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LONDON COUNTY COUNCIL



Report of the
County Medical Officer of Health
and Principal School Medical Officer
for the Year
1957



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Errata

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| <u>Page</u> | |
| 25 | Fourth paragraph - Table T13 is on page 34. |
| 33 | Footnote should refer to table T13. |
| 133 | Fifth paragraph should refer to Table (vii) instead of Table (viii). |
| 182 | For "Appendix B" in first line read "Annex B". |
| 204 | Fertilisers and feeding stuffs are at page 43 only. |
| 205 | Water sampling is at page 43. |

Index

Page	
13	Fourth paragraph - Table 11 is on page 24.
23	Footnote should refer to Table 11.
135	Fifth paragraph should refer to Table 11, instead of Table (11).
182	Box "Appendix B" in first line read "Annex B".
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LONDON COUNTY COUNCIL

Report of the
County Medical Officer of Health
and Principal School Medical Officer
for the Year 1957

By J. A. SCOTT, O.B.E., M.D., F.R.C.P., Q.H.P.

COUNTY MEDICAL OFFICER OF HEALTH AND PRINCIPAL SCHOOL
MEDICAL OFFICER



THE COUNTY HALL
WESTMINSTER BRIDGE, S.E. 1

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LONDON ADMINISTRATIVE COUNTY

VITAL STATISTICS, 1957

Figures in brackets are for 1956

Population :—

Males	1,522,000	} 3,254,000 (3,273,000)
Females	1,732,000	

Areal comparability factors :—

Births	0.89 (0.88)
Deaths	0.99 (1.00)

Live births :—

Legitimate	48,047 (47,737)	} 52,733 (52,171)
Illegitimate	4,686 (4,434)	

Still births :—

Legitimate	969 (940)	} 1,083 (1,070)
Illegitimate	114 (130)	

Live birth rate per 1,000 population :—16.2 (15.9) (adjusted rate 14.4 (14.0))

Still birth rate per 1,000 total births :—20.1 (20.1)

Deaths :—

Males	19,142 (19,557)	} 37,078 (38,317)
Females	17,936 (18,760)	

Death rate per 1,000 population :—11.4 (11.7) (adjusted rate 11.3 (11.7))

Deaths of infants :—

			<i>Legitimate</i>	<i>Illegitimate</i>	<i>Total</i>	
Under 1 month	..	..	743 (737)	116 (93)	859	(830)
1 month to 1 year	..	..	268 (260)	33 (16)	301	(276)
Total under 1 year	..	..	1,011 (997)	149 (109)	1,160	(1,106)

Infant mortality rate :— 21.04 (20.89) 31.80 (24.58) 22.00 (21.20)
(per 1,000 live births)

Neo-natal mortality rate :— 15.46 (15.44) 24.75 (20.97) 16.29 (15.91)
(per 1,000 live births)

Number of marriages registered :— 33,452 (33,884)

Maternal mortality :—

			<i>Post- abortion</i>	<i>Other pregnancy and childbirth</i>	<i>Total</i>
Deaths from sepsis	..	..	8 (6)	— (—)	8 (6)
Deaths from other causes	..	..	5 (5)	15 (16)	20 (21)
Total			13 (11)	15 (16)	28 (27)

VITAL STATISTICS*

Population

TABLE (i)—Population (a), 1901–57

Year	Mid-year (b) estimate of population by the Registrar General, by age groups							Average age (years)
	Total	0–4	5–14	15–24	25–44	45–64	65+	
1901 ..	4,536,500	495,600	862,300	919,700	1,400,200	673,200	185,500	27·7
.....								
1911 ..	4,521,700	467,400	835,600	834,500	1,423,100	740,100	221,000	28·9
.....								
1921 ..	4,484,500	376,100	809,200	796,600	1,365,500	877,100	260,000	30·8
.....								
1931 ..	4,374,300	297,700	646,700	827,940	1,330,200	951,000	320,760	33·4
.....								
1938 ..	4,062,800	249,300	538,600	709,700	1,291,200	927,300	346,700	34·8
.....								
1948 ..	3,339,100	269,900	359,500	2,709,700				
1949 ..	3,375,470	276,200	367,000	2,732,270				
.....								
1950 ..	3,389,620	276,200	370,000	1,437,960		1,305,460		
1951 ..	3,358,000	274,000	381,000	419,000	1,101,000	812,000	371,000	36·9
1952 ..	3,363,000	256,000	400,000	416,000	1,091,000	822,000	378,000	37·1
1953 ..	3,343,000	244,000	413,000	410,000	1,072,000	826,000	378,000	37·2
1954 ..	3,322,000	234,000	425,000	394,000	1,056,000	827,000	386,000	37·4
1955 ..	3,295,000	230,000	421,000	391,000	1,037,000	829,000	387,000	37·5
1956 ..	3,273,000	229,000	427,000	384,000	1,018,000	829,000	386,000	37·5
1957 M.	1,522,000	118,000	216,000	175,000	481,000	386,000	146,000	36·1
F.	1,732,000	112,000	209,000	208,000	493,000	457,000	253,000	39·2
	3,254,000	230,000	425,000	383,000	974,000	843,000	399,000	37·8

(a) 1901–38—Total population.

1948–49—Resident civilian population.

1950–51—Home population, i.e., resident civilian population, members of the Merchant Navy at home and overseas and members of the Armed Forces stationed in the area.

1952—Home population, i.e., resident civilian population, plus any British, Commonwealth or Allied Armed Forces stationed in the area.

(b) Population at census dates 1901, 1911 and 1921.

There was a net loss of 19,000 in the population from the previous year's figure, mostly in the 25–44 years age group (–44,000) with increases at age 45 and over (+27,000) and a small increase of 1,000 in the child population under five—London's population is an ageing one as reflected by the average age (end column). There was an estimated net gain of 470 population following a boundary adjustment between London and Surrey Administrative Counties, under the London County Council (General Powers) Act, 1956, which became effective 1 April, 1957.

* The statistics given are based on the latest information available from the Registrar General: instances have occurred in the past in which figures have been subsequently corrected so that data for a previous year may differ from that published in the Annual Report for that year.

Fertility

TABLE (ii)—Live births and still-births—1948-57

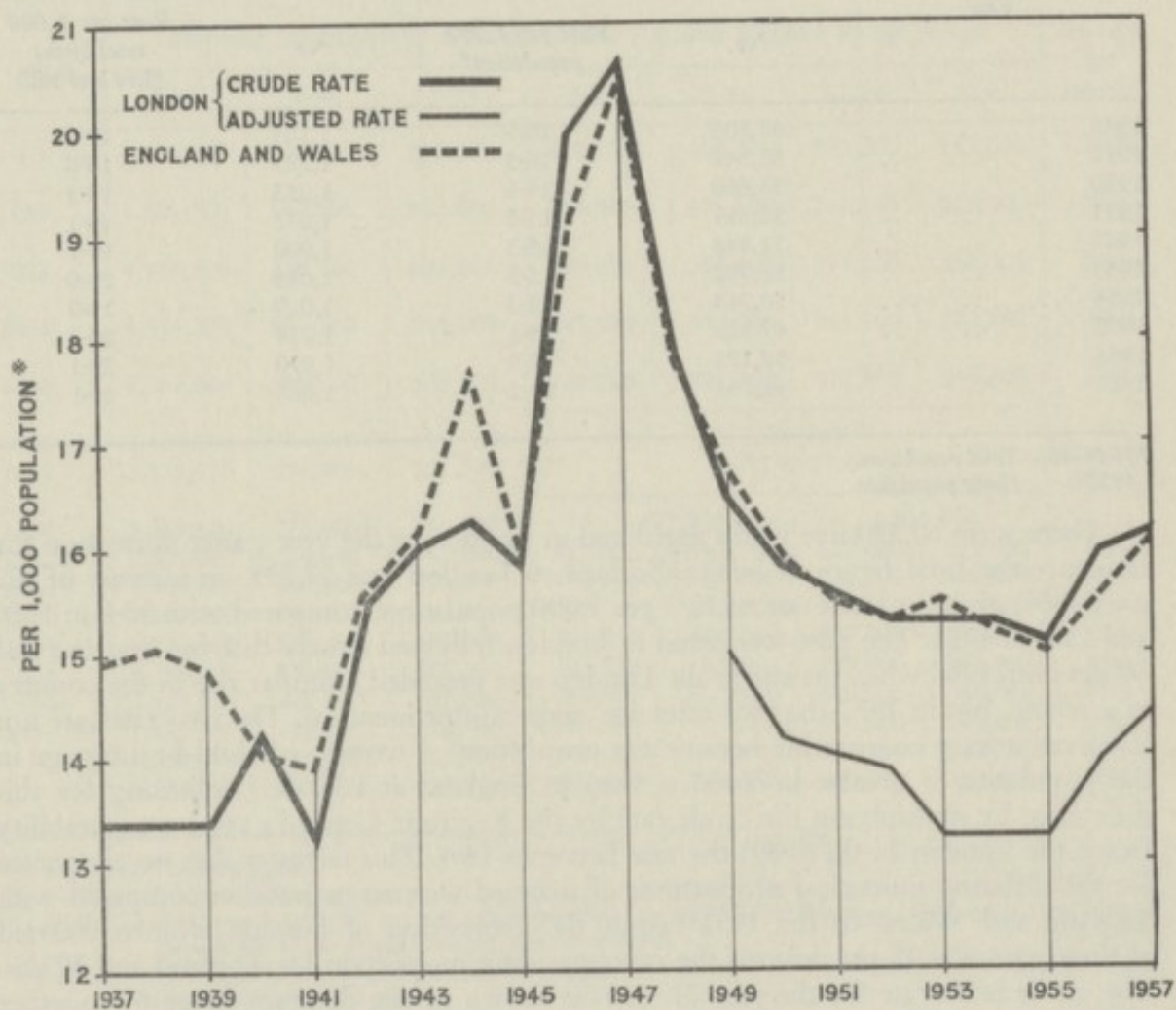
Year	Live births		Still-births	
	No.	Rate per 1,000 population*	No.	Rate per 1,000 total births (live and still)
1948	60,805	17.9	1,188	19.2
1949	56,547	16.5	1,129	19.6
1950	53,660	15.8	1,055	19.3
1951	52,387	15.6	1,073	20.1
1952	51,443	15.3	1,000	19.1
1953	50,992	15.3	1,088	20.9
1954	50,745	15.3	1,029	19.9
1955	49,826	15.1	1,034	20.3
1956	52,171	15.9	1,070	20.1
1957	52,733	16.2	1,083	20.1

*1948-49—Total population.

1950— Home population.

There were 60,530 live births registered in London in the year ; after correction for residence the final figure of births allocated to London was 52,733, an increase of 562 over 1956, giving a birth rate of 16.2 per 1,000 population, compared with 15.9 in 1956 and 15.1 in 1955. The post-war trend in London followed closely that for England and Wales until 1956 when the rise in the London rate preceded a similar rise in the country as a whole, but in 1957 the two rates are again almost identical. The two rates are not however strictly comparable because the proportion of women of child-bearing age in the population is greater in London than in England and Wales ; adjusting for this difference by multiplying the crude rate by the Registrar General's areal comparability factor for London births (0.89) the rate becomes 14.4. This factor makes no allowance for the differing numerical proportions of married women in London compared with England and Wales—at the 1951 census the proportion of London women married at these ages was 95 per cent. of the corresponding proportion for England and Wales. The crude birth rate for the past 21 years is shown in the diagram (page 6) together with the national rate and, since 1949, the adjusted birth rate : the true comparative fertility of London lies somewhere between the lines for the crude rate and adjusted rate.

Figure 1
LIVE BIRTH RATE—
LONDON (A.C.) AND ENGLAND & WALES 1937-57



*Rates based on total population 1937-1949, home population 1950-

Still-births

There were 1,083 still-births in 1957—a rate of 20.1 per 1,000 total births, the legitimate and illegitimate rates being 19.8 and 23.8 respectively.

TABLE (iii)—*Illegitimate live births in London (A.C.) and percentages for London and England and Wales, 1938–57*

Year(s)	Illegitimate live births	Illegitimate live births as a percentage of total live births	
		London A.C.	England and Wales
1938	3,419	6.3	4.2
1940–1945	21,520	8.4	6.5
1946	5,218	7.9	6.7
1947	4,724	6.7	5.3
1948	4,207	6.9	5.4
1949	3,899	6.9	5.1
1950	3,752	7.0	5.1
1951	3,597	6.9	4.7
1952	3,607	7.0	4.8
1953	3,645	7.1	4.7
1954	3,615	7.1	4.7
1955	3,827	7.7	4.6
1956	4,434	8.5	4.8
1957	4,686	8.9	4.8

With a greater proportion of women of child-bearing age and fewer of them married in London than in the country generally, there is a greater exposure to the risk of illegitimacy. Nevertheless, this does not account for the illegitimate rate being nearly double that of England and Wales. Some part of the London excess is due to unmarried mothers making their way to London to bear their children in the shelter of the anonymity of a large city and to take advantage of the facilities available therein. In 1957 the voluntary associations who care for the unmarried mother (see pages 53, 54 for details of this work) saw 631 such women; of these 219 were from Eire, 81 were West Indians and 41 were of foreign nationality. In addition, there were amongst women seeking such assistance 833 who were not natives of the United Kingdom, namely 413 Southern Irish, 292 West Indian and 128 of foreign nationality; of these 656 were normally resident* in London. These must be minimum figures—there will have been others who did not seek assistance from the voluntary organisations.

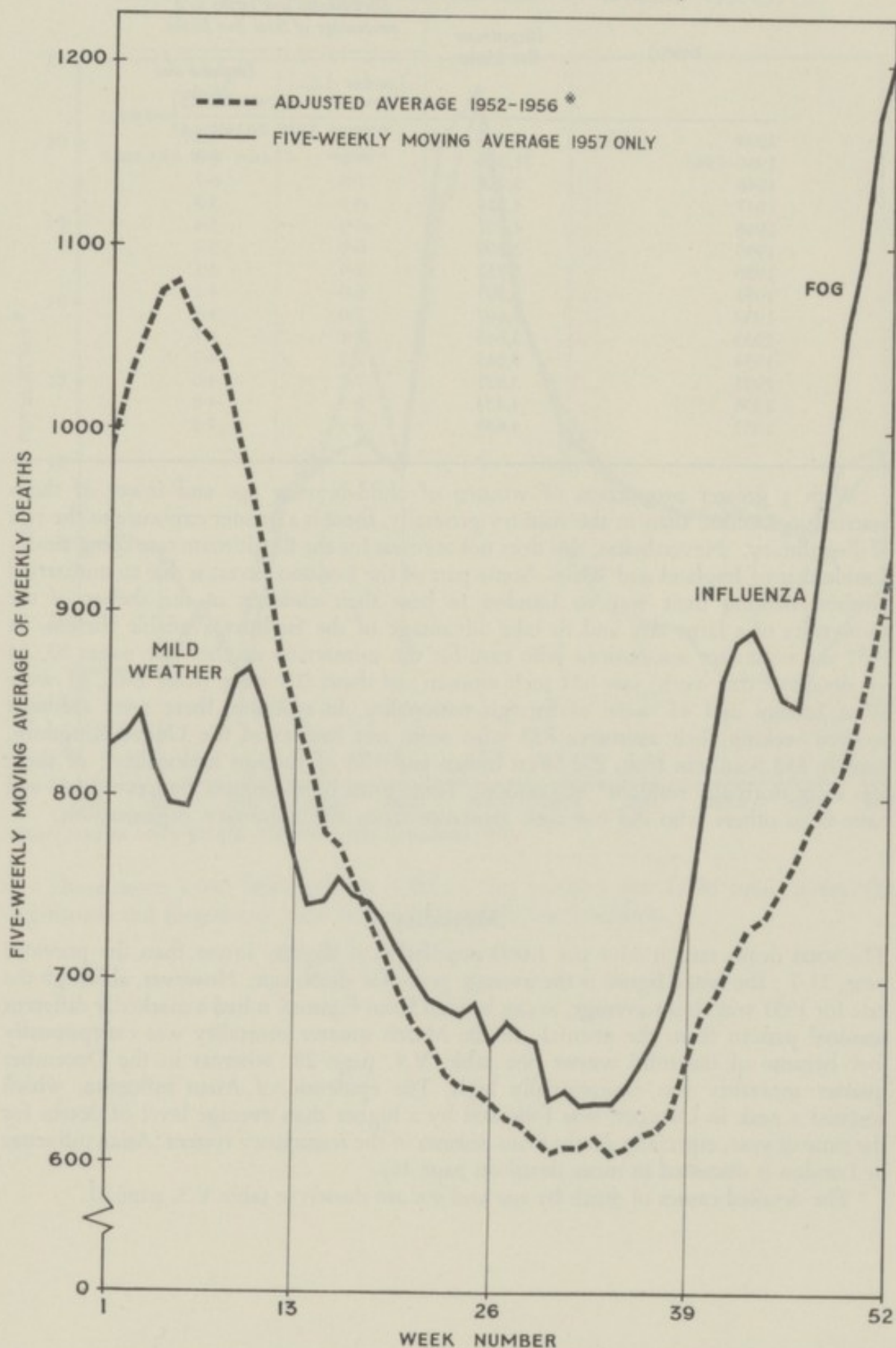
Mortality

The total death rate at 11.4 per 1,000 population is slightly lower than the previous year, 11.7; the latter figure is the average post-war death rate. However, although the rate for 1957 was about average, as can be seen from Figure 2 it had a markedly different seasonal pattern from the normal—in the March quarter mortality was exceptionally low because of the mild winter (see table V.4, page 22) whereas in the December quarter mortality was exceptionally high. The epidemic of Asian influenza, which reached a peak in October, was followed by a higher than average level of deaths for the time of year, especially deaths from diseases of the respiratory system (Asian influenza in London is discussed in more detail on page 16).

The detailed causes of death by age and sex are shown in table V.3, page 21.

* Had lived in London 12 months before making contact with Moral Welfare Association.

Figure 2—WEEKLY REGISTERED DEATHS—LONDON (A.C.),
1952-6 AND 1957
(FIVE-WEEK MOVING AVERAGE)



* Calculated by taking the number of deaths in the corresponding weeks of five previous years, eliminating the highest and lowest figures and then computing a five-week moving average of the arithmetic means of the remaining three weekly figures.

The leading causes of death in London in 1957 were as follows :

	Deaths	Rate per 1,000 population	Leading causes of death
Diseases of the heart	10,864	3.34	
Cancer	7,956	2.44	
Bronchitis, pneumonia*	4,784	1.47	
Vascular lesions of the central nervous system ..	3,886	1.19	
Other circulatory	1,829	0.56	
Violent causes	1,482	0.46	
Digestive diseases	1,396	0.43	
Diseases of early infancy (international classification Nos. 760-776)	715	0.25	
Congenital malformations, 0-4 weeks	112		
Tuberculosis (all forms)	428	0.13	
All other causes	3,626	1.11	
Total	37,078	11.39	

* Excluding pneumonia of the new born (under 4 weeks) which is included in ' Diseases of early infancy '.

The ranking order of the leading causes of death remains unchanged from 1956. Heart disease was discussed in detail in my report for last year ; cancer, the second principal cause, with a rate of 2.44 per 1,000 (the highest ever recorded in peace time), is increasing year by year as is shown by the following table :

TABLE (iv)—Cancer mortality rates per 1,000 living, 1948-57

Cancer

Age and Sex	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Males :										
0-14 ..	0.03	0.06	0.11	0.10	0.11	0.12	0.11	0.10	0.13	0.09
15-44 ..	0.30	0.29	0.38	0.35	0.37	0.39	0.34	0.33	0.36	0.31
45-64 ..	4.05	4.09	4.45	4.28	4.19	4.28	4.31	4.50	4.51	4.55
65+ ..	12.54	12.75	13.25	15.64	15.50	15.69	15.29	15.73	15.77	15.29
All Males	2.21	2.27	2.45	2.60	2.61	2.68	2.64	2.73	2.76	2.77
Females :										
0-14 ..	0.03	0.05	0.07	0.09	0.08	0.07	0.06	0.08	0.10	0.07
15-44 ..	0.36	0.33	0.37	0.35	0.35	0.38	0.32	0.33	0.38	0.35
45-64 ..	2.96	2.68	2.84	2.80	2.85	2.85	2.85	2.93	2.77	2.97
65+ ..	9.08	9.08	8.95	8.79	8.77	8.73	8.39	8.43	8.75	8.34
All Females	1.95	1.93	1.98	1.99	2.02	2.04	2.02	2.08	2.12	2.16
All Persons	2.08	2.09	2.20	2.27	2.30	2.34	2.31	2.39	2.42	2.44

The importance of cancer lies in the fact that it is in middle age (45-64 years) its impact is relatively greatest—greater than any other single cause in this age range. For ages 45-64 years the contribution of cancer to total mortality in 1957 was for males, 31, and for females 41 per cent., the corresponding proportions at age 65 years and over, were 19 and 16 per cent. respectively.

Infant mortality
TABLE (v)—*Infant mortality—1957*

Cause of death		Age at death				Total			Rates per 1,000 live births		
		Under 1 day	1 to 7 days	1 to 4 wks.	4 wks. to 1 yr.	No.	Male	Female	Total	Male	Female
Whooping cough	Leg.	—	—	—	1	1	—	1	0.02	—	0.04
	Illeg.	—	—	—	—	—	—	—	—	—	—
Tuberculosis	.. Leg.	—	—	—	—	—	—	—	—	—	—
	Illeg.	—	—	—	—	—	—	—	—	—	—
Measles	.. Leg.	—	—	—	—	—	—	—	—	—	—
	Illeg.	—	—	—	—	—	—	—	—	—	—
Convulsions	.. Leg.	—	—	—	—	—	—	—	—	—	—
	Illeg.	—	—	—	—	—	—	—	—	—	—
Bronchitis and pneumonia	.. Leg.	4	23	8	111	152	91	61	2.88	3.34	2.39
	Illeg.	1	2	3	—	—	—	—	—	—	—
Gastro enteritis and diarrhoea	Leg.	—	—	4	18	22	13	9	0.42	0.48	0.35
	Illeg.	—	—	—	—	—	—	—	—	—	—
Congenital malformation	Leg.	32	30	41	97	209	105	104	3.96	3.86	4.08
	Illeg.	1	4	4	—	—	—	—	—	—	—
Immaturity	.. Leg.	121	57	12	2	225	129	96	4.27	4.74	3.76
	Illeg.	21	12	—	—	—	—	—	—	—	—
Injury at birth	.. Leg.	73	63	4	—	157	100	57	2.98	3.67	2.23
	Illeg.	6	10	1	—	—	—	—	—	—	—
Post-natal asphyxia and atelectasis	Leg.	111	73	7	—	220	123	97	4.17	4.52	3.80
	Illeg.	18	11	—	—	—	—	—	—	—	—
Haemolytic disease	Leg.	15	7	3	1	27	11	16	0.51	0.40	0.63
	Illeg.	—	—	1	—	—	—	—	—	—	—
Accidental mechanical suffocation	Leg.	2	—	—	10	12	7	5	0.23	0.26	0.20
	Illeg.	—	—	—	—	—	—	—	—	—	—
Other causes	.. Leg.	21	18	14	61	135	78	57	2.56	2.87	2.23
	Illeg.	12	7	2	—	—	—	—	—	—	—
All causes	Leg. M.	221	160	40	161	1,011	582	429	21.04	23.44	18.48
	F.	158	111	53	107	—	—	—	—	—	—
	Illeg. M.	27	30	4	14	149	75	74	31.80	31.45	32.16
	F.	32	16	7	19	—	—	—	—	—	—
TOTAL, 1957		438	317	104	301	1,160	657	503	22.00	24.14	19.71
TOTAL, 1956		359	346	125	276	1,106	630	476	21.20	23.62	18.66
	Leg. M.	156	196	62	145	997	559	438	20.89	22.96	18.72
	F.	149	124	50	115	—	—	—	—	—	—
	Illeg. M.	34	18	7	12	109	71	38	24.58	30.59	17.98
	F.	20	8	6	4	—	—	—	—	—	—

The pattern of infant mortality remains much the same as in the previous year. The increase in the total rate from 21.20 in 1956 to 22.00 in 1957 was largely accounted for by an increased number of deaths of illegitimate babies ; last year the infant mortality rate for illegitimate infants was exceptionally low.

The trend since 1946 is shown below :

TABLE (vi)—*Infant mortality by cause—1946–57*
(Rates per 1,000 live births)

<i>Cause of death</i>	1946 to 1950	1951 to 1955	1956	1957
Whooping cough ..	0.55	0.13	0.04	0.02
Tuberculosis ..	0.26	0.07	—	—
Measles	0.08	0.06	—	—
Bronchitis and pneumonia ..	5.48	3.74	3.32	2.88
Gastro-enteritis ..	2.83	0.74	0.35	0.42
Immaturity	6.93	4.26	4.10	4.27
Congenital malforma- tions	4.32	3.62	3.70	3.96
Injury at birth ..	2.33	2.69	2.64	2.98
Post-natal asphyxia and atelectasis ..	3.48	3.92	3.66	4.17
Haemolytic disease ..	(a)	0.65	0.61	0.51
Convulsions ..	0.03	0.00	0.02	—
Accidental mechanical suffocation ..	1.10	0.15	0.21	0.23
Other causes	4.24	3.24	2.55	2.56
All causes	32	23	21	22

(a) *Included in other causes.*

A comparison with England and Wales for both neo-natal (deaths in the first four weeks) and infant mortality (deaths in the first year) is as follows : Neo-natal mortality

Rates per 1,000 live births

<i>Year(s)</i>	<i>Neo-natal mortality</i>		<i>Infant mortality</i>	
	<i>London</i>	<i>England and Wales</i>	<i>London</i>	<i>England and Wales</i>
1946–1950	18.4	21.1	31.6	36.4
1951–1955	16.2	18.0	23.3	26.9
1956	15.9	16.8	21.2	23.7
1957	16.3	16.5	22.0	23.1

The great majority of all the neo-natal deaths occur in the first seven days of life and of these about half occur in the first day. Thus the distinction between still-births and live births in such cases is very narrow and the term 'perinatal' mortality is used to describe the total loss of life before, during and shortly after birth. The definition adopted in this report includes still-births and deaths in the first week of life. Comparative rates for perinatal mortality per 1,000 *total* births are given below for London and England and Wales : Perinatal mortality

<i>Year(s)</i>	<i>London</i>	<i>England and Wales</i>	<i>Year</i>	<i>London</i>	<i>England and Wales</i>
1946–1950 ..	35.5	39.8	1956	33.3	36.8
1951–1955 ..	33.9	38.2	1957	34.2	36.3

The medical conditions causing still-birth cannot be determined since certification of the cause of still-birth is not required in this country although it is in Scotland. Following representations made to the Ministry of Health during 1957 a special inquiry under Ministry auspices is to be made into perinatal mortality in certain areas, including London, commencing in 1958. (The National Birthday Trust Fund also made a similar inquiry in March, 1958, and the results are awaited with considerable interest.)

TABLE (vii)—Maternal mortality, 1948–57

Year	Live births and still-births	Deaths in pregnancy or child-birth excluding abortion		Post-abortion deaths	
		No.	Rate per 1,000 total births	No.	Rate per 1,000 female population aged 15–44 years*
1948	61,993	30	0.48	18	0.022
1949	56,676	20	0.35	20	0.025
1950	54,715	29	0.53	9	0.011
1951	53,460	24	0.45	18	0.023
1952	52,433	35	0.66	15	0.019
1953	52,080	21	0.40	16	0.021
1954	51,774	28	0.54	6	0.008
1955	50,860	31	0.61	8	0.011
1956	53,241	16	0.30	11	0.015
1957†	53,816	15	0.28	13	0.018

* Estimated in 1948 and 1949.

† For the second year running none of the deaths in pregnancy or childbirth was due to sepsis; five of the 13 post-abortion deaths came under the category of 'abortion with sepsis'.

Summary
tables

Tables summarising the more important of these vital statistics (a) by metropolitan boroughs and (b) showing the secular trend for the County are to be found on pages 19 and 20.

A new feature of these tables is that they now include adjusted birth and death rates, i.e., crude rates multiplied by the Registrar General's areal comparability factors to give (adjusted) rates which are directly comparable with each other and with the corresponding figures for England and Wales. The adjusted rates roughly standardise the crude birth rates for the differing proportions of women of child-bearing age in the populations concerned and the crude death rates for the age/sex structure of the populations and also, since 1956, for the presence or absence of chronic sick or mental hospitals in the areas, the deaths from which are assigned to the area of occurrence.

Atmospheric pollution

In Appendix B to my annual report last year an account was given of an investigation into the effect of atmospheric pollution on health. An examination of four fogs over the three winters 1954–55 to 1956–57 demonstrated that a critical level of atmospheric pollution, in relation to its effect on health, was reached when the mean daily concentrations of smoke and sulphur dioxide in the atmosphere were in the region of 200 milligrams of black suspended matter per 100 cubic metres of air and 40 parts of sulphur dioxide per 100 million parts of air.*

The fog of December, 1957, attained this level. Figure 3 (page 13) shows the daily mean concentrations on each of the foggy days 2–6 December, 1957, and six days on each side of them, with, for comparison, similar figures for the fog of 3–7 January, 1956; the days shaded include both those on which the mean concentrations exceeded the level chosen and those days immediately surrounding them on which there was any mention of fog in the meteorological reports of Kew Observatory. The highest and lowest temperatures recorded at Kew Observatory over the same periods are also shown.

* The mean daily levels were computed by averaging the readings of the seven volumetric stations shown on page 195 of last year's report.

Figure 3—DAILY CONCENTRATIONS OF SMOKE AND SULPHUR DIOXIDE (AVERAGE READING OF SEVEN STATIONS) AND HIGHEST AND LOWEST DAILY TEMPERATURES IN SMOGS OF JANUARY, 1956, AND DECEMBER, 1957

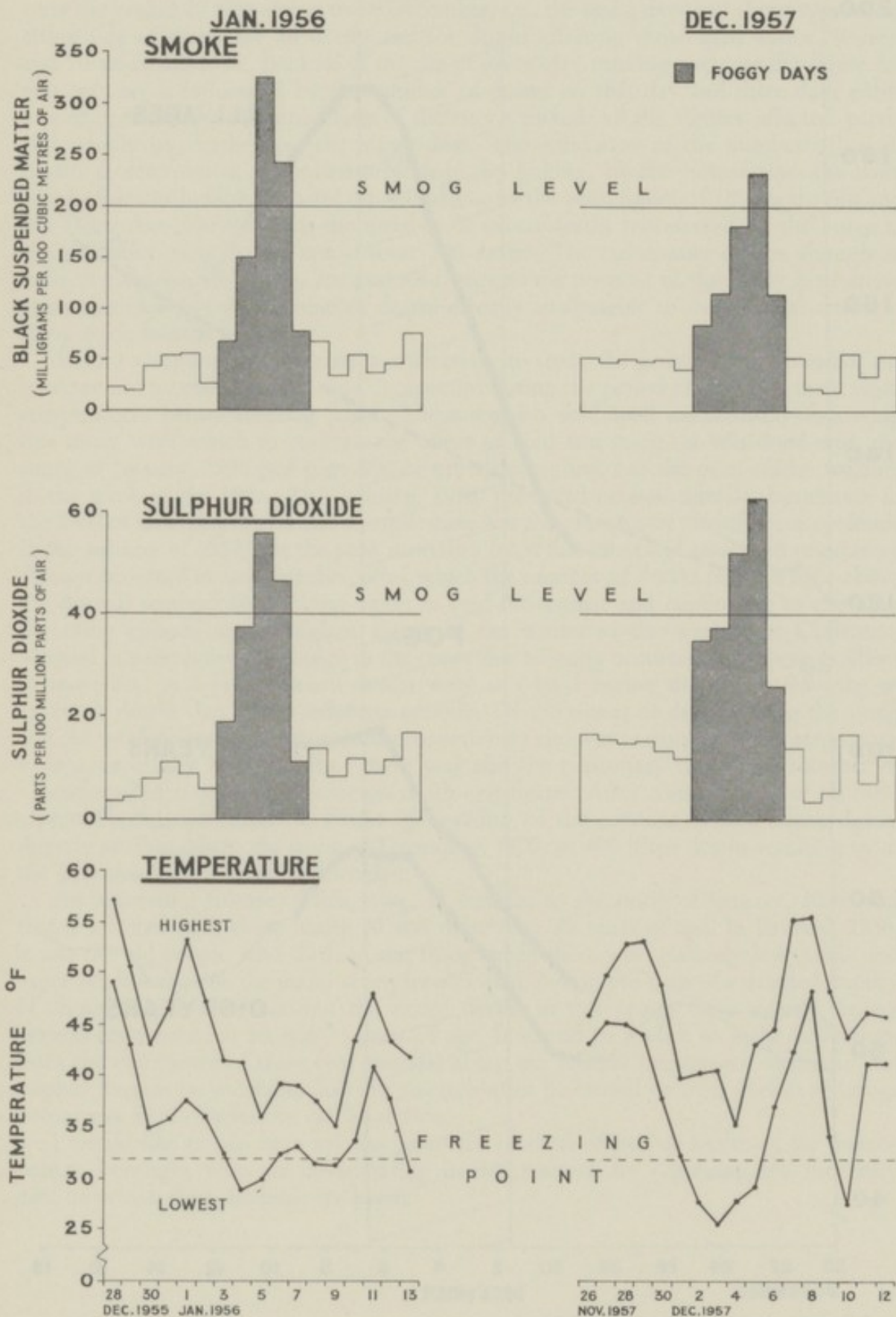
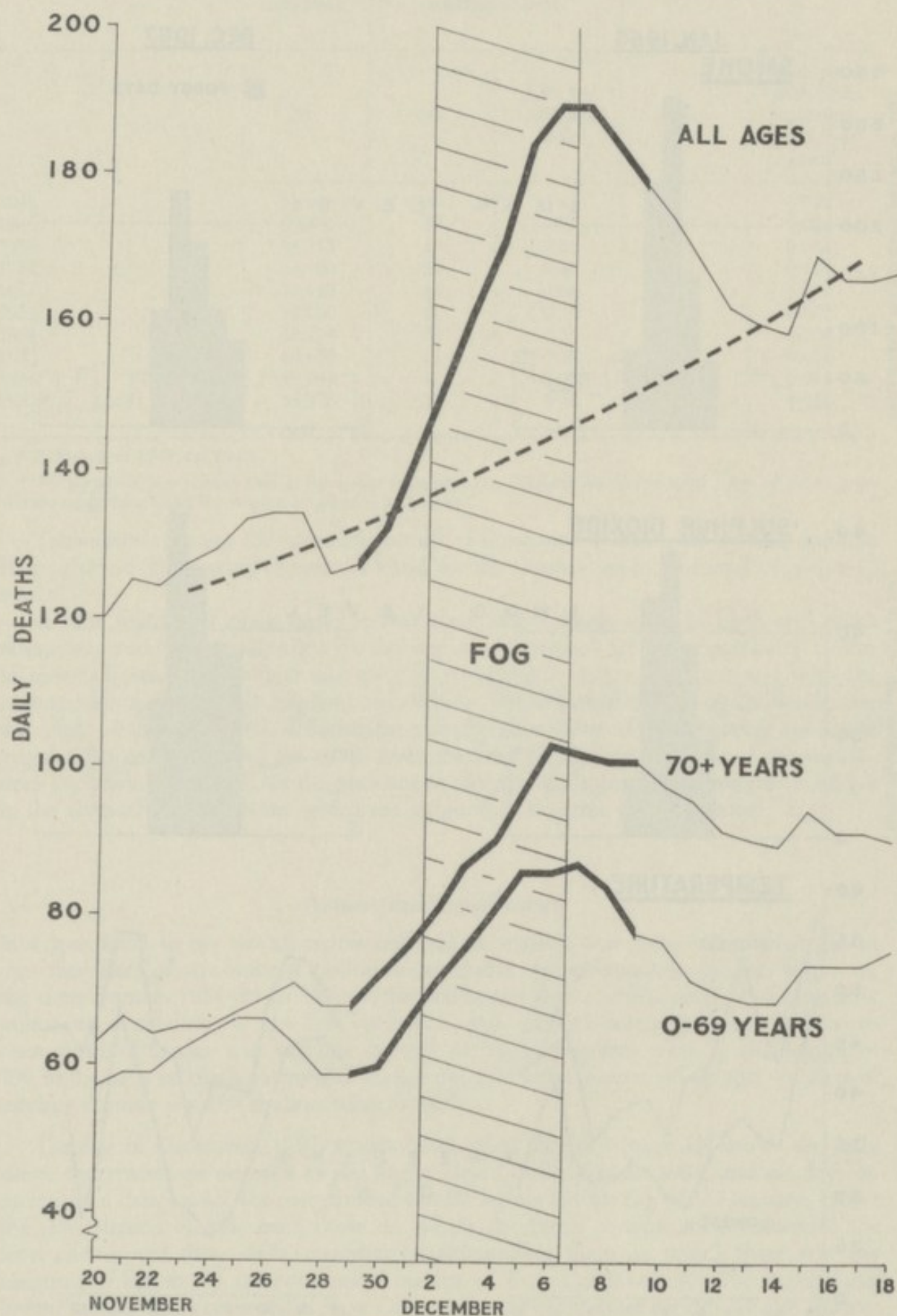


Figure 4—DEATHS,* ALL AGES, 0-69 YEARS AND 70 YEARS AND OVER, 20th NOVEMBER to 18th DECEMBER, 1957—SEVEN-DAY MOVING AVERAGES



* Excluding deaths in the Lewisham rail disaster.

The two smogs, both of which covered five days, were somewhat different in that in December, 1957, smoke was 84 per cent. and sulphur dioxide was 120 per cent. of the corresponding volumes in January, 1956.

Figure 4 (page 14) shows the seven-day moving average of deaths *occurring* in London (excluding the 90 deaths in the Lewisham rail disaster on the 4th December) over the period 20 November to 18 December, i.e., the smog days and about two weeks either side of them, for all deaths and for deaths affecting those aged under 70 years and 70 years and over. Because of the use of seven-day moving averages the figure for any one day is influenced by the number of deaths on that day and three days either side of it, hence the thickened lines of the curves include all the figures affected partly and wholly by deaths over the foggy days. The estimation of the number of excess deaths is determined, somewhat arbitrarily, by linking, by the dotted line, the daily trend of deaths before and after the subsidence of the peak figure of 189 on the 6th and 7th December. On this basis the number of excess deaths represented by the bulge in the mortality curve works out at some 300 deaths. The rail disaster deaths, though an indirect consequence of fog, are excluded because the purpose of this study is to arrive at an estimation of the number of deaths directly attributable to the physical action of smog upon human beings.

Before accepting this estimate it is necessary to study the general background of the weather and mortality at this time. It was cold during the period of the smog with night temperatures below freezing point. There was no cold spell immediately following this smog with which to contrast the effect of cold and smog, as was done with the smog of January, 1956 (see page 206 of my 1956 report), but the even colder weather in the week of the 19th—25th January, 1958, produced no such similar disturbance in the level of mortality. A further complication was the presence of the influenza epidemic in the autumn of 1957, but the peak mortality from this cause and associated respiratory diseases occurred in late October, after which the number of deaths fell to a little above the normal seasonal level, rising again in mid-November and continuing to rise after the smog episode to the highest figure of the winter in the week after Christmas. Viewed in perspective, the bulge in the curve due to smog occurred on a rising gradient of mortality, in a period when deaths were at a level higher than usual *following* an excess of deaths due to the influenza episode. Of the causes of death during the smog and the week following, the greatest proportionate rise was in diseases of the respiratory system, especially in bronchitis; there was also the customary rise in the number of 'mentions' of respiratory disease on death certificates. After consideration of all these aspects there is no reason to doubt the validity of the estimate of 300 excess deaths directly attributable to the smog of December, 1957, or 400 if the deaths resulting from the Lewisham rail disaster be included.

An interesting feature of this smog, in contrast to the smog of January, 1956, was that it affected both those under 70 and those over 70 years of age. In January, 1956, it was the old people who died; in this smog when there was relatively less smoke and more sulphur dioxide the under seventies also died, but on the basis of a detailed inquiry of about one-third of London the excess deaths in this group were mainly among persons aged between 50 and 70 years of age. It would be foolish to make deductions from the experience of these two episodes about the relative importance of smoke and sulphur dioxide on mortality and this research must be carried on over a series of smogs before any firm conclusions can be drawn.

I would like to add here my thanks to the medical officers of health of the metropolitan boroughs who are co-operating in this research by supplying the mortality data on which these findings are based.

INFECTIOUS DISEASES

NOTIFICATIONS of infectious diseases for the years 1937-1957 are shown in table V.5, page 23 ; those for certain such diseases by age and sex for the 13 four-weekly periods of the year 1957 are given in table V.6, page 24 ; and deaths from infectious disease are included in table V.3, page 22.

Diarrhoea and enteritis There were 24 deaths under the age of two years from diarrhoea and enteritis compared with 20 in the previous year. This represents a rate of 0.45 per 1,000 live births and shows a continuation of the low figures of recent years.

Diphtheria Only four notifications of diphtheria were confirmed in 1957, this being equal to the lowest annual figure ever recorded. The single death from this cause was a woman of 59 years who was taken ill while outside London, admitted to hospital on her return to London four days later and died the following day.

Dysentery The figure of 2,356 notifications of dysentery represented a considerable fall from the record figure in 1956. This year there was a slight drop in the proportion of cases in the 5-14 years age group. In 1957 the total in the 5-14 year age group was less than in the under five group.

Enteric fever Notifications of enteric fever totalled 47 compared with 73 in 1956. There were no sizeable local outbreaks. However, during the year a group of 11 cases of paratyphoid B fever occurring in various parts of London and the Home Counties, in Hampshire, Devon and Staffordshire, were shown to have had their origin in a restaurant in central London, when a member of the staff was found to be a carrier.

Influenza The influenza epidemic of 1957 was marked by a number of unusual features. It was caused by a strain of influenza virus A not previously encountered. Minor variations in influenza A virus have occurred on a number of occasions in recent years, but the new strain differed very markedly from any previous strains. It was found first in China in the early part of the year and became known as the Asian strain. The discovery of this new strain raised fears of a possible serious pandemic if the virus attacked a population with no resistance to it. Blood tests showed that a certain number of persons over 70 years of age possessed antibodies to the virus, and the suggestion was made that the pandemic of influenza in 1890 might have been due to an identical or similar virus.

The virus reached Europe in May or June but did not spread in epidemic form until after the summer holidays. The subsequent epidemic, occurring at an unusual time of the year, had a unique effect on the seasonal curve of mortality in 1957. In the event the epidemic although very widespread and involving a large proportion of the population was marked by a comparatively low case fatality rate.

The main epidemic centre of the disease in London appeared to be the schools. Absenteeism in the day schools rose well above the customary level in the week ending 21 September, and reached its highest level two weeks later. In the week ending 5 October, it was estimated that 28 per cent. of children were absent from school. Higher absence rates were found in the nursery schools and primary schools than in secondary schools. The absence rate among teachers was considerably lower than that for the children, but here again the highest rates occurred in nursery and primary school teachers. After the week ending 5 October, the epidemic in the schools began to wane, and the absence rate had returned to normal levels four weeks later.

The timing of the epidemic in the school differed somewhat from that in the adult working population. New claims for sickness benefit at offices of the Ministry of National Insurance in the County of London reached a level of twice the average figure in the week in which school absence was at its highest, but did not reach their peak of about four times the customary level until two weeks later, in the insurance week 9-15 October.

As regards the incidence of the disease among school children, although accurate figures are not available it was estimated that some 50 per cent. of school children suffered from influenza during the epidemic.

Apart from its unusual seasonal incidence this epidemic was unusual in its age distribution of mortality. The figures for influenza given in table V.3, when compared with those of previous influenza epidemics show a level of mortality rather above expectation at ages between 5 and 25 years, and a level of mortality above the age of 75 much below expectation. As has already been stated, the disease was on the whole not severe as judged by the case fatality rate.

Just before the epidemic commenced arrangements were made for a considerable number of volunteers in the London ambulance service to receive a vaccine. Their subsequent sickness history was followed up as part of an inquiry carried out by the Medical Research Council. The results showed that the vaccine against the Asian strain exerted a protective effect in those receiving it.

The level of incidence of influenza after the main epidemic remains speculative. The virus continued to be present in the population during the months of November and December. There was no repetition of the epidemic events already described in the schools or adult population, but there was a considerable rise in mortality commencing in November and increasing during December. This was in part the result of the usual seasonal influences encountered at this time of the year; the smog of December undoubtedly had a marked effect on mortality for the following period. The exact part played by influenza in the raised mortality of December is thus extremely difficult to estimate.

The influenza deaths in the last 15 years are shown in the following table :

TABLE (viii)—*Influenza deaths, 1943-57*

<i>Year</i>	<i>Influenza deaths</i>	<i>Year</i>	<i>Influenza deaths</i>
1943	726	1951	809
1944	206	1952	162
1945	171	1953	514
1946	371	1954	83
1947	284	1955	164
1948	78	1956	120
1949	372	1957	384
1950	256		

No cases of leptospirosis were reported during the year among the Council's sewer Leptospirosis workers.

The biennial epidemic occurred during 1957, the size of the epidemic (36,952 Measles notifications) being smaller than the preceding one in 1955 in which year there were 49,110 notifications. There were 11 deaths from measles during the year which indicates a level of severity roughly equal to that in the 1955 epidemic.

TABLE (ix)—*Number of cases of ophthalmia neonatorum in babies of mothers resident in the County, 1957* Ophthalmia neonatorum

	<i>Domiciliary confinements</i>	<i>Institutional confinements</i>	<i>Total</i>
Notified during the year	26	46	72
Removed to hospital for special treatment ..	—	4	4

Of the 72 cases, vision was unimpaired in 62, one died, and the remaining nine moved from the district. None of the three cases under treatment at the end of the preceding year had impaired vision.

The poliomyelitis epidemic was not of large proportions. At no time did the weekly notification exceed 30. There were 12 fatal cases. The age distribution (see following table) remained roughly as it has been during the last three years. Particulars of vaccination against poliomyelitis may be found at page 72.

TABLE (x)—*Poliomyelitis notifications by age, 1947-57*

Year	0-4 years		5-14 years		15 years and over		Total	
	No.	%	No.	%	No.	%	No.	%
1947.. ..	196	27.9	257	36.6	249	35.5	702	100.0
1948.. ..	47	33.3	43	30.5	51	36.2	141	100.0
1949.. ..	356	53.3	173	25.9	139	20.8	668	100.0
1950.. ..	150	34.9	149	34.6	131	30.5	430	100.0
1951.. ..	27	24.1	45	40.2	40	35.7	112	100.0
1952.. ..	95	30.7	105	34.0	109	35.3	309	100.0
1953.. ..	116	35.0	104	31.3	112	33.7	332	100.0
1954.. ..	42	33.6	41	32.8	42	33.6	125	100.0
1955.. ..	334	34.8	391	40.7	235	24.5	960	100.0
1956.. ..	88	31.5	115	41.2	76	27.3	279	100.0
1957.. ..	103	31.8	131	40.4	90	27.8	324	100.0

Whooping
cough

There were 3,982 notifications of whooping cough, this being the lowest figure for 12 years. Mortality was the lowest ever recorded, there being only one death. It is not possible to say to what extent this favourable experience is the result of widespread immunisation against this disease.

TABLE V.1—Vital statistics—Metropolitan Boroughs and the Administrative County of London, 1957 (a)

Metropolitan Boroughs	Estimated home population mid 1957	Live birth rate		Death rate (all causes)		Infant Mortality (per 1,000 live births)	Death-rates							Notifications of infectious disease										
		Crude	Adjusted	Crude	Adjusted		Cancer	Vascular lesions of C.N.S.	Heart disease	Other circulatory	Pneumonia	Other respiratory (including bronchitis)	Violence	Dysen- tery	Food poison- ing	Measles	Pneumonia	Polio-myelitis		Scarlet fever	Whoop- ing cough	Tuberculosis		
																		Para- lytic	Non- para- lytic			Pulmo- nary	Non- pulmo- nary	
Division 1																								
Chelsea	50,600	14.6	11.1	14.8	10.2	22	2.59	2.15	4.11	1.50	1.07	0.85	0.65	1.40	0.26	8.02	0.85	0.06	—	0.67	1.36	0.89	0.12	
Fulham	116,200	15.3	14.7	11.0	11.2	26	2.03	1.02	3.24	0.53	0.56	1.14	0.45	0.92	0.15	13.18	0.50	0.03	0.02	0.28	1.20	1.04	0.07	
Hammersmith ..	111,700	16.9	15.7	11.0	11.9	25	2.65	1.30	2.90	0.47	0.52	1.05	0.45	1.23	0.45	11.34	0.82	0.10	—	0.34	1.17	1.13	0.14	
Kensington ..	167,900	16.5	11.9	10.4	10.7	28	2.17	1.28	2.76	0.64	0.56	0.74	0.58	0.46	0.31	5.85	0.45	0.08	0.01	0.20	0.77	1.14	0.70	
Division 2																								
Hampstead ..	97,130	15.1	11.3	10.5	10.7	18	2.37	1.24	2.98	0.67	0.53	0.65	0.45	0.27	0.10	8.53	0.49	0.11	0.04	0.57	1.11	1.11	0.09	
Paddington ..	120,500	18.7	14.8	10.0	10.8	24	2.15	1.02	2.82	0.41	0.48	0.61	0.77	0.27	0.46	9.98	0.46	0.02	0.02	0.42	0.77	1.59	0.15	
St. Marylebone ..	72,530	10.9	8.5	15.5	11.4	32	2.79	1.97	5.74	0.63	0.47	1.14	0.51	0.25	0.12	6.98	0.11	0.06	0.06	0.39	0.84	0.90	0.08	
St. Pancras ..	132,000	16.8	14.4	10.9	11.4	21	2.47	1.05	3.08	0.39	0.70	0.98	0.59	0.94	0.98	7.70	1.13	0.05	0.04	0.78	2.14	1.80	0.12	
Westminster City of ..	95,930	11.1	9.1	9.6	10.0	22	2.18	1.01	2.68	0.46	0.39	0.66	0.57	0.13	0.25	5.75	0.11	0.05	—	0.14	0.65	1.06	0.08	
Division 3																								
Finsbury	34,830	20.5	18.0	10.0	10.6	22	2.10	0.72	3.04	0.32	0.63	1.06	0.55	3.42	0.26	9.88	1.64	0.09	0.03	1.12	1.35	1.09	0.03	
Holborn	22,230	11.4	8.1	11.8	13.2	36	2.34	0.87	3.46	0.54	0.76	0.72	0.90	0.72	0.09	4.45	0.18	0.36	0.13	0.36	0.27	1.44	—	
Islington	227,800	20.1	18.1	10.8	10.8	21	2.27	0.91	3.17	0.62	0.70	1.06	0.43	1.71	0.58	7.71	0.75	0.10	0.02	0.87	1.87	1.12	0.13	
Division 4																								
Hackney	165,000	15.8	14.7	11.0	12.2	20	2.56	1.15	3.28	0.48	0.49	1.02	0.45	0.78	0.19	13.66	0.44	0.03	0.03	0.55	1.08	0.77	0.07	
Shoreditch ..	43,870	16.8	15.1	14.0	10.5	22	2.80	2.05	3.10	0.78	1.23	1.46	0.47	1.60	0.18	17.55	0.43	0.05	0.02	0.75	0.75	0.71	0.18	
Stoke Newington ..	50,480	17.6	15.7	9.8	11.3	28	2.10	1.13	2.89	0.42	0.38	0.85	0.32	1.94	0.28	15.51	0.42	0.02	0.02	1.05	0.87	0.69	0.08	
Division 5																								
Bethnal Green ..	50,940	15.8	14.5	11.3	11.5	12	2.41	1.06	3.12	0.49	0.75	1.33	0.33	2.08	0.18	15.39	0.29	—	0.10	0.49	1.39	0.80	0.04	
City of London(b)	5,100	6.3	5.6	10.4	10.6	94	1.96	1.18	2.55	0.78	0.78	0.59	0.78	1.18	2.94	3.53	—	0.20	0.20	0.39	—	0.98	—	
Poplar	67,080	16.8	15.6	10.3	11.9	21	2.24	0.95	2.55	0.42	0.52	1.31	0.45	0.79	0.76	15.06	0.81	0.07	0.04	0.88	1.74	0.79	0.06	
Stepney	97,810	19.0	16.7	12.4	14.0	24	2.55	1.11	3.50	0.61	0.99	1.22	0.50	0.35	0.08	14.29	0.79	0.07	0.03	0.47	0.78	1.23	0.18	
Division 6																								
Deptford	70,970	14.8	14.2	12.2	10.9	13	2.52	1.32	3.51	0.61	0.93	1.32	0.31	0.23	0.08	11.54	0.63	—	—	0.83	1.24	2.01	0.11	
Greenwich	88,910	14.1	13.3	9.6	11.0	29	2.15	0.87	2.64	0.48	0.49	0.93	0.40	0.25	0.19	13.43	0.31	0.03	0.07	1.15	1.09	0.85	0.02	
Woolwich	146,200	13.7	13.6	10.3	10.9	26	2.20	1.05	3.06	0.49	0.72	0.70	0.34	0.68	0.34	9.47	1.39	0.05	0.01	0.99	0.94	0.90	0.10	
Division 7																								
Camberwell ..	177,700	16.7	15.4	10.6	10.9	24	2.15	1.13	3.15	0.57	0.68	0.84	0.29	0.43	0.32	16.13	0.43	0.02	0.02	0.74	1.88	1.25	0.10	
Lewisham	220,900	14.9	14.2	11.0	11.0	16	2.25	1.42	3.39	0.48	0.52	0.88	0.38	0.66	0.22	12.35	0.43	0.05	0.12	0.65	1.02	1.00	0.12	
Division 8																								
Bermondsey ..	54,750	17.0	16.0	11.5	12.7	22	2.48	1.10	3.00	0.38	0.60	1.39	0.64	0.07	0.13	20.07	0.58	—	—	1.26	2.06	1.39	—	
Lambeth	224,300	18.7	16.8	10.5	10.8	23	2.14	1.07	3.14	0.49	0.71	0.84	0.40	0.30	0.26	13.24	0.97	0.06	0.01	0.69	1.15	0.88	0.05	
Southwark	91,140	18.0	16.0	12.0	10.8	23	2.39	0.92	3.76	0.68	1.09	0.84	0.38	0.38	0.22	12.94	0.67	0.01	0.02	1.57	2.06	1.33	0.08	
Division 9																								
Battersea	111,800	16.1	15.1	10.9	11.1	23	2.54	1.23	3.27	0.47	0.45	0.91	0.43	0.29	0.23	12.54	0.61	0.03	0.05	0.51	1.06	0.80	0.10	
Wandsworth ..	337,700	14.9	14.3	14.7	10.2	16	3.53	1.48	4.61	0.73	0.75	0.84	0.44	0.69	0.78	11.26	0.97	0.13	0.08	0.69	1.03	0.77	0.04	
London, 1957 ..	3,254,000	16.2	14.4	11.4	11.3	22	2.44	1.19	3.34	0.56	0.65	0.93	0.46	0.72	0.37	11.36	0.67	0.06	0.04	0.67	1.22	1.06	0.09	
London, 1956 ..	3,273,000	15.9	14.0	11.7	11.7	21	2.42	1.27	3.46	0.59	0.67	1.07	0.47	1.95	0.41	2.95	0.50	0.06	0.03	0.67	1.67	1.10	0.10	

(a) Rates are per 1,000 home population, figures in italics are based upon fewer than 20 births, deaths or notifications as a warning that the smallness of the experiences may affect their significance.

(b) Including Inner and Middle Temple.

TABLE V.2—Principal vital statistics—Administrative County of London, 1906–1957

Year(s)	Annual rate per 1,000 living				Annual mortality per 1,000 living (a)														Annual mortality				
	Live births		Deaths (all causes)																Infant (per 1,000 live births)	Maternal (per 1,000 total births (b))			
	Crude rate	Adjusted rate	Crude rate	Adjusted rate	Tuberculosis		Cancer	Vascular lesions of C.N.S.	Heart disease	Other circulatory disease	Influenza	Pneumonia (all forms)	Bronchitis	Other resp. diseases	Violence								
					Pulmonary	Non-pulmonary									Suicide	Road accidents	Other violence						
																			Infants 0-1	Diarrhoea and enteritis 0-2	Puerperal sepsis	Other child-birth	
1906-10 ..	26.5	(d)	14.9	(d)	1.39	0.48	1.11	(d)	1.26	(d)	0.22	1.49	1.22	0.22	0.12	0.09	0.40	114	23.8	1.46	1.47		
1911-15 ..	24.0		14.8		1.39	0.39	1.16		1.54		0.16	1.33	1.29	0.21	0.10	0.12	0.38	108	28.0	1.40	1.57		
1916-20 ..	20.0		15.1		1.43	0.34	1.28		1.71		1.01	1.38	1.30	0.19	0.08	0.13	0.34	92	15.4	1.64	1.72		
1921-25 ..	19.9		12.3		1.01	0.19	1.38		1.66		0.32	1.14	0.97	0.16	0.12	0.12	0.23	71	11.7	1.36	1.63		
1926-30 ..	16.2		12.3		0.90	0.14	1.52		2.29		0.30	1.00	0.72	0.16	0.14	0.18	0.25	64	10.2	1.60	1.63		
1931-35 ..	13.8		12.1		0.79	0.11	1.66		0.72		2.99	0.30	0.26	0.85	0.47	0.14	0.16	0.17	0.25	63	11.6	0.99	1.38
1936-40 ..	13.6		13.4		0.72	0.09	1.87		0.80		3.67	0.38	0.19	0.83	0.67	0.13	0.15	0.15	0.70	56	10.9	0.48	0.96
1941-45 ..	15.4		16.0		0.90	0.11	2.38		1.15		3.99	0.58	0.14	0.91	1.14	0.16	0.12	0.12	1.27	48	8.0	0.27	1.04
1946-50 ..	18.2	11.8	0.53	0.06	2.10	1.07	3.31	0.55	0.08	0.62	0.87	0.13	0.12	0.09	0.29	32	3.0	0.07	0.53				
1951-55 ..	15.3	13.5	11.7	11.6	0.23	0.02	2.32	1.23	3.45	0.58	0.10	0.60	0.97	0.11	0.13	0.08	0.22	23	0.8	0.07	0.46		
1956 ..	15.9	14.0	11.7	11.7	0.13	0.01	2.42	1.27	3.46	0.59	0.04	0.67	0.96	0.11	0.15	0.10	0.22	21	0.4	—	0.30		
1957 ..	16.2	14.4	11.4	11.3	0.12	0.02	2.45	1.19	3.34	0.56	0.12	0.65	0.83	0.10	0.15	0.09	0.21	22	0.5	—	0.28		

(a) Death-rates from 1939 to 1949 relate to the civilian population only.

(b) The rates are per 1,000 total births from 1928 when still births were first registered. Prior to this year the rates are per 1,000 live births, and are estimated to be approx. 0.05 in excess of the rate per 1,000 total births. From 1931 deaths from abortion are excluded.

(c) Deaths from vehicles and horses 1906–10, 1911–39 estimated, and from 1940 actual deaths from motor vehicles and other road traffic accidents.

(d) Comparable figures are not available for this period.

TABLE V.3—Deaths by cause—Administrative County of London, 1957

Cause	Sex	0—	1—	5—	15—	25—	45—	65—	75+	Total	
										1957	1956
1. Tuberculosis—respiratory ..	M	—	—	—	2	37	123	74	47	283	321
	F	—	1	—	1	36	27	15	15	95	102
2. Tuberculosis—other ..	M	—	1	2	2	5	10	5	1	26	19
	F	—	1	1	1	2	6	5	8	24	13
3. Syphilitic disease ..	M	—	—	—	—	4	35	48	17	104	110
	F	—	—	—	—	—	9	11	22	42	47
4. Diphtheria ..	M	—	—	—	—	—	—	—	—	—	—
	F	—	—	—	—	—	1	—	—	1	2
5. Whooping cough ..	M	—	—	—	—	—	—	—	—	—	—
	F	1	—	—	—	—	—	—	—	1	5
6. Meningococcal infection ..	M	3	1	1	—	—	—	—	—	5	6
	F	2	3	1	—	—	—	—	—	6	9
7. Acute poliomyelitis ..	M	—	—	3	1	5	1	—	—	10	4
	F	—	—	1	—	—	1	—	—	2	2
8. Measles ..	M	—	5	1	1	—	—	—	—	7	—
	F	—	3	—	—	—	1	—	—	4	2
9. Other infective, &c., diseases	M	4	3	—	3	7	14	4	3	38	34
	F	3	3	1	1	2	18	11	5	44	39
10. Malignant neoplasm: Stomach	M	—	—	—	1	24	228	196	141	590	540
	F	—	—	—	—	14	103	137	176	430	437
11. Malignant neoplasm: Lung, bronchus	M	—	—	—	2	37	891	525	198	1,653	1,636
	F	—	—	—	—	19	142	93	83	337	278
12. Malignant neoplasm: Breast	M	—	—	—	—	—	2	3	1	6	9
	F	—	—	—	—	64	316	167	152	699	727
13. Malignant neoplasm: Uterus	F	—	—	—	1	40	139	89	52	321	315
14. Other malignant and lymphatic neoplasms	M	3	9	5	15	104	602	576	552	1,866	1,945
	F	2	3	6	10	81	634	545	586	1,867	1,837
15. Leukemia, aleukemia	M	—	6	7	9	14	32	14	26	108	102
	F	—	4	6	3	15	22	13	16	79	94
16. Diabetes ..	M	—	—	1	—	6	15	26	19	67	84
	F	—	—	—	1	2	26	62	65	156	158
17. Vascular lesions of nervous system	M	—	—	1	2	30	346	479	630	1,488	1,593
	F	—	2	—	2	33	346	656	1,359	2,398	2,565
18. Coronary disease, angina ..	M	—	—	—	—	126	1,263	1,103	889	3,381	3,387
	F	—	—	—	—	16	346	743	1,056	2,161	2,167
19. Hypertension with heart disease	M	—	—	—	—	3	65	135	183	386	426
	F	—	—	—	—	—	44	146	373	563	601
20. Other heart disease ..	M	1	1	—	11	62	251	400	994	1,720	1,855
	F	—	1	—	3	88	243	460	1,858	2,653	2,882
21. Other circulatory disease ..	M	—	—	—	2	26	179	252	340	799	795
	F	—	—	1	3	25	121	260	620	1,030	1,134
22. Influenza ..	M	—	3	3	7	13	71	60	36	193	60
	F	1	—	9	10	14	45	43	69	191	60
23. Pneumonia ..	M	67	17	3	3	23	216	288	445	1,062	1,023
	F	50	11	8	3	22	103	200	656	1,053	1,162
24. Bronchitis ..	M	24	3	1	2	12	509	634	647	1,832	2,036
	F	11	3	2	—	13	115	210	522	876	1,113
25. Other diseases of respiratory system	M	4	2	1	3	8	70	76	67	231	229
	F	—	1	—	—	9	19	18	47	94	126
26. Ulcer of stomach and duodenum	M	—	—	—	1	15	104	124	96	340	385
	F	—	—	—	—	2	24	46	87	159	155
27. Gastritis, enteritis and diarrhoea	M	13	2	—	1	7	16	14	15	68	71
	F	9	—	1	—	2	17	44	54	127	112
28. Nephritis and nephrosis ..	M	1	—	4	9	22	41	30	26	133	184
	F	—	1	1	3	12	32	27	29	105	125
29. Hyperplasia, prostate ..	M	—	—	—	—	—	12	68	168	248	262
	F	—	—	—	5	23	—	—	—	28	27
30. Pregnancy, childb. : abortn.	M	105	12	7	4	20	18	11	2	179	164
31. Congenital malformations ..	F	104	11	8	6	18	14	8	6	175	134
32. Other defined and ill defined diseases	M	418	18	15	14	81	275	234	346	1,401	1,356
	F	308	14	10	14	84	283	296	642	1,651	1,698

TABLE V.3 (contd.)—Deaths by cause—Administrative County of London, 1957

Cause	Sex	0—	1—	5—	15—	25—	45—	65—	75+	Total	
										1957	1956
33. Motor vehicle accidents ..	M	1	2	9	47	41	50	29	37	216	208
	F	—	—	6	7	6	17	20	22	78	109
34. All other accidents	M	11	13	15	31	72	102	59	77	380	397
	F	10	6	2	2	10	37	55	162	284	331
35. Suicide	M	—	—	—	16	89	142	42	21	310	301
	F	—	—	—	6	47	77	38	20	188	179
36. Homicide, operations of war	M	2	1	—	2	3	3	—	1	12	15
	F	2	1	1	2	2	3	3	—	14	13
ALL CAUSES	M	657	99	79	191	896	5,686	5,509	6,025	19,142	19,557
	F	503	69	65	84	701	3,331	4,421	8,762	17,936	18,760

TABLE V.4—Weather during 1957
(as recorded at Kew Observatory)

Month	Temperature		Rainfall		Sunshine	
	Mean (a)	Difference from Average (b)	Total	Difference from Average (b)	Total	Difference from Average (c)
	°F	°F	ins.	ins.	hrs.	hrs.
January	43.7	+4.0	1.44	—0.52	55.4	+13.6
February	43.3	+3.0	2.99	+1.44	73.2	+14.8
March	49.6	+6.8	1.02	—0.52	107.9	+1.2
April	49.1	+1.6	0.34	—1.37	175.5	+26.3
May	52.2	—1.4	1.05	—0.70	207.5	+10.0
June	61.9	+2.5	0.97	—1.01	290.8	+90.3
July	64.0	—1.3	3.28	+0.90	175.9	—19.6
August	61.5	—0.3	3.84	+1.60	165.4	—19.6
September	56.5	—0.9	2.49	+0.50	103.7	—37.2
October	53.2	+2.9	1.84	—0.67	95.4	+2.2
November	45.1	+0.9	2.29	—0.05	70.1	+18.9
December	41.4	+0.7	1.73	—0.43	48.5	+11.2
Year	51.8	+1.8	23.28	—0.83	1,569.3	+112.1

(a) Average of the daily means of 24 hourly readings.

(b) Average over the 80 years ended 1950.

(c) Average over the 70 years ended 1950.

TABLE V.5.—Notifiable infectious diseases—Annual number of notifications and numbers per 1,000 of population—Administrative County of London, 1937-1957

(a) Rate per 1,000 live births registered in London. (b) Rate per 1,000 total births after correction for London residence 1937-50; from 1951 rate per 1,000 total births registered in London. For cause of increase from this date see page 16 of *Annual Report for 1951*. (c) Comparable figures are available for all years (1937-50) and for last quarter only—Rates are adjusted on an annual basis. (d) Cases related to live 22 weeks only—Rates are adjusted on an annual basis. (e) In order to ensure uniformity of diagnosis the practice of the Registrar General has been followed in producing this table, namely in taking full account of any known change in diagnostic after the receipt of the original notification. These corrections were not available prior to 1944. Comparable figures can be obtained by the method given in the footnote to this table in the years 1947-51.

TABLE V. 6.—Notification of certain infectious diseases—distribution by age and date of notification—Administrative County of London, 52 weeks commencing week ended 5th January, 1957

Four-weekly periods 1957		Dysentery				Measles				Meningococcal infection				Pneumonia				Polio-myelitis								Scarlet fever				Whooping cough			
																		Paralytic				Non-paralytic or not stated											
		Ages				Ages				Ages				Ages				Ages				Ages				Ages				Ages			
		0-4	5-14	15+	Total	0-4	5-14	15+	Total	0-4	5-14	15+	Total	0-4	5-14	15+	Total	0-4	5-14	15+	Total	0-4	5-14	15+	Total	0-4	5-14	15+	Total	0-4	5-14	15+	Total
1-4	M	35	30	13	79	813	572	13	1,399	2	1	—	3	15	4	56	75	—	3	2	5	—	9	1	10	27	36	3	67	148	92	—	240
	F	34	22	38	95	846	546	19	1,414	3	1	—	4	18	5	61	85	6	2	2	10	—	7	2	28	31	4	84	158	118	7	283	
5-8	M	56	58	24	138	1,329	1,628	15	2,978	—	—	1	1	29	11	61	103	—	—	—	—	—	6	2	8	33	86	3	123	191	105	2	298
	F	60	56	53	169	1,226	1,531	28	2,789	—	2	1	3	23	14	52	91	—	2	4	—	—	2	2	33	87	6	126	199	136	7	344	
9-12	M	46	67	29	147	2,203	1,833	28	4,071	2	—	1	3	17	10	88	116	—	2	1	3	1	3	1	5	27	80	4	112	146	119	2	268
	F	32	41	46	122	2,014	1,797	58	3,874	—	—	—	—	23	20	75	118	1	1	1	3	—	1	1	2	29	89	4	122	183	139	4	326
13-16	M	35	44	18	99	2,012	1,731	26	3,774	3	1	1	5	7	3	60	70	1	1	2	4	—	1	—	1	25	87	5	117	134	106	4	244
	F	28	37	24	84	1,932	1,733	49	3,720	2	—	2	4	3	3	38	46	—	1	2	3	1	—	1	2	29	90	3	123	142	119	5	266
17-20	M	16	14	24	56	1,778	958	29	2,769	4	1	—	5	6	6	48	60	1	2	2	5	—	3	—	3	30	45	5	80	88	73	4	165
	F	14	11	19	45	1,682	943	47	2,674	1	—	—	1	4	1	39	45	3	2	1	6	—	1	—	1	20	47	—	67	94	85	5	183
21-24	M	39	47	14	100	1,018	870	21	1,910	3	—	1	4	9	8	34	51	4	6	1	11	3	—	1	4	28	77	4	109	80	55	3	138
	F	36	27	41	105	988	835	29	1,873	4	—	1	5	7	1	33	42	2	1	1	4	—	1	3	4	26	72	6	104	79	47	4	130
25-28	M	32	14	12	58	638	394	8	1,043	1	1	1	3	3	3	22	28	3	4	3	10	1	6	1	8	18	48	3	69	50	44	—	94
	F	18	15	23	57	652	391	17	1,066	1	1	1	3	3	4	25	34	3	—	6	9	1	3	2	6	14	42	5	61	61	56	2	119
29-32	M	22	4	7	33	257	179	2	441	—	1	—	1	4	5	17	26	10	8	2	20	5	15	6	26	15	54	2	71	65	37	—	102
	F	12	6	18	36	251	167	6	424	—	—	—	—	2	3	10	15	7	4	4	9	2	7	5	14	21	33	1	55	46	56	2	104
33-36	M	12	7	5	24	131	42	2	176	4	—	—	4	3	4	23	30	12	6	7	25	8	8	2	18	14	22	3	39	63	46	—	109
	F	14	6	19	39	116	50	2	169	4	—	—	4	3	1	8	12	14	3	4	21	2	9	7	18	18	17	2	32	77	48	2	121
37-40	M	21	12	15	48	32	8	1	41	—	1	1	2	13	14	85	112	2	7	2	11	2	5	1	8	14	33	3	50	55	26	1	82
	F	11	7	14	32	45	9	3	57	2	—	—	2	4	17	57	79	2	4	10	16	1	—	3	4	20	43	1	64	61	20	6	87
41-44	M	18	12	11	41	21	23	—	44	4	3	1	8	21	23	227	271	1	1	4	6	—	—	—	—	29	46	2	77	20	7	1	28
	F	14	6	14	34	26	27	—	53	2	1	1	4	12	32	192	237	4	1	1	6	—	—	1	1	14	42	—	56	26	11	1	38
45-48	M	57	35	22	115	32	30	—	63	—	1	—	1	4	3	118	125	1	2	3	6	—	—	—	—	25	42	3	70	27	20	1	48
	F	54	33	27	114	42	29	—	71	2	—	—	2	3	1	58	62	1	—	1	2	—	1	—	1	38	60	4	103	28	14	3	45
49-52	M	84	103	28	215	36	32	1	69	2	—	—	2	6	11	101	118	—	1	—	1	—	1	—	—	25	61	2	89	31	12	—	43
	F	77	63	56	199	43	25	3	73	—	—	—	—	7	3	70	80	—	—	1	1	—	1	—	1	27	69	1	97	25	16	—	41
Total (52 weeks)	M	473	447	222	1,153	10,300	8,300	146	18,778	25	10	7	42	137	105	940	1,185	35	43	29	107	20	56	15	91	310	717	42	1,073	1,098	742	18	1,859
	F	404	324	392	1,131	9,855	8,103	261	18,257	21	5	6	32	112	107	718	946	37	21	35	94	7	23	27	58	317	736	37	1,094	1,173	865	48	2,089

Notes: 1. Where the total figures are in excess of the sum of the age groups, the difference is due to cases 'age not known'.

2. The totals of these figures will not necessarily agree with the total notifications given in Table V. 3 which relates to the calendar year 1957 and which includes bulk notifications from hospitals not notified individually.

TUBERCULOSIS

THE NOTIFICATION rates of tuberculosis were slightly lower than in 1956, with the exception of pulmonary notifications at 0·4 years for both boys and girls and non-pulmonary notifications for girls aged 5–14 years, but the latter is based on such small numbers as to have no statistical significance. Death rates also showed the same general trend; deaths from pulmonary tuberculosis under 25 years of age and all deaths from non-pulmonary tuberculosis are now so few that considerable random fluctuations occur in the rates from year to year. The number of cases on the registers remains practically unchanged, the figure has been 38,000 odd for the past three years. The diagram on page 26 shows the trend of notifications, deaths and numbers on the registers of chest clinics over the last decade.

The services provided by the Council as local health authority and described in detail in my report for 1955 for the care and after-care of tuberculous patients and the prevention of tuberculosis continued to be available during the year. They are summarised for the years 1952–57 in Table T9 (page 31).

The voluntary tuberculosis care committees associated with most of the 29 chest clinics in London continued their valuable work of assisting patients and their families financially or in other ways where help was not available from official sources. The Council's local tuberculosis care organisers act as secretaries to these committees.

The numbers of children vaccinated during the year under the Council's schemes for the B.C.G. vaccination of susceptible (tuberculin negative) child contacts of known tuberculous patients, diabetic children and thirteen-year-old school children are shown in Table T13 (page 33).

In addition to the B.C.G. vaccination schemes other preventive measures arranged by the Council include the chest X-ray of all newly appointed staff who are likely to work in close and frequent contact with children, staff and senior pupils at the Council's occupation centres for mentally deficient persons (Table T12, page 33) and of positive reactors among thirteen-year-old school children tested with a view to B.C.G. vaccination.

Epidemiological investigations are made of the contacts of cases of tuberculosis notified among the children, staff or residents in the Council's establishments. Similar investigations are carried out at secondary schools where the tuberculin positivity rate disclosed at the pre-B.C.G. vaccination tests is significantly higher than the average for secondary schools in the area. (See Table T8, page 30).

TABLE T1—Tuberculosis—Statutory notifications and deaths—Administrative County of London, 1948–57 (a)

Year	Pulmonary tuberculosis				Non-pulmonary tuberculosis			
	Statutory notifications		Deaths		Statutory notifications		Deaths	
	No.	Annual rate per 1,000 living	No.	Annual rate per 1,000 living	No.	Annual rate per 1,000 living	No.	Annual rate per 1,000 living
1948 ..	5,473	1·61	1,900	0·56	600	0·18	202	0·06
1949 ..	5,699	1·68	1,585	0·47	553	0·16	156	0·05
1950 ..	5,189	1·53	1,225	0·36	529	0·16	122	0·04
1951 ..	4,897	1·46	1,154	0·34	507	0·15	125	0·04
1952 ..	4,713	1·40	933	0·28	518	0·15	86	0·03
1953 ..	4,668	1·40	690	0·21	410	0·12	73	0·02
1954 ..	4,231	1·27	596	0·18	410	0·12	62	0·02
1955 ..	3,757	1·14	517	0·16	365	0·11	44	0·01
1956 ..	3,602	1·10	423	0·13	327	0·10	32	0·01
1957 ..	3,460	1·06	378	0·12	294	0·09	50	0·02

(a) Excluding posthumous notifications.

TREND OF TUBERCULOSIS LONDON A.C. 1948-57

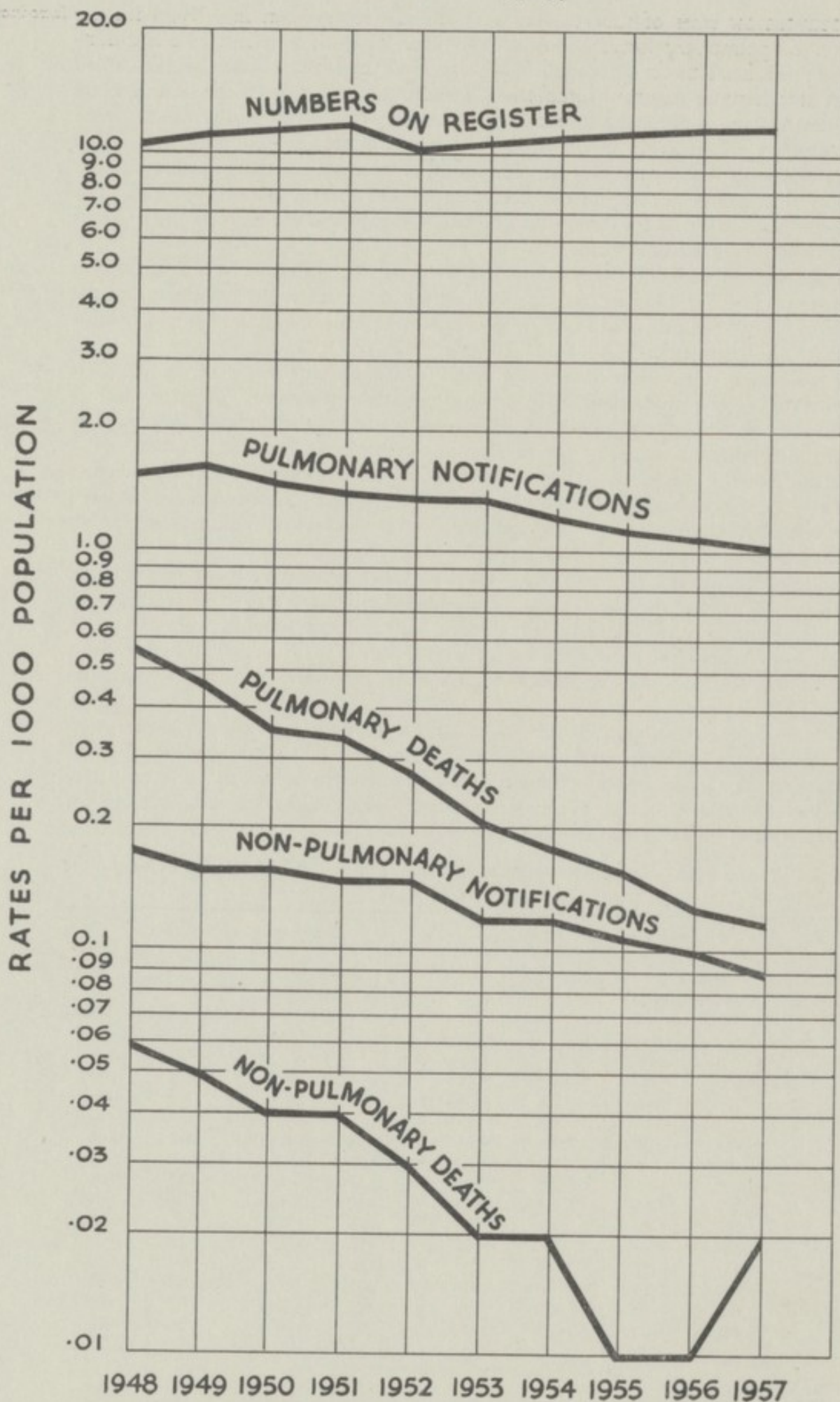


TABLE T2—*Pulmonary tuberculosis—Notification and death rates per 1,000 living by age and sex, 1948–1957*

Year	Age									
	0–4		5–14		15–44		45 and over		All ages	
	M	F	M	F	M	F	M	F	M	F
<i>Notification rates</i>										
1948 ..	1.08	0.94	0.87	0.96	2.66	2.40	1.60	0.34	1.93	1.32
1949 ..	1.08	0.94	0.82	1.04	2.70	2.45	1.84	0.39	2.03	1.36
1950 ..	1.15	0.86	0.75	0.77	2.46	2.34	1.59	0.33	1.83	1.26
1951 ..	0.98	0.92	0.74	0.68	2.18	1.98	1.91	0.36	1.80	1.16
1952 ..	0.65	0.70	0.53	0.61	2.16	1.90	1.88	0.43	1.73	1.11
1953 ..	0.84	0.85	0.69	0.65	2.01	1.80	2.09	0.42	1.76	1.08
1954 ..	0.64	0.55	0.48	0.55	1.79	1.71	2.02	0.41	1.60	0.99
1955 ..	0.56	0.42	0.39	0.48	1.65	1.48	1.82	0.41	1.45	0.86
1956 ..	0.33	0.37	0.31	0.34	1.62	1.31	2.01	0.41	1.47	0.78
1957 ..	0.43	0.40	0.30	0.32	1.60	1.27	1.92	0.38	1.44	0.73
<i>Death rates</i>										
1948 ..	0.06	0.05	0.01	0.03	0.66	0.65	1.27	0.23	0.76	0.37
1949 ..	0.02	0.03	0.01	0.02	0.46	0.46	1.21	0.26	0.65	0.30
1950 ..	0.05	—	0.01	0.01	0.34	0.32	0.99	0.22	0.51	0.22
1951 ..	0.02	0.02	—	0.02	0.27	0.21	1.23	0.22	0.53	0.18
1952 ..	—	—	—	—	0.18	0.16	1.08	0.18	0.44	0.14
1953 ..	0.02	0.03	0.00	0.00	0.12	0.11	0.81	0.13	0.33	0.10
1954 ..	—	0.03	—	0.01	0.07	0.10	0.74	0.12	0.28	0.09
1955 ..	0.02	—	0.00	—	0.07	0.06	0.66	0.11	0.25	0.07
1956 ..	—	0.02	—	—	0.07	0.05	0.52	0.09	0.21	0.06
1957 ..	—	0.009	—	—	0.06	0.05	0.46	0.08	0.19	0.05

TABLE T3—*Non-pulmonary tuberculosis—Notification and death rates per 1,000 living by age and sex, Administrative County of London, 1948–1957*

Year	Age									
	0–4		5–14		15–44		45 and over		All ages	
	M	F	M	F	M	F	M	F	M	F
<i>Notification rates</i>										
1948 ..	0.398	0.289	0.479	0.388	0.165	0.229	0.048	0.049	0.177	0.176
1949 ..	0.275	0.312	0.404	0.375	0.156	0.214	0.054	0.041	0.157	0.168
1950 ..	0.241	0.296	0.265	0.271	0.164	0.247	0.049	0.042	0.140	0.171
1951 ..	0.207	0.269	0.294	0.257	0.143	0.223	0.053	0.043	0.138	0.162
1952 ..	0.198	0.168	0.275	0.173	0.144	0.233	0.070	0.085	0.141	0.165
1953 ..	0.144	0.160	0.152	0.182	0.138	0.175	0.044	0.070	0.109	0.135
1954 ..	0.142	0.149	0.139	0.187	0.128	0.176	0.069	0.071	0.111	0.134
1955 ..	0.110	0.116	0.140	0.121	0.140	0.189	0.042	0.037	0.105	0.116
1956 ..	0.111	0.089	0.078	0.095	0.109	0.176	0.048	0.058	0.084	0.114
1957 ..	0.076	0.063	0.069	0.100	0.105	0.168	0.034	0.052	0.073	0.106
<i>Death rates</i>										
1948 ..	0.188	0.175	0.055	0.062	0.054	0.047	0.048	0.042	0.063	0.056
1949 ..	0.092	0.119	0.065	0.039	0.052	0.027	0.057	0.025	0.059	0.034
1950 ..	0.043	0.074	0.032	0.039	0.036	0.022	0.042	0.038	0.038	0.034
1951 ..	0.071	0.067	0.031	0.048	0.040	0.019	0.041	0.039	0.042	0.033
1952 ..	0.053	0.040	0.010	0.010	0.027	0.018	0.033	0.029	0.029	0.023
1953 ..	0.024	0.076	0.005	0.010	0.017	0.017	0.025	0.029	0.019	0.025
1954 ..	0.025	0.018	0.005	—	0.016	0.009	0.035	0.029	0.021	0.016
1955 ..	0.008	0.009	0.009	0.005	0.012	0.004	0.021	0.024	0.014	0.013
1956 ..	0.009	—	—	—	0.009	0.004	0.023	0.014	0.012	0.007
1957 ..	0.008	0.009	0.009	0.005	0.011	0.004	0.030	0.027	0.017	0.014

TABLE T4—*Tuberculosis—Statutory notifications by age groups, 1957*

Form of tuberculosis notified	Sex	Number of notifications of new cases of tuberculosis by age											Total all ages
		0—	1—	5—	10—	15—	20—	25—	35—	45—	55—	65+	
Pulmonary tuberculosis ..	M.	6	45	39	25	116	192	408	336	395	366	263	2,191
	F.	3	42	31	35	123	190	370	207	123	84	61	1,269
Other forms of tuberculosis ..	M.	1	8	7	8	16	13	25	15	9	4	5	111
	F.	1	6	11	10	14	21	57	26	14	11	12	183
All forms of tuberculosis ..	M.	7	53	46	33	132	205	433	351	404	370	268	2,302
	F.	4	48	42	45	137	211	427	233	137	95	73	1,452

TABLE T5—*Tuberculosis—Deaths in Administrative County of London, 1957*

Form of tuberculosis	Sex	Age at death								Total all ages
		0—	1—	5—	15—	25—	45—	65—	75+	
Pulmonary tuberculosis	M.	—	—	—	2	37	123	74	47	283
	F.	—	1	—	1	36	27	15	15	95
Other forms of tuberculosis	M.	—	1	2	2	5	10	5	1	26
	F.	—	1	1	1	2	6	5	8	24
All forms of tuberculosis	M.	—	1	2	4	42	133	79	48	309
	F.	—	2	1	2	38	33	20	23	119

TABLE T6—Statutory notification of non-pulmonary tuberculosis—Distribution according to site and age, Administrative County of London, 1957

Site of tuberculous lesion	Numbers of notifications of new cases of non-pulmonary tuberculosis by age				Total all ages
	0-4	5-14	15-24	25+	
Bones and joints	8	15	23	50	96
Abdomen	—	1	2	10	13
Peripheral glands	3	14	21	51	89
Meninges and C.N.S.	5	2	6	5	18
Skin and erythema nodosum	—	1	1	1	3
Genito-urinary	—	2	8	58	68
Other sites	—	1	3	3	7
All sites	16	36	64	178	294

TABLE T7—Patients on the registers*—1948-1957

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Cases on the register at the end of the year										
Pulmonary—										
Males	17,224	18,203	19,090	19,119	17,336	18,475	18,897	19,300	19,715	19,946
Females	13,549	14,223	15,031	15,556	14,672	14,930	15,576	15,846	15,928	15,836
Other forms :										
Males	2,889	2,752	2,591	2,520	1,530	1,508	1,442	1,371	1,339	1,274
Females	3,147	3,015	3,068	2,954	1,850	1,820	1,709	1,704	1,710	1,709
Total	36,809	38,193	39,780	40,149	35,388	36,733	37,624	38,221	38,692	38,765
No. per 1,000 of population	11.0	11.3	11.7	12.0	10.5	10.9	11.3	11.6	11.8	11.9

* Since 1952 figures are taken from chest clinic registers; for earlier years they represent Borough M.O.H. register.

TABLE T8—Summary of investigations into tuberculosis 'incidents' at Council establishments in 1957

Establishment	Notified case	Children				Adults	
		Tuber- culin tested	Positive reactors	X-rayed	Abnormal	X-rayed	Abnormal
Day school ..	Pupil	22	4	3	—	—	—
	Pupil	33	8	7	—	—	—
	Teacher	182	17	11	1	4	—
	Coach driver ..	220	14	14	—	—	—
	Teacher	132	4	4	—	6	—
	Teacher	61	6	4	—	2	—
	Teacher	290	20	20	—	16	—
	Teacher	240	77	42	—	19	—
	School bus driver	20	1	1	—	—	—
	Schoolkeeper ..	66	6	10	3	10	1
	Teacher	339	34	34	—	—	—
	Teacher	36	5	12	1	2	1
	Pupil	30	1	1	—	1	—
	Teacher	34	—	—	—	10	—
	Meals supervisor ..	468	30	49	—	11	—
	Teacher	19	2	5	—	10	—
	Pupil	654	18	—	—	30	—
	Pupil	—	—	496	2	33	—
	Pupil	239	19	12	1	3	—
	Pupil	528	40	21	—	—	—
	Pupil	351	15	15	—	21	—
	Schoolkeeper ..	530	25	23	1	23	—
	Meals supervisor ..	16	2	4	1	—	—
	Kitchen helper ..	106	6	5	—	—	—
	Pupil	55	—	—	—	4	—
	Pupil	596	18	17	1	9	—
	School bus driver	22	1	3	—	—	—
	Pupil	—	—	437	2	21	—
Total (27) ..		5,289	373	1,250	13	235	2
Nursery school	Kitchen keeper ..	146	5	5	—	10	—
	Kitchen keeper ..	45	5	—	—	15	—
Day nursery ..	Boiler man	111	10	10	3	—	—
	Student nursery nurse	13	1	1	1	15	—
	Infant	53	2	—	—	17	—
	Matron	20	8	8	—	14	—
Residential nursery	Nursery assistant	35	3	3	—	19	—
	Nursery nurse ..	62	6	6	—	21	—
Residential school	Housefather	11	5	5	—	4	—
	Housematron	39	8	13	1	15	—
	Pupil	53	14	10	—	21	3
	Nursery assistant	18	—	1	—	10	—
Welfare home	Resident	—	—	—	—	5	1
	Resident	—	—	—	—	140	1
	Resident	19	—	—	—	34	1
	Resident	8	2	2	1	2	1
Grand Total (43)		5,922	442	1,314	19	577	9

TABLE T9—Summary of services provided for tuberculous patients—Administrative County of London
1952–57

	1952	1953	1954	1955	1956	1957
<i>Clinic registers</i>						
Total on registers at the end of the year	35,388	36,733	37,624	38,221	38,695	38,765
<i>Work of local tuberculosis care organisers</i>						
Patients assisted for the first time with :—						
Beds and bedding	541	431	435	291	240	176
Clothing or footwear	961	1,089	1,334	1,014	847	734
Patients at the end of the year receiving :—						
Extra nourishment	2,234	2,451	2,391	2,285	2,183	1,938
Home help service	673	618	729	660	624	528
<i>Home care and treatment</i>						
At the end of the year, patients :—						
Awaiting admission to hospital	738	494	209	71	22	34
Under treatment in their own homes	808	804	930	1,050	334	329
Receiving attention by home nurses	367	466	530	498	405	371
Home visiting by tuberculosis health visitors—						
Total visits (including contacts)	97,071	94,587	85,439	86,302	83,137	80,302
<i>Recuperative holidays</i>						
Patients sent on holidays arranged through Spero	Not available					
Holiday Scheme of N.A.P.T.				340	322	
<i>Diversional therapy</i>						
At the end of the year, weekly classes at Chest Clinics	Not available				175	147
Receiving instruction in their own homes					239	259
<i>Rehabilitation</i>						
At the end of the year the Council was financially						
responsible for rehabilitants at :—						
British Legion Village, Maidstone	25	25	33	36	33	29
Papworth Village Settlement, Cambridge	17	17	23	22	26	19
Enham-Alamein Village Centre, Andover	18	21	22	15	10	9
Barrowmore Hall, Chester	2	2	2	2	—	1
Correspondence courses arranged through the British						
Council for Rehabilitation for patients undergoing						
prolonged treatment at home	65	113	80	77	33	20
<i>At boarding open-air schools</i>						
Children convalescent from tuberculosis :—						
At the beginning of the year	33	29	34	22	12	8
Admitted during the year	47	27	23	2	3	—
At the end of the year	29	34	22	12	8	6
Awaiting admission at end of year	11	7	1	—	2	—
<i>Boarding-out of child contacts</i>						
Children in nurseries and foster homes at the						
beginning of the year	419	440	450	365	279	172
Placed during the year	490	562	411	398	272	229
Boarded-out at the end of the year	440	450	365	279	172	136
Average number boarded-out at any one time	442	486	417	310	215	164
<i>Boarding-out of child contacts for segregation during B.C.G.</i>						
<i>vaccination</i>						
Children in nurseries and foster homes at the						
beginning of the year	15	24	6	11	7	4
Placed during the year	67	38	39	40	28	24
Boarded-out at the end of the year	24	6	11	7	4	3
Average number boarded-out at any one time	18	14	10	19	13	7
<i>Hostels for homeless infective tuberculous men</i>						
In residence at the beginning of the year	54	44	59	63	58	69
Recommendations approved during the year	61	84	57	49	82	60
In residence at the end of the year	44	59	63	58	69	77

TABLE T10—Principal tuberculosis statistics—Metropolitan Boroughs and the Administrative County of London, 1957

Metropolitan Boroughs	Estimated home population mid 1957	New notifications				New notifi- cations per 1,000 popula- tion	Deaths from tuberculosis			Tuber- culosis deaths per 1,000 popula- tion	Pulmonary tuber- culosis deaths per 1,000 popula- tion aged 15 and over	Number of tuberculosis cases on clinic registers at 31.12.57		Cases on register per 1,000 popula- tion
		Pulmonary	Tuber- culosis of Meninges and C.N.S.	Other non- pulmonary tuber- culosis	Total		Pulmonary	Non- pulmonary tuber- culosis	Total deaths			Total	Percentage of pulmonary cases positive during 1957	
Division 1														
Chelsea	50,600	45	—	6	51	1·01	2	—	2	0·04	0·05	441	2·7	8·7
Fulham	116,200	121	—	8	129	1·11	18	5	23	0·20	0·19	1,364	2·4	11·7
Hammersmith	111,700	126	3	13	142	1·27	8	1	9	0·08	0·09	1,517	1·3	13·6
Kensington	167,900	191	2	14	207	1·23	13	4	17	0·10	0·09	1,590	2·6	9·5
Division 2														
Hampstead	97,130	108	—	9	117	1·20	4	1	5	0·05	0·05	1,052	7·1	10·8
Paddington	120,500	191	1	17	209	1·73	11	1	12	0·10	0·11	1,440	2·8	12·0
St. Marylebone	72,530	65	—	6	71	0·98	12	—	12	0·17	0·19	869	4·6	12·0
St. Pancras	132,000	238	1	15	254	1·92	17	1	18	0·14	0·16	1,249	★	9·5
Westminster, City of ..	95,930	102	—	8	110	1·15	18	4	22	0·23	0·21	827	★	8·6
Division 3														
Finsbury	34,830	38	—	1	39	1·12	7	—	7	0·20	0·26	271	8·6	7·8
Holborn	22,230	32	—	—	32	1·44	4	—	4	0·18	0·21	241	6·6	10·8
Islington	227,800	255	3	26	284	1·25	28	3	31	0·14	0·16	2,818	3·6	12·4
Division 4														
Hackney	165,000	127	1	11	139	0·84	20	1	21	0·13	0·15	1,853	3·1	11·2
Shoreditch	43,870	31	—	8	39	0·89	5	—	5	0·11	0·15	423	5·7	9·6
Stoke Newington	50,480	35	—	4	39	0·77	6	—	6	0·12	0·15	755	1·7	15·0
Division 5														
Bethnal Green	50,940	41	—	2	43	0·84	4	1	5	0·10	0·10	834	2·4	16·4
City of London	5,100	5	—	—	5	0·98	—	—	—	—	—	61	5·4	12·0
Poplar	67,080	53	1	3	57	0·85	9	—	9	0·13	0·18	589	2·5	8·8
Stepney	97,810	120	1	17	138	1·41	20	—	20	0·20	0·27	1,231	2·3	12·6
Division 6														
Deptford	70,970	143	—	8	151	2·13	12	3	15	0·21	0·22	1,198	2·9	16·9
Greenwich	88,910	76	—	2	78	0·88	7	1	8	0·09	0·10	1,075	3·4	12·1
Woolwich	146,200	131	—	14	145	0·99	20	2	22	0·15	0·18	2,030	0·6	13·9
Division 7														
Camberwell	177,700	222	2	16	240	1·35	22	4	26	0·15	0·16	1,771	1·4	10·0
Lewisham	220,900	220	1	26	247	1·12	31	2	33	0·15	0·18	2,797	★	12·7
Division 8														
Bermondsey	54,750	76	—	—	76	1·39	9	—	9	0·16	0·21	609	3·1	11·1
Lambeth	224,300	197	—	12	209	0·93	17	5	22	0·10	0·10	3,221	1·8	14·4
Southwark	91,140	121	—	7	128	1·40	14	4	18	0·20	0·20	1,456	4·1	16·0
Division 9														
Battersea	111,800	89	1	10	100	0·89	10	1	11	0·10	0·12	1,103	3·0	9·9
Wandsworth	337,700	261	1	13	275	0·81	30	6	36	0·11	0·11	4,080	3·5	12·1
LONDON	3,254,000	3,460	18	276	3,754	1·15	378	50	428	0·13	0·15	38,765	2·9	11·9

* Figures not available.

TABLE T11—Tuberculosis—Annual chest X-ray examination of mental defectives at senior occupation centres—Administrative County of London—1957

Division	Occupation centre E.B.—elder boys E.G.—elder girls	Average roll at time of examina- tion	Date of examina- tion	No. X-rayed		No. of cases of T.B. dis- covered
				Under 15	Over 15	
1	Hammersmith (E.B.) ..	34	29.1.57	—	3	—
3	Islington (E.G.) ..	34	24.9.57	—	26	—
	Archway (E.B.) ..	34	24.9.57	7	25	—
4	Dalston (E.B.) ..	50	11.2.57	—	18	—
5	Stepney (T.C.) ..	20	7.11.57	—	18	—
6	Greenwich (E.G.) ..	31	26.3.57	—	1	—
	Brockley (E.G.) ..	55	26.3.57	—	13	—
7	Peckham (E.B.) ..	63	12.2.57	5	43	—
9	Balham (E.B.) ..	50	7.11.57	1	33	—
	Earlsfield (E.G.) ..	60	7.11.57	1	41	2
	Totals ..	431		16	212	2

Annual X-ray examination of staff at occupation centres, 1957.

No. of existing staff X-rayed 64 All satisfactory.

TABLE T12—B.C.G. vaccination under L.C.C. schemes in 1956/57

1. Day schools—

1956/57

No. of schools visited	410
No. of 13-year-old children at school	*37,839
No. of consents	*27,858
No. Mantoux tested	*26,517
No. of positive reactors	* 3,452=13 per cent.
No. given B.C.G.	*23,023
No. vaccinated June, 1954, to December, 1957	67,815
Retests in 1957—	
No. of consents to retest	5,972
No. of retests	5,257
No. found negative	16=0.3 per cent.
No. re-vaccinated	16

2. Residential establishments—

No. of establishments visited in 1957	2
---	---

No. of children tested	72
No. of positive reactors	9=12.5 per cent.
No. given B.C.G.	63

3. Notifications of Tuberculosis (all forms) in 14- and 15-year-old children in

1953	70
1954	82
1955 (first full year after B.C.G.)	45
1956	38
1957	39

4. Tuberculosis contacts—

No. of contacts given B.C.G. vaccination in London ..	5,115
No. of contacts given B.C.G. vaccination in London since inception of scheme in 1950	26,019

5. Diabetics—

No. tuberculin tested	No figures available.
No. given B.C.G. in 1957	17
No. given B.C.G. since inception of scheme	51

* Divisional figures are shown in Table T.14

TABLE T13—B.C.G. vaccination of school children in Administrative County of London, 1956/57 (third year)—Divisional figures

Division	No. of 13-year-old school children	Total No. of consents	Alleged contacts of known cases	No. of children tested and read by B.C.G. units	Children not dealt with because of refusal of consent or absence		Positive reactors (among (4))		No. of negative reactors vaccinated by B.C.G. units
			Consents included in (2)		No.	Per cent. of (1)	No.	Per cent.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	4,783	3,338	1	3,157	1,625	33.9	472	14.9	2,685
2	4,040	3,057	20	2,964	1,056	26.1	450	15.2	2,513 (1 negative not vaccinated)
3	2,829	1,880	7	1,758	1,064	37.6	266	15.1	1,491 (1 negative not vaccinated)
4	4,093	2,975	7	2,776	1,310	30.3	304	11.0	2,472
5	3,078	2,345	9	2,280	789	25.6	364	16.0	1,916
6	4,183	3,255	57	3,130	996	23.8	384	12.3	2,740 (6 negatives not vaccinated)
7	5,133	3,890	76	3,656	1,401	27.3	387	10.6	3,256 (13 negatives not vaccinated)
8	4,362	3,170	56	3,017	1,289	29.6	401	13.3	2,608 (8 negatives not vaccinated)
9	5,338	3,948	58	3,779	1,501	28.1	424	11.2	3,342 (13 negatives not vaccinated)
Totals . .	37,839	27,858	291	26,517	11,031	29.2	3,452	13.0	23,023

GENERAL PUBLIC HEALTH

Housing

A LIMITED number of houses was made available for (a) families containing tuberculous persons recommended by chest physicians for urgent rehousing, and (b) applicants recommended by general practitioners and hospitals as suffering from very serious medical conditions aggravated by housing circumstances. Applications received during the year were dealt with as follows :

(a) Tuberculous persons—

Recommendations received	421
Nominated for rehousing	185
Recommendations not qualifying for rehousing	135
Under consideration at end of year	101

(b) Persons with very severe medical conditions—

Recommendations received	2,484
Nominated for rehousing	226
Recommendations not qualifying for rehousing	1,904
Under consideration at end of year	354

	1956	1957	
Areas represented as unfit for habitation	68	90	Slum clearance
Houses in such areas	3,345	2,409	
Areas surveyed but not represented by the end of the year	111	81	
Houses in such areas	3,255	2,004	
Public local inquiries	37	28	
Informal hearings	4	4	
Orders confirmed—			
(i) after inquiry or hearing	28	45	
(ii) without inquiry or hearing (no objections received)	9	13	
Town and Country Planning Act, 1947—			
Declaration of Unfitness Orders	2	—	
Houses involved	91	—	
Surveys following applications to the Council	92	68	Improvement grants
Searches following applications to metropolitan borough councils	193	158	
Premises scheduled as dangerous structures, searches made	1,439	1,094	Dangerous structures

Public health laboratory

The facilities available at the Medical Research Council's Public Health Laboratory at the County Hall and the close co-operation with its staff have proved of great value.

Milk sampling

Designation	Samples examined		T.B. Bacillus isolated		T.B. Bacillus NOT isolated		Test not completed*		Percentage positive of completed tests	
	1956	1957	1956	1957	1956	1957	1956	1957	1956	1957
Ordinary	169	43	5	—	158	38	6	5	2.96	—
Tuberculin tested	17	30	2	—	15	23	—	7	11.76	—
do. (farm bottled)	4	—	—	—	2	—	2	—	—	—
Total	190	73	7	—	175	61	8	12	3.68	—

* Guinea pigs died before completion of test or milk curdled.

Milk purchased for use in Council establishments :

	1956	1957
Liquid milk, samples taken by boroughs and county councils ..	1,420	1,162
Number found to be unsatisfactory	—	3
Dried milk, samples submitted to bacteriological examination ..	5	4
<i>No samples contained more than 100,000 organisms per gramme, nor was staphylococcus aureus isolated.</i>		

Sanitary inspection

The public health inspectors dealt with the following matters in Council establishments :

	1956	1957
Reports of infestation by a variety of pests	200	178
Visits and re-inspections involved	350	294
Inspections of school meals centres	500	420
Investigations of illness following consumption of school meals ..	22	15
Occasions when the meal was found to be the cause	—	2

Blind and partially-sighted persons

During the year, 1,785 examinations—35 less than in the previous year—were made in connection with certification under the National Assistance Act, 1948, of blind or partially-sighted persons. 69 persons were found to be neither blind nor partially-sighted. In addition, 334 certificates were accepted from other local authorities, hospitals and private ophthalmologists, this was an increase of 87 over the previous year. The percentage of new registrations recommended to obtain treatment increased from 51.5 per cent. to 53.8 per cent.

The results of examinations of persons newly registered during the year are given in Tables (i) and (ii) below.

TABLE (i)

Number of new registrations during the year with percentage recommended to obtain treatment

Age	Principal cause of defective vision				Total
	Cataract	Glaucoma	Retrolental fibroplasia	Other conditions	
0-4 years	3	—	2	9	14
5-15 years	—	—	—	2	2
16-64 years	41	20	—	168	229
65-74 years	62	31	—	159	252
75 years and over	240	45	—	321	606
Age not known	—	—	—	2	2
(a) Total No. of persons	346	96	2	661	1,105
(b) No. recommended to obtain treatment	223	68	—	304	595
(b) as percentage of (a)	64.5	70.8	—	46.0	53.8

TABLE (ii)

Number of treatments recommended in respect of newly registered persons

	No. of patients examined	Treatments recommended					Optical	Hospital Super- vision
		None	Medical	Surgical				
				Early	Later	If general condition permits		
Cataract	346	123	19	45	31	35	28	117
Glaucoma	96	28	16	1	5	4	2	50
Retrolental fibroplasia	2	2	—	—	—	—	—	—
Other conditions	661	357	58	16	11	11	48	211
TOTAL	1,105	510	93	62	47	50	78	378

Persons recommended to obtain treatment are re-examined at intervals after the initial registration. The number of persons re-examined for this reason in 1957 is shown in Table (iii).

TABLE (iii)
Re-examination of persons recommended to obtain treatment

	Principal cause of defective vision				Total
	Cataract	Glaucoma	Retrolental fibroplasia	Other conditions	
No. of persons re-examined	167	51	—	205	423
No. found to have had treatment ..	125	44	—	122	291
Percentage treated	74.9	86.2	—	59.5	68.7

As a consequence of successful treatment, 35 persons previously registered as blind were found, on re-examination, to be partially-sighted and 28 persons previously certified as blind or partially-sighted were found to be improved to such an extent as no longer to justify registration.

Figures for ophthalmia neonatorum are given on page 17.

Registration of nursing homes

	1956	1957
Register at beginning of year	41	39
New homes registered	1	—
Registrations cancelled—voluntary closure	3	1
Registered at end of year	39	38
Inspections :		
medical officers	60	51
public health inspectors	102	96
Homes exempted from registration	37	39

The registered homes provided the following accommodation :

Number of beds in home	Number of homes	Patients accommodated		
		Maternity†	Others*	Total
25 or over	9	209	216	425
20 to 24	5	25	85	110
15 to 19	7	20	95	115
10 to 14	9	37	74	111
5 to 9	6	22	23	45
Under 5	2	—	5	5
Total	38	313	498	811

† Each bed is registered for a maternity, medical or surgical case.

* Numbers include beds for medical and surgical patients which cannot be used if a maternity patient is accommodated in the same room.

Welfare Committee establishments

Medical supervision of establishments of all types under the control of the Welfare Committee was continued. During visits attention is given *inter alia* to the adequacy of arrangements for residents to receive dental and ophthalmic treatment with particular reference to long stay cases.

Residents are normally expected to make arrangements with a dental practitioner or ophthalmologist of their choice for treatment. At most of the large welfare homes, arrangements have been made for a local dental practitioner to attend the home periodically, the Council making available a dental chair. Similarly, at a few homes, it has been possible to arrange for an ophthalmic optician to attend to carry out refraction testing. Physiotherapy, which is the responsibility of the Regional Hospital Boards is available at local hospitals to residents of welfare homes. A scheme for the provision of physiotherapy at one small home is under discussion with the appropriate board. If implemented, the scheme will provide useful experience and may possibly be extended to some of the Council's other welfare homes.

—Arrangements have been made for chiropodists to visit the homes for old people regularly.

Invalid meals for London

The Council makes a grant-in-aid to Invalid Meals for London, a voluntary body providing meals for invalids and sick persons. Meals are supplied, on the production of a medical certificate, to sick persons including the aged, expectant and nursing mothers, persons discharged from or awaiting admission to hospital, cripples and invalids, e.g., diabetics, requiring special diets. Meals are delivered by motor van to the homes of patients unable to attend the dining rooms attached to five centres.

		1956	1957
		£	£
Grant-in-aid		11,500	11,500
Meals served		187,578	174,011

SCIENTIFIC BRANCH

THE SCIENTIFIC BRANCH undertakes analytical and consultative work in chemistry and allied sciences for all departments of the Council.

The work of the branch is carried out in three groups of laboratories by a staff numbering 62. At the County Hall headquarters a wide field is covered including air pollution, building and decorative materials, food, fuels, lubricants, laundries, trade effluents, swimming baths, statutory duties, etc. The northern and southern outfall laboratories, situated at Beckton and Crossness respectively, are concerned with obtaining scientific data for the control of the sewage treatment processes and ancillary plant. Close liaison was maintained with officers in government departments, research organisations, and scientific societies, and the Scientific Adviser and senior officers were members of a number of committees under the auspices of other bodies.

A summary of these activities from the Scientific Adviser's annual report is given below.

Synopsis of work done

Samples examined during 1957 totalled 33,477, and the following table indicates their main categories. This record of laboratory examinations takes no account of much advisory service, not necessarily associated with analytical work, given by the senior professional officers which is an important function of the branch :

Air from vehicular tunnels	260
Bacteriological, miscellaneous	50
Building materials	588
Chemicals, drugs and medical supplies	97
Clay, sub-soils and borehole waters	2,617
Detergents and soaps	142
Fertilisers and feeding stuffs	105
Foods	463
Floor oils	49
Fuel (coal and coke)	25
Gases from sludge digestion plant	441
Instrument sets (ambulance) for sterilisation	34
Insulating materials for hot water systems	30
Lamps ; gas detector	425
Laundry tests	22
Liquor (effluent from Beckton Gas Works)	463
Meals	52
Metals	29
Milk	54
Miscellaneous, numerous categories	174
Oils, lubricating and fuel	61
Paints, varnishes, distempers	1,495
Petroleum and allied samples	38
Rain water (air pollution deposits)	84
Sewage and effluent	2,426
Sludge, primary, digested, activated	3,561
Smoke in air, determinations	3,732
Sulphur gases in air :	
Lead peroxide method	110
Volumetric method	3,731
Water, steam raising plant	1,342
Water, chemical and bacteriological examination :	
Drinking water	1,024
Swimming baths	1,103
River water	3,484
Water, miscellaneous	55
Trade effluents	2,810
Research and investigation samples	2,301
	33,477

The following paragraphs relate these activities to the various responsibilities and services of the Council.

River Thames

The condition of London's river is of special concern to the Council. In addition to effluents from the Council's own sewage treatment plants, there are sources of pollution from other sewage works, impure tributaries, trade discharges, and contamination from shipping. To assess the condition of the water under varying conditions of fresh water and tidal flow, and to compare the state between seasons of the year and over periods of years, regular weekly examinations are made involving chemical analysis of water taken from 26 points over a distance of 80 miles. The area examined extends from the upper limit of the tidal reaches at Teddington to the sludge dumping area at Black Deep in the outer estuary.

Dissolved oxygen is continuously being absorbed by oxidisable matter present in the water and the rate of renewal of oxygen from the air depends on the temperature, the wind, and other factors. If the process of absorption requires more oxygen than can be replaced from the air, putrescent conditions arise in which sulphate-reducing bacteria produce hydrogen sulphide from water-soluble sulphate. The summer quarter, July to September, with its higher temperature and normally reduced rainfall is the critical period.

The position during 1957 was as follows :

(a) The average daily flow of fresh water over Teddington Weir during the summer quarter was 304 million gallons, appreciably less than the corresponding quarter of 1956 (442 million gallons). The flow fell to 170 million gallons per day on 44 occasions.

(b) Despite a smaller average flow, the length of the river devoid of dissolved oxygen in the summer quarter showed little change when compared with that of the previous year.

(c) The number of occasions when some dissolved oxygen was found present in the river off the two outfall works showed an increase and the incidence of sulphide decreased.

(d) Examination of the number of sulphate-reducing bacteria per unit weight of mud from the river bottom indicated an appreciable reduction from Greenwich to the northern outfall and a slight reduction to Greenhithe.

The progressive deterioration in the condition of the water in the lower and middle river sections, observed over a period of years, appears at least to have been halted by the improvements at the northern outfall works. The urgent necessity for a further substantial reduction of the pollution load on the river is still apparent.

The Scientific Adviser continued to be a member of the Thames Survey Committee of the Department of Scientific and Industrial Research, and of the Heated and Other Effluents Committee of the Ministry of Housing and Local Government. Both committees deal with aspects of the condition of the river and are to make recommendations for its improvement.

Sewage treatment

The treatment of sewage at both outfall works is the joint responsibility of the Chief Engineer and the Medical Officer of Health. Close daily collaboration is maintained between their staffs and weekly conferences are held between the Divisional Engineer (Main Drainage) and the Scientific Adviser, together with their senior officers, to discuss analytical results and operational practice.

The new primary sedimentation tanks at the northern outfall works were the subject of continued experiment during the year and investigation was made of the performance at constant flow, the effect of continuous and intermittent scraping, composition of the sludge as removed and other aspects of the work. The performance of this new

plant has been very satisfactory and has substantially reduced the load on the river by reducing the amount of suspended matter leaving this section of the plant by one-half and the oxygen demand by one-third.

The present plant for secondary treatment has a capacity of 40 million gallons daily. The final effluent from this either reached or approached Royal Commission standard for a considerable part of the time. New diffused air plant to extend the capacity for secondary treatment was nearing completion at the end of the year.

Sludge digestion provided gas at the rate of half a million cubic feet daily.

During the year a considerable programme of research and development work was carried out. Collaboration with the Chemical Research Laboratory of the Department of Scientific and Industrial Research in the experimental biological production of sulphur continued. Work on radioactive tracers was extended and the investigation of a method suggested for the removal of synthetic detergent was begun. Tests on automatic samplers and efficiencies of aeration using different types of diffuser continued.

Trade waste discharges

The Council exercises control under the London County Council (General Powers) Act, 1953, over industrial discharges into the London sewerage system which have increased in volume and complexity over recent years.

Samples included 2,810 submitted for examination by eleven metropolitan boroughs, of which 561 were considered to contravene the Act. Objectionable matter contained in quantity in various wastes included strong acids and caustic alkalis; petroleum spirit, oils, tar; cyanide from plating shops; tannery wastes containing excessive amounts of sulphide; and solid matters such as fats, vegetable fibres and stone grindings. In some cases the wastes rendered the atmosphere of the sewer unbreathable. 52 cases of discharges of process and cooling waters above the temperature limit of 110°F. laid down in the Act were investigated.

Following the examination of samples which contravene the Act, officers of the Scientific Branch and of the Chief Engineer's Department usually visit the premises to discuss with the occupiers the problems involved in treating the discharges. A similar procedure is followed when consideration is given to applications for permission to make new discharges where standards have to be prescribed.

Safety in sewers

Regular examination of inflammable gas detector lamps of the expanding metal spiral type and those based on selective diffusion is made to ensure that all lamps are in good order and advice is given as required on the use of self-contained oxygen respirators. Experiments have continued on methods of improving sewer ventilation.

Housing

The work done for this service covers a wide field of considerable economic importance. The annual expenditure of the Council on paint and surface coating for houses, flats, schools, bridges etc. and the labour charge for their application amounts to approximately £4 million. The savings effected by ensuring that materials of suitable quality are used greatly exceeds the cost of the advisory service. An inter-departmental paint committee representing all the departments concerned keeps the position under review.

Approved lists of manufacturers' brands of paint are maintained and during the year 22 new brands were approved after test, while a further 38 were found not to be of the quality required. Some of the more frequent causes of rejection were low opacity, poor surface finish or hardness, low flexibility and presence in exterior paints of lithopone or excessive amounts of chalk.

Demands for the examination of building materials are increasing. The range of materials received for assessment of quality or investigation of possible faults included

floorings, floor sealers and polishers, plasters, light alloys and plastic building materials, fire retardants, concrete, slates, asphalts and bitumen felts. In addition to laboratory tests, small scale practical trials under normal conditions of use are frequently made and sometimes accelerated weathering tests are employed to assess the value of articles intended for external use. Defects are also investigated on site.

The importance of testing clays and ground waters from building sites has increased with the increased use of high blocks of flats in housing schemes. The deep concrete foundations required may be in contact with moist soil or ground water when the sulphates normally present in London clay which can weaken Portland cement concrete may attack them. Estimation of the sulphate content in the soil determines the appropriate cement to use to resist attack by sulphate in excessive concentrations.

Air pollution

The Council has co-operated for many years with the Department of Scientific and Industrial Research in investigating the incidence of air pollution. Regular observations are made at 20 sites, which include seven parks, six ambulance stations, Kew Observatory, the Science Museum, and the grounds of a hospital at Godalming.

The records of air pollution obtained at these sites are reported to the Fuel Research Station for collation with those of other authorities and publication. They are also being used by the statistical section of this department in a continuing investigation of their relationship with mortality and morbidity.

The amounts of smoke and sulphur dioxide averaged over the County as a whole showed a small improvement as compared with the two previous years, despite a severe fog in December which raised the average for that month to an unusually high figure. The reduction was more marked in the case of smoke than sulphur dioxide. The summer figures were normal, and the improvement was attributable to mild weather early in the year with consequent smaller coal consumption. Measured in the standard units, the ratio of smoke to sulphur dioxide showed the usual annual swing from about 4.2 in the winter to 2.6 in summer, reflecting the summer reduction in the proportion of coal consumed domestically. The winter level of smoke was about four and a half times, and sulphur dioxide three times, the summer level.

By a standing agreement with the Ministries concerned, the Scientific Adviser or his deputy accompanied the Chief Alkali Inspector of the Ministry of Housing and Local Government on visits of inspection to test the efficiency of the flue gas working plants at Battersea and Bankside Power Stations.

The widespread applications of nuclear science have drawn attention to the risks of environmental contamination by radioactive matter, and during the year further progress was made in developing techniques of measurement. Such contamination can arise from tests of nuclear explosives, reactor accidents, or unguarded use of the radioisotopes now being widely utilised in hospitals, research laboratories and industry.

In the days immediately following the Windscale accident of 10th October, airborne radioactive matter from this source was detected in the atmosphere, and it was estimated that the amount inhaled by the average Londoner was about 0.01 micro-curie. The amount of radio-iodine present in milk was an important factor on this occasion, and this was found in some samples of milk delivered in the London area to reach, but not exceed, 0.01 micro-curie per litre. This concentration was one-tenth that at which milk was rejected in Cumberland. Through the co-operation of medical officers of other local authorities, estimates were made of the degree of contamination which had prevailed in other representative areas throughout the country, the material for examination being on filter papers used for the routine determination of smoke in the atmosphere. The general conclusion was that, apart from the areas in which restrictions had already been imposed, the degree of contamination was insufficient to necessitate any control measures.

Public Health

Care is taken to ensure that the water supplies to Council establishments are of satisfactory quality. In the majority of cases water is taken from a public supply, but 15 residential schools and other premises draw water from private wells. In these cases the supply is chlorinated before use by means of automatic dosing apparatus and the water supplied is regularly examined.

The air in the Council's vehicular tunnels under the Thames was examined weekly in order to ensure that forced ventilation gave an adequate dilution of exhaust gases. Carbon monoxide was kept within the specified limit on most occasions at both Blackwall and Rotherhithe tunnels, but the amount of black suspended matter showed an increase in comparison with previous years. This change is attributable to the larger proportion of diesel-engined heavy vehicles now in use, which can be a prolific source of smoke unless carefully maintained and properly driven. The amount of carbon monoxide produced by the diesel engine is, however, relatively low.

Other work relating to hygiene and safety included the examination of disinfectants. Advice was given on the disinfection of the tubes of firemen's breathing apparatus. The strength of salt solutions to be taken by personnel exposed to great heat at fires was specified. Drawing inks were examined for toxic constituents, mainly aniline. In certain cases where skin exposure to fuel and other oils was liable to cause dermatitis the use of a barrier cream was advocated.

Public control

The Scientific Adviser is the Official Agricultural Analyst to the County under the Fertiliser and Feeding Stuffs Act, 1926. 101 samples were examined under the Act, and 27 of them varied in some way from the Statutory Statements or Voluntary Warranties given by the vendors. Many samples were examined under the Petroleum (Consolidation) Act, 1928, the provisions of which govern licences for storage and safety precautions regarding petroleum spirit and petroleum mixtures. Of these, 20 samples were found to come within the provisions of the Act. Visits of inspection were made to premises where inflammable solvent is used in licensed processes to ensure that the content of petroleum vapour did not exceed the limit prescribed for safety. Advice was sought in several instances on premises and processes employed to which the London Building Acts, 1930-39 applied.

Parks

Although some work was done for this department on fertilisers, soils and other matters of horticultural interest, the major item of work was to ensure efficient water treatment and pleasant bathing at the 16 open-air swimming baths provided for public use. The condition of the water is tested daily by bath attendants and visits are made periodically by officers of the branch.

School meals, education and children's departments

In co-operation with the School Meals and Catering Department, 52 meals were analysed for fat, protein, carbohydrate, mineral contents and calorific value in order to ascertain that the standards aimed at were being provided by the kitchens. The results showed a good approximation to the requirements of the various nutritional factors for the age groups concerned.

Swimming bath waters at 24 schools and institutions were examined and the improvised treatment of the former worked well and will be continued until authorisation by the appropriate Ministry for the expenditure for installing automatic treatment plants is obtained.

Supplies

The wide range of work for this department includes paints, fuels, lubricating oils, foods, soaps, plastics, solders, chemicals, drugs and general medical supplies.

The foodstuffs, which are purchased to an annual value of over a million pounds, were generally of a high standard of quality and a careful watch on contamination from the container, preservatives and general adulteration was maintained. All complaints on these and other purchases are carefully investigated, new preparations are examined for potential value to the Council and tenders are assessed to ensure that the cheapest satisfactory material is recommended. Careful attention is given to the development of synthetic detergents and new types are examined as they become commercially available.

Fire brigade

Much of the work in this field was of a consultative and advisory nature. Investigations were made of cases in which spontaneous ignition was suspected as the cause of fire and where particular materials had caused a fire to spread rapidly. In co-operation with Fire Brigade officers, detailed consideration has been given to special measures needed in combating fires involving dangerous chemicals.

Steam raising and heating plants

In collaboration with the Chief Engineer's Department many plants were regularly visited and advice was given on their operation. 1,342 samples were taken for laboratory examination. A typical problem on which investigation continued during the year was the growth of sulphate-reducing bacteria in hot water installations. Experiment with bactericides had showed that bacteriostatic conditions could be achieved by dosing with acriflavine at a concentration of 15 parts per million and promising results were obtained during the year from dichlorophene, a cheaper material.

Cleansing materials

Many types of cleansing materials, both solid and liquid, were examined for suitability for use in kitchens, laundries, and for general cleaning. Further improvements were made in the formulation of a dish-washing powder and tests for efficiency were made both by laboratory methods and on restaurant scale. A rapid and inexpensive method for bulk cleaning of nickel-silver cutlery was devised which gives a bright finish and saves the labour cost of polishing.

HEALTH SERVICE PREMISES

Building Programme

THE FINANCIAL RESTRICTIONS which have for several years prevented the Council from carrying out much of its health service building programme continued throughout the year. In addition, the Council decided not to embark on capital projects in 1958-59 and 1959-60 which would cost substantially more than the amount authorised for 1957-58. Restriction of capital expenditure and annual building programme

Accordingly, only one scheme costing more than £10,000 was included in the programme for 1958-59, particulars of which were submitted to the Minister of Health in accordance with the procedure introduced in 1954. Four other schemes, not requiring individual approval by the Minister, were included in the programme, and details of these are set out in Table (i).

As in the preceding year, divisional health committees decided to defer for the time being a considerable number of works of minor improvement.

Details of works completed during 1957 and in hand at the end of the year are given in Tables (ii) and (iii). Schemes approved but not commenced by the end of the year are indicated in Table (iv). Other works

Comprehensive Health Centres

In 1955 the Council sought some clarification of the Government's policy with regard to the provision of health centres and was advised that the Minister of Health would be unable to approve their erection except in areas where existing health services (including general medical services) were inadequate and additional services were urgently needed and where moreover general practitioners had signified their willingness to work in a health centre.

In view of this advice and the difficulties experienced in securing the co-operation of general practitioners in the provision of general medical services from health centres, it was apparent that it would be unrealistic and, because of the shortage of land in London for housing development, undesirable for the Council to continue its policy of long-term reservation of health centre sites.

Following consultation with the London Executive Council and the Local Medical Committee the latter suggested that where health centres might be needed later, blocks of flats might be so constructed that ground floor flats could be converted into health centre suites, if required in the future. The Council approved in principle this suggestion and the use in this way, as far as practicable, of sites reserved for health centres.

It was, accordingly, decided to reconsider the future use of each of the 28 sites which had been acquired or reserved for health centres in consultation with the London Executive Council, and five sites had been released for other development at the end of 1957.

Housing accommodation over single-storey buildings

In view of the shortage of housing accommodation in London, the Council decided that consideration should be given in future to the practicability of including residential accommodation in new premises erected for health service purposes.

Health service premises generally

Particulars of additional and replacement maternity and child welfare, school treatment and occupation centres provided during the year, and of day nursery premises closed as a result of the continued decline in the demand for places, are set out in Tables (v) to (vii).

Table (viii) gives details of properties used for health service purposes in respect of which the freehold or long-term leasehold interest was obtained during 1957.

TABLE (i)
Health service capital building programme, 1958-59

Premises	Work proposed
(i) Schemes costing over £10,000 Battersea accident ambulance station ..	Replacement of building destroyed by enemy action
(ii) Schemes costing less than £10,000 1. Knight's Hill hostel for the tuberculous, Lambeth	Provision of workshop
2. Eastern ambulance station, Hackney ..	Additional covered space
3. North Western general ambulance station, Hampstead	Provision of new entrance and reinstatement after war damage
4. South Eastern ambulance station, Deptford	Improvements to office and staff accommodation

TABLE (ii)
Works completed

Div.	Premises	Service	Work involved
2	Daleham Gardens, Hampstead	Maternity and child welfare and school treatment centre	New building
2	66, Lancefield Street, Paddington	Maternity and child welfare centre	Conversion of former day nursery to welfare centre
2	283A, Harrow Road, Paddington	Maternity and child welfare and school treatment centre	Repair of defective drains
2	254/256, Camden Road, St. Pancras	Day nursery	Repairs to premises
4	Cranston Estate, Tenants' Clubroom, Shoreditch	Maternity and child welfare centre	Adaptations to upper floor to form new centre
6	Lionel Road, Woolwich ..	Maternity and child welfare centre	Adaptations to provide additional accommodation to house foot clinic and borough council cleansing station
7	Queen's Road Centre, Camberwell	Maternity and child welfare centre, day nursery and education services accommodation	Improvement of electrical installation and plastering of breeze block partitions
9	67, Victoria Drive, Wandsworth	Maternity and child welfare and school treatment centre	Completion and adaptation of existing building
9	37, Sister's Avenue, Battersea	Day nursery	Improvement to sanitary accommodation, heating and hot and cold water services
9	St. Christopher's School treatment centre Battersea	School treatment centre	Repairs to roof
9	Alton Estate Tenants' Clubroom, Wandsworth	Maternity and child welfare centre	Adaptations to form new centre
—	Former Balham day nursery, Old Devonshire Road, Wandsworth	Occupation centre	Conversion to form new occupation centre to replace unsatisfactory temporary accommodation and provide additional places
—	Dalston ambulance station, Hackney	Ambulance station	Improvement of staff accommodation

NOTE.—In addition to the schemes indicated above, programmes of minor works of improvement and alteration of existing buildings, varying in cost from a few pounds to £500, were sanctioned by the divisional health committees.

TABLE (iii)

Works in hand

<i>Div.</i>	<i>Premises</i>	<i>Service</i>	<i>Work involved</i>
4	Laburnum Street, Shoreditch	Dental centre	Improvements to entrance to part of building used as Shoreditch Dental Hospital
9	Ashburton Estate, Wandsworth	Maternity and child welfare and school treatment centre	Formation of centre in block of flats in course of erection
9	Putney Vale Estate Tenants' Clubroom, Wandsworth	Maternity and child welfare centre	Adaptation of borough council clubroom premises to form new centre for part-time use
—	Former Knight's Hill day nursery, Lambeth	Hostel for tuberculous men	Conversion to form hostel
—	Oval ambulance station, Lambeth	Ambulance station	Repairs to balconies
—	Fulham ambulance station, Fulham	Do.	Repair of war damage
—	Kingsland Road ambulance station, Shoreditch	Do.	Widening of entrance
—	Streatham ambulance station, Wandsworth	Do.	Provision of covered accommodation

TABLE (iv)

Works approved but not commenced

<i>Div.</i>	<i>Premises</i>	<i>Service</i>	<i>Work involved</i>
2	Hallfield Estate, Paddington	Maternity and child welfare and school treatment centre	Provision of centre in ground floor of block of flats (to be built by Paddington Metropolitan Borough Council)
2	St. Alban's Villas, St. Pancras	Maternity and child welfare centre	Provision of centre in ground floor of block of flats (to be built by St. Pancras Metropolitan Borough Council)
6	Burney Street, Greenwich	Do.	Provision of centre in ground floor of block of flats (to be built by Greenwich Metropolitan Borough Council)
8	Ethelm Street, Lambeth	Day nursery	To be erected in conjunction with block of flats
8	Keeton's Road, Bermondsey	Maternity and child welfare and school treatment centre	Provision of centre in ground floor of block of flats
—	Highlever Road, Kensington	Occupation centre	Erection of new building
—	Shaftesbury School, Perry Rise, Lewisham	Do.	Do.

TABLE (v)
Additional and improved maternity and child welfare and school treatment accommodation

<i>Div.</i>	<i>Premises</i>	<i>Service</i>	<i>Details</i>
2	Daleham Gardens, Hampstead	Maternity and child welfare and school treatment centre	This new purpose-built centre was brought into use on 4 February, 1957. The previous unsatisfactory temporary centre at 40, College Crescent was closed in consequence
2	Queen's Park welfare centre, 66, Lancefield Street, Paddington	Maternity and child welfare centre	This building, which had been used as a day nursery, was converted for use as a welfare centre and re-opened on 19 June, 1957, to replace unsatisfactory temporary premises at the Congregational Hall, Third Avenue, which were closed on the same date
4	Cranston welfare centre, Tenants' Clubroom, Cranston Estate, Shoreditch	Do.	This centre, in adapted premises, was opened on 11 November, 1957, and replaced the Crondall Street Centre, Shoreditch, which had proved too small and inconvenient for the purpose
6	St. Alfege's Church Hall, Stockwell Street, Greenwich	Do.	Premises in Bardsley Lane, Greenwich, had been used for this centre but it became uneconomic to continue their use. The centre was transferred to the Church Hall on 12 February, 1957
6	Eltham health centre, Lionel Road, Woolwich	Do.	These premises were enlarged to provide accommodation for a foot clinic and the Woolwich Borough Council's cleansing station which were transferred from the former Eltham Hill Health Centre premises, Sherard Road, Woolwich, on 30 September, 1957
9	Alton maternity and child welfare centre, Tenants' Clubroom, Bessborough Road, Wandsworth	Maternity and child welfare centre	This temporary centre, which serves the Alton Estate and part of the Roehampton Estate, was opened in adapted accommodation at the clubroom on 8 July, 1957
9	Victoria Drive maternity and child welfare centre, 67, Victoria Drive, Wandsworth	Maternity and child welfare and school treatment centre	Adaptations to this building were completed and the centre opened on 20 November, 1957, to replace the temporary centre in the Ackroydon Tenants' Clubroom and to serve new housing development in the area

TABLE (vi)
Replacement occupation centres for the mentally defective

<i>Centre</i>	<i>Date of opening</i>	<i>Details</i>
Bethnal Green (junior mixed) occupation centre, Cornwall Avenue, Bethnal Green	14.1.57	Consequent upon the opening of this centre, a re-allocation of accommodation resulted in the closure of the former Bethnal Green Centre at Oxford House, Mape Street, Bethnal Green, and the Hackney Centre at Old Gravel Pit Hall, Valette Street, Hackney
Balham (elder boys) occupation centre, 22, Old Devonshire Road, Wandsworth	24.6.57	This centre, in adapted former day nursery premises, replaced the Battersea Centre, St. Michael's Hall, Darley Road, Battersea, which was closed on 29 June, 1957

TABLE (vii)
Day nurseries closed

<i>Div.</i>	<i>Nursery</i>	<i>Date of closure</i>
2	Devonshire Street Day Nursery, St. Marylebone	31.12.57
3	Banner Street Day Nursery, Finsbury	10.12.57
3	Windsor Street Day Nursery, Islington	24.12.57
4	Brunswick Day Nursery, Shoreditch	31. 8.57
4	Fernhurst Day Nursery, Hackney	26. 4.57

TABLE (viii)
Acquisitions and leases

<i>Div.</i>	<i>Property</i>	<i>Interest obtained</i>	<i>Service</i>
1	106-110 (even) Dalling Road, Hammer-smith	Freehold	Day nursery
1	18-20, Bagley's Lane, Fulham	Leasehold	School treatment centre
2	Accommodation in St. Marylebone Town Hall	Leasehold	Maternity and child welfare centre
2	4, Prince Albert Road, St. Pancras	Leasehold	Day nursery
3	42-44, Richmond Avenue, Islington	Leasehold	Maternity and child welfare centre
5	University House, Bethnal Green	Freehold	Day nursery
9	Fairfield Day Nursery, Wandsworth	Freehold	Day nursery
9	25 and 26, Summerley Street, Wandsworth	Freehold	Day nursery
9	Elizabeth Bullock, 376 Wandsworth Road, Wandsworth	Leasehold	School treatment centre

CARE OF MOTHERS AND YOUNG CHILDREN

Administration

DAY TO DAY administration of the services is the responsibility of the nine divisional health committees and during the year members of the committees regularly visited health establishments in their areas. The reports of the individual divisional medical officers are given in the section which commences on page 151.

Maternity and child welfare centres

Details of changes in centres during the year will be found in the section on health service premises, page 45.

Expectant and nursing mothers

Statistics for ante- and post-natal and educational sessions are given in the following tables :

Year	Ante-natal				Post-natal	
	Clinics at end of year (including ante-natal, post-natal, and combined)	Sessions per month	Attendances		Percentage of pregnant women attending at an ante-natal clinic	No. of women attending during year
			First	Total		
1953	119	986	22,713	129,451	44	4,062
1954	120	920	23,204	126,270	45	4,489
1955	118	846	22,231	116,042	43	4,258
1956	116	805	23,379	122,662	44	4,543
1957	118	786	23,918	121,579	44	3,887

Tests

Expectant mothers are offered a full range of blood tests at the clinics, and chest X-ray through the mass X-ray service. General practitioners are invited to use these facilities for patients for whom they are providing ante-natal care.

Mothercraft training

Facilities for the treatment of infant feeding difficulties are provided by two voluntary associations. At the Violet Melchett welfare centre residential care was provided for 56 mothers, 60 accompanied children and 57 unaccompanied children as against 51, 57 and 63 in 1956 ; similar non-resident facilities were provided at the North Islington infant welfare centre.

Clinics

The tables on page 51 and above show attendances at maternity and child welfare centres. Of the 640 sessions a week being held at the end of the year, 386 were conducted by medical officers employed on a sessional basis.

Voluntary organisations

Maternity and child welfare services were provided by 17 voluntary organisations by agreement with the Council under section 22 of the National Health Service Act, 1946. In addition, child welfare centres were maintained on behalf of the Council by the medical schools for four teaching hospitals acting as voluntary organisations and grant-aided by the Council.

Family planning

Family planning advice is provided for married women for whom further pregnancy would be detrimental to health. 377 sessions were held by the Council attended by a total of 4,092 women. In addition, 688 women, for whom payment was made by the Council, were referred during the year to clinics run by the Family Planning Association.

Child welfare

Year	Clinics at end of year (including special clinics for toddlers)	Sessions per month	Attendances						Percentage of infants attending a centre at least once in the first year of life
			Under 1 year		Over 1 year		Toddlers		
			First	Total	First	Total			
1953 ..	174	1,901	43,969	615,530	4,671	213,976	42,576	85	
1954 ..	175	1,927	44,061	614,369	4,653	211,634	42,683	86	
1955 ..	176	1,939	43,068	587,143	4,541	193,273	41,268	86	
1956 ..	178	1,953	44,910	595,690	4,492	189,388	41,055	86	
1957 ..	178	1,990	46,387	613,147	4,994	183,538	40,848	86	

Drugs, medicaments, welfare foods, etc.

Drugs and medicaments (provided free), and nutrients (at fixed charges, abated where necessary) continued to be supplied on medical recommendation at the welfare centres in accordance with approved lists. Comparative figures for the issue of national welfare foods are given in the following table :

Welfare food	Average weekly issues	
	1956	1957
National dried milk (tins)	25,413	19,839
Cod liver oil (bottles)	6,156	5,191
Vitamin tablets (packets)	2,952	2,788
Orange juice (bottles)	48,163	48,925

Day accommodation for children

The Council's day nurseries provide for children whose mothers are obliged to work because they are without a husband (i.e., widowed, divorced etc.) or because the father's income is insufficient to maintain the home. They also provide care for children during illness or confinement of their mothers, for children whose health might suffer through environmental factors (including poor housing) if not admitted to a nursery and for children who have no mother. Any places which remain unfilled are available for other children whose mothers go to work, but the Council does not take these into consideration when determining the need for day nursery accommodation.

Excessive provision is avoided by closing or amalgamating nurseries when necessary or by reducing approved numbers.

Child-minders who are not required to register under the Nurseries and Child-minders Regulation Act, 1948, are encouraged to register voluntarily. They receive a small weekly payment in return for which they accept supervision by the Council, allow their homes to be inspected and take the children to a child welfare clinic monthly.

The extent of the day nursery and child-minder provision in London will be seen from the following table. Five maintained day nurseries (376 places) were closed during 1957. Two training nurseries were among the nurseries closed. The number of training nurseries at the end of the year was 51 (including two grant-aided nurseries). During the same period the number of private day nurseries increased by two (55 places). Statutory and voluntary child-minders increased by 91 with an increase of 156 in the number of children minded. A number of the private day nurseries and child-minders care for children for part of the day only.

Day accommodation for children

	<i>At 31st December</i>									
	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
DAY NURSERIES										
Maintained	114	113	111	106	105	104	100	94	86	81
Grant aided	6	6	6	6	6	6	5	5	5	5
Total	120	119	117	112	111	110	105	99	91	86
Places 0-2	2,593	2,591	2,507	2,071	2,067	2,056	2,006	1,903	1,775	1,747
Places 2-5	4,064	3,958	3,955	4,145	4,068	4,002	3,844	3,677	3,368	2,988
Total	6,657	6,549	6,462	6,216	6,135	6,058	5,850	5,580	5,143	4,735
PRIVATE DAY NURSERIES										
Places	8	28	41	49	63	60	61	56	58	60
Total nursery places	367	972	1,294	1,583	1,841	1,795	1,795	1,640	1,646	1,701
Total nursery places	7,024	7,521	7,756	7,799	7,976	7,853	7,645	7,220	6,789	6,436
CHILD-MINDERS										
Statutory	35	73	96	93	96	112	110	106	102	132
Voluntary	284	584	766	749	794	793	925	743	777	838
Total	319	657	862	842	890	905	1,035	849	879	970
CHILDREN MINDED										
Statutory	243	501	570	604	504	638	590	649	611	699
Voluntary	323	579	834	840	856	854	1,000	851	886	954
Total	566	1,080	1,404	1,444	1,360	1,492	1,590	1,500	1,497	1,653
TOTAL, NURSERY PLACES AND CHILDREN MINDED	7,590	8,601	9,160	9,243	9,336	9,345	9,235	8,720	8,286	8,089

**Occasional
creches**

Creches are provided for the benefit of mothers needing occasional relief from the care of their children while they visit hospitals or welfare centres or attend to shopping or other domestic duties. The creches also provide relief for mothers living in poor home conditions and have helped some children with mild behaviour problems.

Except in special circumstances attendances are limited to two sessions a week. No charge is made when a child is left in a creche while the mother attends a clinic or class held by the Council in the same premises ; otherwise a charge is made which in an effort to make the creches self-supporting was increased from 1s. 3d. to 1s. 9d. a session on 1.4.57. This, together with improved attendances and more economical staffing, has had some effect. The charge is waived or abated in cases of need.

The extent of the scheme may be seen from the following figures :

				<i>Year ended</i>	
				<i>31 July, 1956</i>	<i>31 July, 1957</i>
Number of creches	..	..	..	19	20
Number of places	..	..	..	350	328
Number of sessions held	..	..	..	2,330	2,369
Number of attendances :					
Free	..	..	..	6,325	6,674
Full fee	..	..	..	18,825	19,701
Abated fee	..	..	..	207	141
				25,357	26,516
Gross cost of service :					
Staff, equipment, heating, lighting, etc. ..	..	..	..	£2,242	£1,881
Less fees received	..	..	..	£1,177	£1,375
				£1,065	£506
Net cost of service					

Residential establishments for young children

Medical officers on the Council's staff make routine visits to residential establishments under the direction of the Children's Committee. The care of children suffering from physical handicap or mental retardation, whether due to innate defect or emotional disturbance, is carefully reviewed with the visiting medical officer.

The only incidents during the year worthy of mention were two outbreaks of enteritis at Hutton baby unit in March and July, affecting about 78 per cent. and 44 per cent. of the children respectively (staff 17 per cent. and none), in which no pathogenic organisms were found, and an outbreak of Sonne dysentery at St. Margaret's residential nursery in December, affecting 38 per cent. of the children (staff 16 per cent.).

Every child whom it is proposed to board out with a view to adoption is given a full medical examination by his general medical practitioner and the opinion of the Medical Officer of Health is sought on the suitability of the child for adoption on medical grounds. Adoption and boarding-out

The opinions on the children referred by the Children's Officer in 1957 and two previous years were as follows :

	1955		1956		1957	
1. Considered unfit for adoption or boarding out		2		4		3
2. Referred for adoption—						
(a) Fit for adoption	158		147		178	
(b) Fit for adoption subject to certain conditions	7		7		8	
(c) Unfit for adoption but fit for boarding out	14		15		7	
(d) Still under consideration	4		3		4	
(e) Withdrawn by Children's Officer	2		1		8	
	—	185	—	173	—	205
3. Referred for boarding out—						
(a) Fit for boarding out	375		324		310	
(b) Still under consideration	—		—		5	
(c) Withdrawn by Children's Officer	4		2		7	
	—	379	—	326	—	322
TOTAL		566		503		530

Care of the unmarried mother and her child

One mother and baby home is maintained by the Welfare Committee together with two units in larger establishments. Other homes are provided by voluntary organisations supported by grants in aid from the Council. Mother and baby homes

	1956	1957
Number of voluntary homes receiving grant	19	18
Number of expectant and nursing mothers admitted	1,308	1,141
Amount of grant	£10,755	£11,360

Financial assistance to the five large moral welfare associations of the major religious denominations was continued. Moral welfare associations

	1956	1957
Grant paid to the associations	£10,100	£9,625
Number of expectant and nursing mothers advised	2,908	2,684

The following statistical tables relate only to cases dealt with by the five Moral Welfare Associations (London Diocesan Council, Southwark Diocesan Association, Westminster Catholic Social Welfare Committee (Crusade of Rescue), Southwark Catholic Rescue Society, Jewish Board of Guardians).

TABLE (i)
Mothers seen for the first time in 1957
Age of mother

	No.	Per cent.
Under 18 years	234	8.7
18-24 years	1,485	55.3
25-34 years	783	29.2
Over 35 years	172	6.4
Not known	10	0.4
	2,684	100.0

TABLE (ii)
Referring Agency

	No.	Per cent.
Hospital	1,082	40.3
National Council for the Unmarried Mother and her Child, and other Voluntary Agencies	542	20.2
Health, Welfare and other Local Authority Departments	439	16.4
Clergy, Church Workers	239	8.9
Employers, friends	102	3.8
Personal application	95	3.5
National Assistance Board, Employment Exchanges, etc.	12	0.4
Any other	173	6.5
	2,684	100.0

TABLE (iii)
Nationality—Normal residence

	London (Admin. County)	Elsewhere	Total
British	1,142	368	1,510
Eire	330	302	632
West Indian	225	148	373
European	59	34	93
Other	42	34	76
	1,798	886*	2,684

* 631 were pregnant on arrival in London.

TABLE (iv)
Care of babies three months after birth
(Babies born between 1.10.56 and 30.9.57)

	No.	Per cent.
Actually in mother's care	955	52.5
Adopted or placed for adoption	374	20.5
Mother responsible for and has access to child	293	16.0
Mother and child moved away	95	5.2
In care of local authority	62	3.4
Died	34	1.9
Miscellaneous, e.g., in hospital	9	0.5
	1,822	100.0

These babies resulted from the pregnancies of 2,398 women—in the case of 485 the result of pregnancy was unknown, and in others the result was a miscarriage, still-birth, etc. Of the 2,398 women, 855 (nearly 36 per cent.) were reported as admitted to mother and baby home before birth of baby.

The total number of illegitimate births in London (Administrative County) during 1957 was 4,886 and the number reported as admitted to Mother and Baby Home represents about 18 per cent. of this total.

Child life protection

By arrangement with the Children's Officer responsibility for the visiting of foster children and the inspection of premises in which the children are living, under Part XIII of the Public Health (London) Act, 1936, as amended by Part V of the Children Act, 1948, was undertaken by health visitors designated as 'child protection visitors'.

	1956	1957
No. of children under supervision on 31 March	643	659

Amenities funds

Small voluntary committees administered funds for the purposes of additional amenities for mothers and children attending welfare centres and day nurseries. The voluntary committees received contributions from Sunday cinematograph entertainments as in previous years.

Marriage guidance

Grants totalling £5,932 for the year ending 31st March, 1958, were made to the London Marriage Guidance Council, the Catholic Marriage Advisory Council and the Family Discussion Bureau.

DOMICILIARY MIDWIFERY SERVICE

THE DUTY to provide an adequate domiciliary midwifery service is discharged through the Council's own midwives and those employed by district nursing associations and hospitals. Figures are given in Tables (i) and (ii) below.

TABLE (i)

	1956	1957
Full time salaried midwives employed by the Council	92	87*
Midwives employed by district nursing associations†	46	44
District midwives employed by hospitals ..	44	39

* 4 vacancies.

† Including supervisory staff.

TABLE (ii)

Total number of domiciliary confinements attended by London County Council, Hospital and Nursing Association midwives—1955–1957

Year	Number of confinements						Number of confinements						Grand Total
	Doctor not booked						Doctor booked						
	L.C.C.		District Nursing Association		Hospital		L.C.C.		District Nursing Association		Hospital		
	Doctor present	Doctor not present	Doctor present	Doctor not present	Doctor present	Doctor not present	Doctor present	Doctor not present	Doctor present	Doctor not present	Doctor present	Doctor not present	
1955	245	3,729	54	1,745	22	1,776	759	1,042	138	157	98	133	9,898
1956	193	3,500	68	1,790	25	1,944	847	1,293	134	197	103	148	10,242
1957	172	3,325	68	1,624	29	1,711	996	1,548	152	294	68	196	10,183

85 per cent. of all the domiciliary confinements in 1957 were conducted without the attendance of a doctor.

General statistics

	1956	1957
Premature babies born	509	501
Still-births per 1,000 births	8.8	8.5
Inhalation analgesia administered—		
Gas and air	70%	35%
Trilene	14%	52%
Total	84%	87%

Each midwife in the service now has an approved Trilene inhaler and the Minnitts (gas and air) apparatus can be brought to the patient's home by the ambulance service at her request.

Midwives Act, 1951

Notifications of intention to practise were received as follows :

	1953	1954	1955	1956	1957
As midwives	1,171	1,142	1,193	1,164	1,193
As maternity nurses	175	168	150	144	137

Fees paid under the Midwives Act to medical practitioners called in by midwives in emergency were as follows :

	1953	1954	1955	1956	1957
Number of claims	3,044	3,003	2,682	2,554	2,479
Amount	£8,662	£8,935	£7,948	£7,503	£7,634

Ante-Natal Care relating to Toxaemia of Pregnancy

In my annual report for 1956 brief reference was made to the meetings then being held between the professional representatives of the three parts of the national health service on the Memorandum from the Standing Maternity and Midwifery Advisory Committee on ante-natal care relating to toxaemia of pregnancy. It was clear at these meetings that co-operation between hospitals, general practitioners and the local health authority was developing but needed strengthening and the discussions at professional level were very helpful in promoting better liaison between the services.

Routine medical examination takes place on booking and at the 30th and 36th weeks of pregnancy. All measures are taken for the early recognition of toxaemia, including keeping of weight records and midwives in the Council's domiciliary service are required to summon medical aid from a general practitioner obstetrician or the patient's own doctor if there is a rise in blood pressure or if the diastolic pressure at any time reaches 90 mm. of mercury. Obstetric examinations

The Council's ante-natal clinics provide for the full range of blood tests and offer a chest X-ray examination to every pregnant mother. The Rhesus factor is always determined and tests for antibodies are carried out in appropriate cases : these tests are done either by the Blood Transfusion Service or the laboratories of the hospitals. In most areas of the County cord blood is taken for Coomb's test from all babies born of Rhesus-negative mothers, whether antibodies were present at 34-36 weeks or not. Among Rhesus-negative mothers delivered at home who had no antibodies at 34-36 weeks, several pregnancies had ended in still-birth in utero. Blood testing etc.

General practitioners giving maternity medical services are able to use the facilities for all these tests whether the mother has her intermediate ante-natal care at the Council's clinic or not. Midwives referred all mothers with a haemoglobin level below 11.8 gm. per 100 ml. to the clinic doctor and called medical aid for all mothers with a haemoglobin level below 8.9 gm. per 100 ml. (100 per cent. of haemoglobin equals 14.8 gm. per 100 ml.).

Although the need is recognised to expand the maternity and child welfare dental service, under present circumstances this can be done only at the expense of the school dental service, although a modest improvement has been possible in some areas by arranging additional evening dental sessions reserved for maternity and child welfare priority cases. The Council's midwives follow-up all expectant mothers recommended by the clinic doctor for dental treatment to see that the mother obtains early treatment either at the Council's dental clinics or elsewhere.

The most striking deficiency in co-operation brought to light as a result of the discussions with hospitals and general practitioners was the absence of any efficient system by which any one of the three branches of the national health service, who might at any time during pregnancy, labour or puerperium become concerned with the mother, would have available full information of the mother's medical and obstetric history. Under the existing arrangements for domiciliary cases there was interchange of records between the general practitioner and midwife on booking and at the 36th week of pregnancy and midwives sent all their records to hospital with any patient who had to be transferred there in labour. It was clear, however, that these arrangements did not meet all contingencies which might arise and that what was required was a personal ante-natal record card to be carried by the patient herself. Preliminary trials have been carried out to test the reliability of mothers in keeping the record card intact and in bringing it to the centre and these have proved encouraging. A card suitable for use in all cases is now being devised and it is hoped to introduce it early in 1958. Ante-natal records

Health
education and
preparation

A wide and comprehensive health education service is provided at the Council's clinics, using such methods as films, film-strips, flannelgraphs and posters. Methods of inhalational analgesia are demonstrated so that mothers become quite familiar with the type of apparatus they will use whether their confinement will be at home or in hospital. All the Council's domiciliary midwives will shortly have completed a course on relaxation and the part it plays in assisting during labour.

Treatment
facilities

No difficulty has been experienced in obtaining the admission to hospital of any patient showing early signs of toxæmia. This seems to indicate that the provision of ante-natal beds in London is adequate. There was some evidence, however, that the follow-up of non-attenders at hospital ante-natal clinics was not always satisfactory and where this was so it was arranged that a health visitor would make a home visit on request by the hospital. However, the need for hospital care for patients in high risk categories is not always satisfactorily met because the patients attend first for ante-natal care at a late stage in pregnancy.

In November 1950 the Council sent a deputation to the Minister of Health to urge the need for a policy decision on the provision of hospital maternity beds and in January 1951 arranged a conference of the four Metropolitan Regional Hospital Boards and the Boards of Governors of teaching hospitals in London.

The same year the Minister issued a circular (LHA.1/51) to all local health authorities and hospital authorities on the subject of selection of maternity patients for admission to hospital giving advice similar to that in the Memorandum from the Standing Maternity and Midwifery Advisory Committee. However, as stated in my annual report for 1952, the varying practice of some hospitals within the same regional hospital board area in seeking the co-operation of the Council in applying uniform standards for the admission of women to hospital maternity beds reacts unfavourably on those hospitals which loyally co-operate in applying such standards. Since 1952, local discussions with individual hospitals and hospital authorities and the meetings that have taken place recently following the issue of the Advisory Committee's Memorandum have, if anything, shown that there is a limit to the agreement that can be reached, and have emphasised the need for a firm policy directive to all maternity hospitals. No doubt this is one of the matters which will receive close attention by the Cranbrook Committee. It is significant that despite the fact that some 80 per cent. of all births in London take place in hospital, about one-quarter of the mothers delivered at home by the Council's domiciliary midwives are in those high risk categories considered by the Advisory Committee to indicate hospital confinement. This point is illustrated by the facts brought out following scrutiny of cases dealt with in 1956.

Of 9,597 mothers who had their babies at home in 1956, 751 (7.8 per cent.) were primigravidae and 1,675 (17.5 per cent.) were parity 4 and upwards. Many obstetricians regard first pregnancy as a priority group for hospital delivery; taking primiparae and mothers of parity 4 and upwards as high risk category cases, 25.3 per cent. of these London mothers delivered at home should have been delivered in hospital. Even if allowance is made for the refusal by some mothers of high parity of a hospital bed, this high proportion of home deliveries of cases in high risk categories indicates that hospital maternity beds in London are not being made available to all mothers who need them, but rather to those who approach the hospital for booking early in pregnancy.

Stage of preg-
nancy at first
attendance

The time of booking of these 9,597 mothers who had their babies at home was investigated:

	Trimester						No. of cases	Percentage
1	..	..	..	..	..	..	991	10.3
2	..	..	..	..	..	..	5,812	60.6
3	..	..	..	..	..	..	2,709	28.2
Unbooked emergencies	..	..	..	..	..	..	85	0.9
							9,597	100

From these figures it is apparent that only slightly more than 10 per cent. of mothers can be said to have adequate ante-natal care, whilst in 28.2 per cent. of such cases ante-natal care is totally inadequate

It is known that in some parts of London mothers who present themselves for ante-natal care for the first time during the second trimester of pregnancy are already too late for a hospital booking. It is clear that hospital maternity units should reserve a number of beds for late bookings for the high risk categories and the medical officer of health could provide hospital authorities with an estimate of the number of beds required. Attempts are made by the staff at the Council's ante-natal clinics to book hospital beds for women whose homes are unsuitable for confinement, but when it becomes apparent that a booking is unlikely to be obtained in advance—usually after 10-20 hospitals have been tried—the patient is referred to her family doctor with a letter requesting him to arrange admission through the Emergency Bed Service when labour starts. If the family doctor does not agree to this proposal, arrangements are made for a domiciliary midwife to take necessary action.

This procedure, which has been adopted through necessity, can only be regarded as an unsatisfactory improvisation. The patient is left in a state of anxiety and uncertainty and trouble often arises with landlords; delay in admission to hospital is inevitable as the patient must be visited by the doctor or midwife before the Emergency Bed Service will act, and these visits are an unnecessary burden on the doctor or midwife. A fee is also payable to the doctor which better arrangements would avoid.

As has been indicated earlier, it is hoped that the Cranbrook Committee will give firm advice on the present unsatisfactory situation in which some patients in real need of hospital confinement are unable to gain admission, yet beds are occupied by those who have not the same claim. In the meantime, the matter rests in the hands of the hospital obstetricians who are in the position to decide to what degree preference for a hospital confinement shall be subordinated to need.

Although the home help service is available to meet the needs that arise at the time of confinement or when the mother is resting at home or is admitted to hospital antenatally, the calls on the service are not as great as might be expected. In many cases the father will take time off from work but in others it is not known whether the small calls on the service are due to the fact that a charge is made or to the mother's preference to make other arrangements for the care of her home and family.

Assistance in
the home

HEALTH VISITING AND NURSING SERVICES

THE AVERAGE strength of the health visitor service available during the year for health visiting duties, apart from the tuberculosis and school health services, was equivalent to 372 full-time units. In addition to clinic and other duties these health visitors made 810,358 home visits, details of which are given in the following table :

<i>Home visits</i>	1953	1954	1955	1956	1957
Expectant mothers :—					
First	24,608	24,739	22,999	23,143	23,482
Revisit	19,223	19,428	19,436	21,422	21,994
Per cent. of notified live- and still-births	47	47	45	44	43
Still-births	1,256	1,253	1,032	1,173	1,080
Children under 1—					
First	48,381	49,381	48,225	51,960	52,171
Revisit	173,309	182,295	174,864	173,774	169,760
*Per cent. of live-births	95	97	97	*100	98
Children 1 to 5	376,153	377,130	362,764	357,215	354,643
Care of old people	65,450	63,764	77,014	12,842	12,465
Miscellaneous				66,823	74,513
Unsuccessful	124,124	118,155	110,149	103,600	100,250
TOTAL	832,504	836,145	816,483	811,952	810,358

* The true percentage may be somewhat less, but it is not practicable to exclude from the year's figures a small number of immigrants and of children visited in the year but born in the previous year.

Included in the figures given in the above table for 1957 there were 2,694 visits to premature babies and 17,161 visits to problem families.

Home visiting and medical follow-up of children attending the Council's schools is undertaken by voluntary children's care committee workers, trained and organised by social workers employed in the Education Officer's and public health departments. The integration of the health visiting and school nursing services has continued. In December, 1954, 275 members of the staff were engaged on combined health visiting and school nursing duties. In 1955, 1956 and 1957 the figures were 283, 327 and 327 respectively.

Details of the Council's scheme for training student health visitors are given on page 147.

Training of
student
health
visitors

HOME NURSING SERVICE

THE HOME NURSING SERVICE was provided, as hitherto, by 26 voluntary district nursing associations acting as agents for the Council, liaison being maintained through the Central Council for District Nursing in London. These associations (with one exception where a block grant is paid) were grant-aided to the extent of 93 per cent. of net approved expenditure.

At the beginning of 1957 a simplified system of record keeping was introduced, which, instead of analysing in great detail the data about completed treatments, provided the following data on visits by type of case, age of patient and location, and in addition, number of long-term cases and number of nursing treatments commenced and completed.

Details are set out in the following tables—it is not possible, except in tables (i) and (ii), to give comparative figures for previous years.

TABLE (i)—*Staff*

	1955	1956	1957
Total number of nurses employed at end of year	572	584	614
Full time equivalent of nurses employed ..	512	538	567
Number of trained district nurses ..	321	327	389
Number of state enrolled assistant nurses ..	36	35	30
Number of male nurses	49	38	40

TABLE (ii)—*Types of case nursed and visits paid*

Type of case	Number of patients nursed	Percentage of total	Average number of visits to each patient	Total visits
Medical	56,091	83.5	29	1,647,319
Surgical	6,126	9.1	34	210,477
Infectious diseases	276	0.4	7	1,807
Tuberculous	1,742	2.6	47	82,620
Maternal complications	714	1.1	8	5,441
Others	2,220	3.3	20	43,957
TOTALS	67,169	100.0	30	1,991,621

The figures for 1956 and 1955 were 1,962,733 and 1,953,182 respectively.

TABLE (iii)—*Visits for general treatment and for injections*

Visits for	At patients' homes	Elsewhere (e.g., Nurses' Homes)	Percentage of total visits
Injections only	968,506	33,575	50
Injections plus other treatment	108,715	245	6
Other treatment only	880,504	76	44
TOTAL VISITS	1,957,725	33,896	100

TABLE (iv)—*Long term cases (i.e., those visited more than 24 times during the year)*

Number	Percentage of total patients nursed
14,598	21.7

TABLE (v)—Age distribution of patients

Age	Number of patients	Percentage of total
0-5 years	2,960	4
5-64 years	30,784	46
65 years and over ..	33,425	50
TOTALS	67,169	100

TABLE (vi)—Nursing treatments completed, cases on books and average case load per nurse

	1955	1956	1957
No. of completed treatments	64,256	60,772	56,395
No. of patients being nursed at end of year	12,535	12,806	13,749
Average case load per nurse at end of year	24	24	27

The Minister of Health has asked for any information that may be available about the effectiveness of the home nursing service in relieving pressure on hospitals by providing home care for patients who might otherwise have to be admitted to hospital.

In London the number of patients nursed has risen from less than 44,000 in 1949 to over 67,000 in 1957. Of the latter total, 6,126 were surgical cases and 714 patients had maternal complications. It is not unreasonable to assume that, but for the provision of home nursing, many of these patients would have had to be admitted to or be retained in hospital. 81 per cent. of the cases assisted by the home help service were chronic sick, aged and infirm. Moreover, 50 per cent. of the cases treated were 65 and over, and bearing this fact in mind, it is again a reasonable assumption that in default of the supply of these two domiciliary services, many of these sick and old persons might well have had to be admitted to hospital.

HOME HELP SERVICE

STATISTICS of the service given follow :

	<i>Service given</i>		
	1955	1956	1957
Cases assisted	34,785	34,557	35,737
Applications deferred or refused because home helps were not available	61	76	25
Hours worked	4,660,600	4,779,600	4,896,000
Home helps employed at end of year ..	3,148	3,326	3,388
Equivalent of whole-time staff	2,029	2,089	2,116
Night helps for chronic sick patients*—			
Applications met	48	37	44
No. of new families assisted*—			
Child help (resident)	5(16)	5(20)	4(20)
Early morning and evening help ..	205	180	153

* These are included in total cases assisted. Figures in brackets denote numbers of children involved.

The pattern of cases assisted remained constant, four-fifths were aged and chronic sick.

During the first year's working of the scheme for providing trained home helps to teach the rudiments of housecraft to mothers of families in danger of break-up (from 1 May, 1956 to 30 April, 1957), 89 home helps were trained, 71 remained available for the special duties on 30 April and 58 had undertaken assignments under the scheme. 86 families (involving 368 children) were provided with the special service. Failure was reported in 10 instances only ; in the remainder varying degrees of improvement were noted, ranging from 'marked improvement' to 'slow progress'. The scheme is now an integral part of the home help service, and while it is still too early to produce evidence of lasting success, experience to date is encouraging.

Specially
trained
home helps

IMMUNISATION AND VACCINATION

Introduction

ON THE DAY on which the National Health Service came into existence in 1948, the Public Vaccinator and the Vaccination Officer, who had for many years been responsible for carrying out the provisions of the Vaccination Acts, disappeared from the scene. Thereafter the compulsion associated with the Vaccination Acts was replaced by the persuasion which had proved so successful in the national diphtheria immunisation campaign.

Before the National Health Service Act, 1946

Vaccination
against
small-pox

Before the National Health Service Act, 1946, vaccination against smallpox had been governed by the Vaccination Acts, 1867-1907. Under these Acts public vaccinators were appointed to carry out the vaccinations, and vaccination officers were given the duty of bringing proceedings against parents who neglected to have their child vaccinated. The administration of the Acts was originally in the hands of the boards of guardians, but in London after 1929 it passed to the metropolitan borough councils. The Vaccination Acts provided that no proceedings should be brought against parents who made a declaration that they conscientiously believed that vaccination would damage the health of their child. Increasing use was made of conscientious objection so that whereas in 1908 the ratio between vaccinations and births in England and Wales had been 63 per cent., by 1939 it had fallen to 34 per cent. The purpose of the Vaccination Acts was being defeated and a serious breach made in the national defences against disease. When the national diphtheria immunisation campaign began, on a voluntary basis, in 1940 its general acceptance was in such striking contrast to the low acceptance rate of vaccination against smallpox that the opportunity was taken in the National Health Service Act, 1946, to repeal the largely ineffective Vaccination Acts. As will be seen later the effect of the removal of compulsion in London has been to reverse the trend of previous years.

Diphtheria
immunisation

The first metropolitan borough to provide facilities for diphtheria immunisation was Holborn, and in this borough a clinic for the purpose was opened in 1922. Westminster and Camberwell followed four years later and, by 1929, fourteen boroughs had opened clinics. From 1922 onwards immunisation was carried out on the staff of the fever hospitals of the Metropolitan Asylums Board and on an increasing scale among the children in the residential schools at that time administered by the boards of guardians. From 1930 the fever hospitals and the residential schools came under the control of the London County Council and the diphtheria prophylactic in use throughout the service was formol toxoid prepared in the Council's Belmont laboratories. When in 1940 the national diphtheria immunisation campaign was launched, the Council made arrangements for immunisation of children in the schools to supplement the work carried out by the metropolitan boroughs on children under the age of 5 years and the prophylactic in general use at the beginning of this campaign was the Council's formol toxoid.

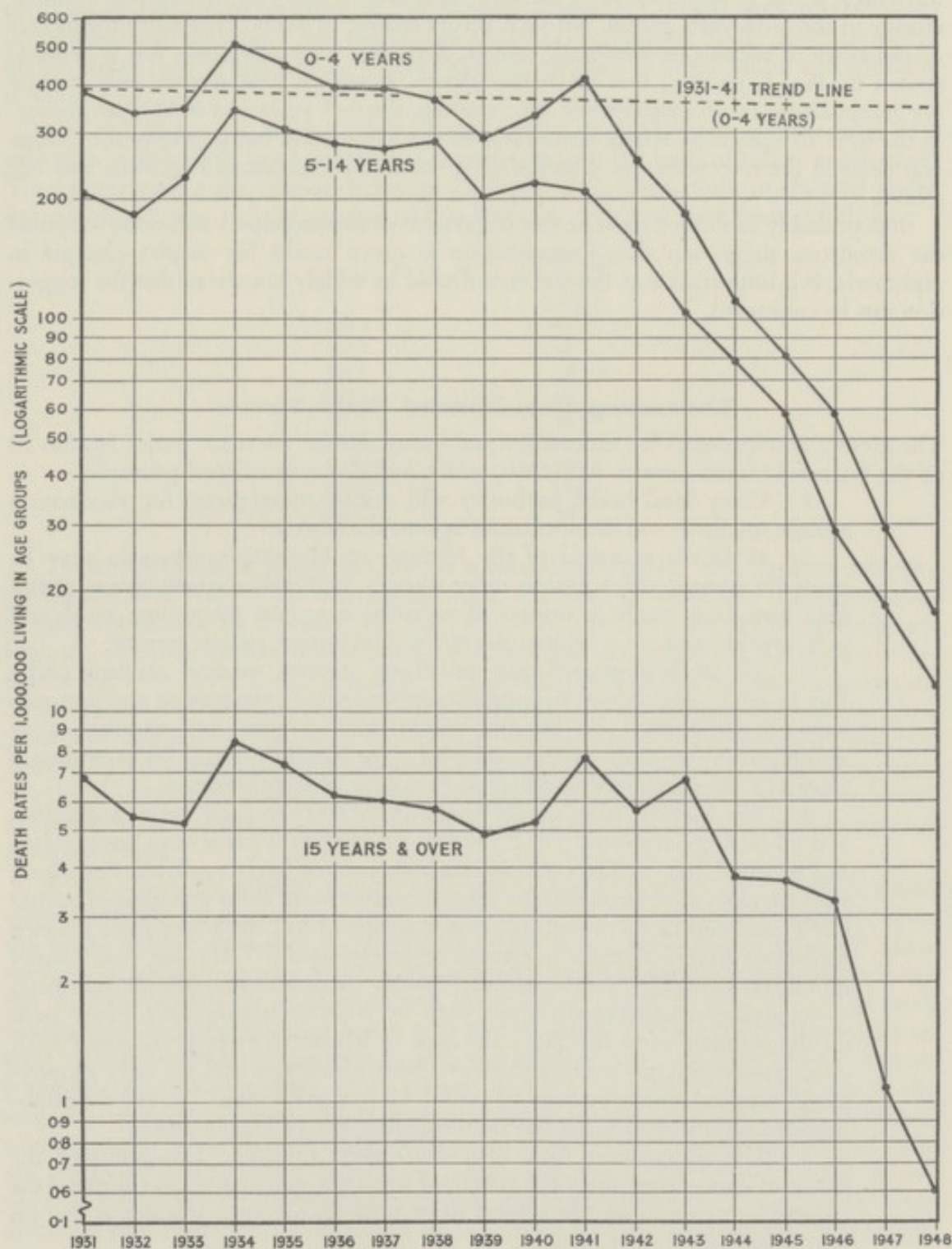
Up to the end of 1946 the proportion of children under 5 years of age who had been immunised against diphtheria varied from 28 per cent. in one borough to 68 per cent. in another (compared with an estimated 5.3 per cent. for the County as a whole in 1937), the borough figures for the 5 to 14 years age group varying between 20 per cent. and 86 per cent.

The virtual
abolition of
diphtheria

The achievement of diphtheria immunisation in virtually eliminating the disease from the community has passed into history. It is essential for the present to continue with immunisation and it is therefore necessary for us to be on our guard against the activities of those who seek to cast doubts on its value. An argument against immunisation which is being used widely at present is that diphtheria incidence and mortality were diminishing before the national immunisation campaign began, that the subsequent fall was merely a continuation of this secular trend, and that similar trends have taken

place in mortality from measles and whooping cough. The comparison with measles and whooping cough, which forms the latter part of this argument, is not a valid one. The falling mortality in both cases is the result of the increasing mildness of diseases which remain as prevalent as ever, whereas the reduction in mortality from diphtheria is the result of a great reduction in prevalence of a disease which has undergone no reduction in clinical severity. The argument that diphtheria immunisation has not affected the long term trend will not stand examination.

Figure 1—ENGLAND & WALES—DIPHTHERIA DEATHS 1931-1948



The diphtheria death rates in England and Wales over the relevant period are shown graphically (Fig. 1—the figures for England and Wales are used to avoid the effect of evacuation and re-evacuation in London during the war years) and it may be mentioned that the first full year of the diphtheria immunisation campaign was 1941. Logarithmic scale is used in the diagram to demonstrate the relative rate of change; if the rate of change was constant throughout the period this would be represented by a straight line. In fact, as is demonstrated with the 0–4 years age group, there was only a very slight downward trend before 1941 and if this trend line is continued to 1948 (dotted line) the abrupt change in the direction of the line after the immunisation campaign began is at once apparent. Had the previous trend continued the level of deaths in 1948 would have been about 20 times the level actually occurring in that year. There was a similar change in the 5–14 years group. No such abrupt change in trend occurred in the figures of mortality of measles or whooping cough. A further very significant fact is demonstrated by Fig. 1, namely, that *the marked change in trend in 1941 occurred only in those age groups among which immunisation was occurring*, the 0–4 years and 5–14 year groups. In the over 15 age group where immunisation was not carried out generally the change was delayed for five years, by which time a number of immunised children had left school.

It is probably too much to hope that opponents of immunisation will cease to spread the erroneous suggestion that immunisation is given credit for secular changes in diphtheria. It is important that the real facts should be widely known so that the suggestion can be countered.

The coming of the National Health Service

National
Health
Service Act,
1946

The present arrangements for vaccination and immunisation are made under Section 26 of the National Health Service Act, 1946, which laid down five broad principles.

1. Every local health authority will make arrangements for vaccination against smallpox and immunisation against diphtheria.
2. With the approval of the Minister of Health arrangements may be made for immunisation against other diseases. In London arrangements of this kind have been made in respect of vaccination against whooping cough and poliomyelitis and, to a limited degree, immunisation against tetanus.
3. All medical practitioners providing general medical services under Part IV of the Act to have the opportunity to provide vaccination and immunisation under Section 26. General practitioners carrying out vaccination or immunisation on their patients are paid a fee by the Council on providing a record of the completed vaccination or course of immunisation.
4. The Minister may supply free prophylactics to local health authorities and medical practitioners. The list of free prophylactics has always been limited and selective, but smallpox vaccine has always been freely available. For a long time the only diphtheria prophylactics available were alum precipitated toxoid (APT) and diphtheria toxoid antitoxin floccules (TAF). At a later stage purified diphtheria toxoid aluminium phosphate precipitated (PTAP) and fluid formol diphtheria toxoid (FT) were added. Pertussis vaccine and combined diphtheria—whooping cough prophylactics with or without tetanus have never been on the Minister's free list. Since the issue of Ministry of Health Circular 8/57, all alum-containing prophylactics have been withdrawn and the only prophylactics supplied free have been FT and TAF (see later—page 71). All the poliomyelitis vaccine used so far has been supplied free by the Minister.
5. The Vaccination Acts, 1867–1907 were repealed. This removed the factor of compulsion from the sphere of smallpox vaccination and allowed the approach to parents on this subject to be made in the same manner as that on immunisation to other diseases.

In 1948 the arrangements for vaccination and immunisation in the metropolitan boroughs although having a basic similarity, showed wide variations in detail. It was the Council's expressed intention at the time the National Health Service came into operation to continue in the main the existing arrangements, expanding them and developing them where necessary. The initial variations found in different areas and the fact that divisional medical officers have favoured different methods in the medical and administrative approach to the subject, are responsible for the fact that even today there are some differences in immunisation practice in different parts of the County. This is as it should be in a field which has seen many changes in recent years and in which finality has not yet been reached. It has allowed scope for local trials of particular methods of immunisation (such as the Medical Research Council trials of combined immunisation in division 9, and the various researches carried out by Dr. Guy Bousfield on the use of new prophylactics) and of different methods of organisation and administration.

The end of the era of compulsory vaccination saw the beginning in London of a period in which there was a substantial improvement in the level of infant vaccination. The figures giving the relation between the number of vaccinations in children under the age of one year and the number of live births in each year have been as follows :

Year	Percentage of live births		
1949	..	..	25
1950	..	..	31
1951	..	..	38
1952	..	..	45
1953	..	..	48
1954	..	..	49
1955	..	..	50
1956	..	..	49
1957	..	..	56

The present level of infant vaccination is substantially higher than the level achieved during the later years of the Vaccination Acts, a fact which vindicates the expectations of those responsible for repealing the Acts. It will be seen that most of the improvement took place during the first five years of the period and that in the last few years performance has been fairly level from year to year. The considerable increases seen in each of the years 1950-1953 are probably not unassociated with the fact that each of these years was marked by the occurrence of cases of smallpox in this country, attention thereby being focused periodically on vaccination as a preventive measure. It is noteworthy that habits of thought and action acquired during these years appear to be still in operation in maintaining a continuous comparatively high level of infant vaccination in recent years.

In the Council's scheme for bringing about the highest possible level of infant vaccination and immunisation against diphtheria the principal reliance is placed upon the health visitor. It is part of her routine duty to educate mothers to accept these preventive methods as part of normal child care and to ensure that the parents bring the children forward for vaccination and immunisation at the proper times. This work of education is carried out by health visitors both in the child welfare centres and on their visits to mothers and children in their own homes. The personal appeal to parents is reinforced in various ways. Once a year a publicity campaign is carried out on the subject of diphtheria immunisation. During a period of a fortnight posters are exhibited, advertisements are inserted in local newspapers, short films are shown in cinemas, talks are given and leaflets distributed. Such publicity drives are regarded as adjuncts and never as substitutes for the personal approach by health visitors to the parents. In some districts a card is sent out to the parent on the child's first birthday stressing the importance of certain health matters including immunisation.

The administrative approach to parents

Without prejudice to the primary importance of the personal approach it has been shown that the proportion of children immunised can be raised when the personal approach is supplemented by an approach to parents through the post. However industrious a health visitor may be she cannot guarantee always to see parents at the time at which the various prophylactic processes become due. If arrangements can be made for a letter to be sent to the parents of each child as soon as it reaches the appropriate age suggesting immunisation, the health visitor may be saved a great deal of special visiting. A letter of this kind may be followed by a reminder when there is no record of immunisation following the first letter, and a special visit if the reminder fails. This postal approach involves the use of clerical staff in the divisional health office, and trials are being carried out in certain districts to see how the benefits resulting from it can be achieved with the greatest economy of staff. Preliminary figures are encouraging.

Immunisation sessions

The Council's scheme for immunisation and vaccination gives parents the choice of having the inoculation carried out either by the family doctor or at the Council's centres. The Council makes available to family doctors free of charge any prophylactic used in the service, and pays a fee of 5s. to the doctor on receipt of a record of a completed course of immunisation. During 1957 general practitioners performed about 20 per cent. of the primary immunisation against diphtheria and whooping cough and about 30 per cent. of the primary vaccinations against smallpox. Immunisation and vaccination not carried out by the general practitioner is performed by the Council's full-time or part-time medical staff in the welfare centres either at special immunisation or vaccination sessions, or (in certain areas) at combined immunisation and maternity and child welfare sessions.

In the immunisation of children of school age a different approach is used, the parents being approached through the school health organisation and the immunisations carried out in special sessions held from time to time in the schools. Immunisation against diphtheria carried out in the schools consists principally of reinforcing doses at the ages of five years and 10 years for children who received primary immunisation in infancy. In some areas the first boosting dose at 5 years of age is given before school entry as part of the child welfare routine, but in most districts this is left until just after school entry. Reinforcing doses of diphtheria prophylactic given in 1957 totalled 39,268.

Vaccination under the National Health Service

The improvement in the level of infant vaccination in London since 1948 has already been commented upon. At least two factors have contributed to this, the first being that compulsion has been replaced by the persuasive zeal of the health visitor, the second the fact that a number of local epidemics of smallpox have focused the attention of the public on smallpox and vaccination. The effect of an epidemic is often to stimulate a wide public demand for vaccination. In so far as this serves to increase the amount of infant vaccination it is welcome, but it can be somewhat embarrassing in other respects. None would deny that a person who is in contact with smallpox should be vaccinated as a matter of urgency. However, mass vaccination of members of the public who have not been in contact with the disease is a measure that should not be encouraged unless smallpox is occurring outside the known contacts—an event which has only rarely occurred in recent epidemics. Children of school age and adults if they have never been vaccinated before are liable to have more serious reactions to vaccination than infants; it is therefore usual not to encourage the primary vaccination of such persons unless they have actually been in contact with smallpox.

It sometimes occurs that a case of smallpox is admitted to a general hospital or a fever hospital before the true nature of the disease is apparent. The Ministry of Health has, therefore, taken steps to encourage the highest possible degree of vaccination of the staff of hospitals.

The Ministry of Health memorandum 312 MED was issued in a revised form in 1956. It recommends the multiple pressure method with one insertion for routine use as being almost free from discomfort. In the face of exposure to smallpox two insertions are recommended and the scratch method is preferred.

By the date of coming into operation of the National Health Service the incidence of diphtheria in London had already fallen from 1,305 notifications in 1941 to 335 in 1948 (notifications corrected from changes in diagnoses). Further rapid diminution was maintained after 1948. Only four cases were notified in 1957, and the annual figure has been less than 20 each year since 1952. The small number of cases occurring has made it possible to investigate the circumstances of each individual case very thoroughly with a view to limiting spread. The present attack on diphtheria, therefore, consists of energetic suppression of infection when it occurs combined with maintenance of the highest possible level of immunisation.

The number of primary immunisations carried out since 1949 are given in Table (i). The actual number of immunisations carried out each year varies with the number of births in the previous year and is also affected by any restrictions that may be imposed by a poliomyelitis epidemic. From the figures for the percentage immunised at age 5 years it will be seen that the fall which took place after 1950 and which was due to uncertainty about the effect of poliomyelitis has now been made good in recent years. Nevertheless, the figure of about two-thirds of the children immunised at 5 years of age is far from satisfactory.

TABLE (i)
Diphtheria Immunisation Primary Course

Year	(1) <i>Under 1</i>	(2) <i>1-4</i>	(3) <i>Under 5</i>	(4) <i>5-14</i>	(5) <i>Age group 1-4 Percentage immunised at 5 years of age</i>
1949.. .. .	(a)	(a)	42,392	13,638	66.2(b)
1950.. .. .	(a)	(a)	34,768	11,921	67.0(b)
1951.. .. .	(a)	(a)	34,424	6,232	64.3
1952.. .. .	18,737	16,636	35,373	6,942	63.0
1953.. .. .	16,143	13,228	29,371	5,897	63.1
1954.. .. .	22,292	16,533	38,825	8,796	66.4
1955.. .. .	18,555	11,078	29,633	4,896	66.5
1956.. .. .	23,927	13,907	37,834	6,403	68.4
1957.. .. .	24,325	12,643	36,968	5,856	70.4

(a) Not available for these years.

(b) Estimated.

An interesting fact emerges from a comparison of the figures in columns (1) and (3), the steady increase through the years of the percentage of the under five immunisations which take place before the first birthday; this is most probably the result of an increasing use of the combined diphtheria/whooping cough prophylactic.

The main factors working against the attainment of high levels of immunisation have been apathy, organised hostility, exaggerated fear on the part of parents of the possibility of poliomyelitis following inoculation and measures taken by divisional medical officers to reduce the amount of immunisation during local prevalence of poliomyelitis.

Apathy and complacency are dangers which result directly from the success of the campaign. Diphtheria seems so remote nowadays that it is necessary to be continually reminding parents of the possible results of neglecting immunisation both for the individual and the community. The potential danger in the present situation has recently been vividly shown in the city of Detroit where as a result of public neglect of immunisation an epidemic of 141 cases of diphtheria with four deaths occurred in a population

which had previously been content to feel that 'it can't happen here'.* Organised hostility has come from the sources that have been familiar in the past, and was particularly evident from 1950 onwards when reports of poliomyelitis following inoculations appeared. The subject of poliomyelitis following injections is discussed later.

There can be little doubt that a factor which has assisted in maintaining higher levels of diphtheria immunisation has been the possibility of combining this process with vaccination against whooping cough. Whereas parents have to be persuaded to accept diphtheria immunisation, whooping cough vaccination supports itself largely by popular demand, this being a disease with which parents are familiar. When parents present their children for whooping cough vaccination it is comparatively easy to persuade them to have their children immunised against diphtheria at the same time when this can be done in the form of a combined injection. In 1957 about 75 per cent. of the diphtheria immunisation in London was carried out using combined prophylactics containing whooping cough vaccine and diphtheria toxoid with or without tetanus toxoid.

Whooping cough immunisation

Before 1948 certain of the metropolitan boroughs provided facilities for immunisation against whooping cough, and in the Council's proposals under Section 26 of the National Health Service Act, 1946, it was stated that these arrangements would be extended and developed in the light of further knowledge. Since that time a considerable amount of field research has taken place, and it is clear that vaccines currently manufactured in this country can be relied upon to give a substantial degree of protection against whooping cough. Although whooping cough occurs most frequently between the ages of one and five years it is most serious when contracted by babies less than a year old. In the effort to reduce mortality from whooping cough therefore it is advisable to commence giving the vaccine earlier than the time at which diphtheria immunisation has been usual in the past. Diphtheria immunisation was usually undertaken between the ages of eight months and one year. Many workers give the whooping cough vaccine in a course beginning about the age of three or four months. The fact that this course is often given in the form of a combined whooping cough/diphtheria prophylactic is responsible for the observation, already commented upon, that an increasing proportion of diphtheria immunisations is being completed before the first birthday. During 1957 nearly 90 per cent. of the whooping cough immunisation carried out was in the form of combined diphtheria/whooping cough prophylactic with or without tetanus toxoid. The actual numbers of completed primary courses carried out being :

Plain whooping cough vaccine	..	..	..	..	3,779
Combined diphtheria/whooping cough	..	..	..	..	19,464
Diphtheria/whooping cough/tetanus (triple prophylactic)					12,405

While there is abundant evidence of the value of the vaccine to the individual child in reducing the likelihood of infection and in reducing the severity of the attack when complete protection is not conferred, the precise part played by vaccination in the recent favourable community experience cannot be clearly shown. In view of the demonstrable benefit to the individual it is reasonable to believe that the use of the vaccine has assisted in the production of the comparatively low figures of mortality in recent years. It is doubtful if a substantial reduction in incidence can be expected unless further attention is given to the problem of maintaining immunity by reinforcing doses. In so far as this could be done by combined diphtheria/whooping cough prophylactics, in those whose primary course was of this nature, no problem would be presented. However, as whooping cough, unlike diphtheria, is a comparatively mild disease in older children many people feel that it would not be justifiable to embark on organising repeated booster doses of whooping cough vaccine.

* *Amer. J. Public Health*—June, 1957.

TABLE (ii)
Whooping cough primary inoculations (including combined antigens)

Year					Number inoculated	Percentage immunised of live births
1949	..	..	..	..	25,939	45.9
1950	..	..	..	..	17,338	32.3
1951	..	..	..	..	11,355	21.7
1952	..	..	..	..	22,233	43.2
1953	..	..	..	..	22,719	44.6
1954	..	..	..	..	37,434	73.8
1955	..	..	..	..	27,941	56.1
1956	..	..	..	..	36,556	70.1
1957	..	..	..	..	35,650	66.8

The amount of whooping cough immunisation performed in London since 1949 is shown in Table (ii). It is seen that there has been a substantial increase in whooping cough immunisation since 1954, the comparatively low figure for 1955 being the result of restriction of activity during the poliomyelitis epidemic of 1955.

Tetanus is an extremely serious and often fatal disease which in recent years has become much less frequent, particularly in towns. The great success in preventing tetanus in war wounds in the services during the last war by the routine immunisation of personnel with tetanus toxoid demonstrated quite clearly the value of this method of prevention. When one considers whether similar schemes should be provided for civilians, the rarity of the disease and the apparent remoteness of infection at first suggest that general immunisation would not be justified. When it is realised however, that a substantial proportion of the population at some time in their lives sustain injuries for which a prophylactic dose of tetanus antitoxin is given, the need for an alternative method of preventing the disease appears more pressing. The advent of reliable combined prophylactics with which it was possible to produce basic immunity to tetanus at the same time as a child was being immunised against diphtheria and whooping cough removed the need for separate injections of tetanus toxoid. In January, 1957, the Council received the approval of the Ministry of Health to a scheme for immunisation of children under five years of age against tetanus using the triple prophylactic. During the year over 12,000 children were immunised in this way, nearly 30 per cent. of them by general practitioners.

Tetanus

A matter that has been in the background of all immunisation practice during recent years has been the possibility that immunising injections might in some cases be followed by poliomyelitis. The subject was first raised in relation to cases of poliomyelitis in London in 1949.* At the same time cases were reported in Australia and later the subject was studied on a national scale in Britain. The situation in London in 1949 was reported in detail in my annual report for 1952. As soon as the first cases were reported the situation was studied and action taken. It was apparent that the number of cases of poliomyelitis occurring was a minute fraction of the children being inoculated; nevertheless, it did appear that in certain cases the injection had determined the site, and also possibly the onset, of paralysis. There was no suggestion that infection with poliomyelitis virus had been introduced by the injection. Nearly all the cases appeared to be associated with the combined whooping cough and diphtheria prophylactic containing alum.

Poliomyelitis following inoculations

Steps taken at that time were later shown to be abundantly justified. First a decision was taken to cease using the combined alum prophylactic. Additional precautions were

* D. H. Geffen—1950 *Medical Officer* 1.137.

taken during an epidemic of poliomyelitis. In some parts of London all immunisation was stopped while a poliomyelitis epidemic was in progress locally, in others intramuscular injections were stopped during an epidemic while subcutaneous injections using non-alum prophylactics continued.

During the next two or three years immunisation figures declined partly because the publicity given to the matter made parents reluctant to come forward, and also because of the difficulty in overtaking the arrears resulting from the cessation of activity during poliomyelitis epidemics. The appearance of the combined diphtheria/whooping cough prophylactics without alum which was singularly free from local reaction proved a great stimulus to increased figures in recent years.

However, it was obvious that the final solution of this problem would have to await the answers to a number of questions. How great was the risk in terms of the number of injections given? Does it vary with different methods of injection, e.g., intramuscular, subcutaneous? Does it vary with the age of the child? With the time of the year? With the presence of an epidemic of poliomyelitis? With different types of prophylactics? It was obvious that the answers to these questions could not be obtained at once. In 1950 a committee of the Medical Research Council was set up to enquire into the problem. During the next few years an enquiry was carried out by the committee in which all public health departments co-operated. The committee reported in 1956* and in July, 1957 the Ministry of Health issued Circular 8/57 making a number of recommendations based on the report. The report showed that inoculation with certain diphtheria and whooping cough prophylactics involves some slight risk of paralysis due to poliomyelitis. The risk is greatest from April to September (i.e., it begins before the usual poliomyelitis season) and when a combined alum-containing prophylactic is used. There was no evidence that subcutaneous injection reduced the risk. The way was now open for recommendations which would reduce the risk to negligible proportions. The recommendations made by the Ministry of Health were:

(a) Alum prophylactics should not be used. This means that in addition to the alum-containing combined prophylactic which had not been used in the Council's service since 1950, no further use will be made of APT and PTAP.

(b) Where antigens are used in combination regard should be had to the seasonal incidence of poliomyelitis and the season of maximum risk of provocation paralysis. It has, therefore, been decided that in the Council's service the use of combined antigens will cease at the beginning of April in each year. It may be resumed at any time after August according to the amount of poliomyelitis that is occurring. It may be that in epidemic years it may not be possible to begin the use of combined prophylactics again until towards the end of the year.

(c) If non-alum antigens are used singly they may be used throughout the year subject to the discretion of the medical officer of health. This means that when the combined antigens are stopped in April it may be possible to continue prophylaxis using single antigens.

At the time of writing it is too early to say what the effect of these changes may be on the level of immunisation. Whilst the changes of routine are disturbing, it may be hoped that the knowledge that steps have been taken which, in the light of full enquiry, appear to be capable of reducing the risk to negligible proportions may set at rest doubts that may have been in the minds of parents and members of the staff and allow a substantial increase in the numbers of children immunised.

In January, 1956, the Ministry of Health decided to make available through the National Health Service the small quantities of a British manufactured poliomyelitis vaccine that were then beginning to become available, for use during the months of May and June. Since that time there have been roughly three stages in the poliomyelitis vaccination programme.

* Report—1956 *Lancet* ii—1223.

The first was the period May-June, 1956. Prior to this the offer of registration had been made to the parents of all children born in the years 1947 to 1954 inclusive. A random sample of children of each age was selected from this group by the Ministry of Health and given vaccine during this period. The experience of the inoculated children during the following poliomyelitis epidemic, compared with the children who were registered but not vaccinated showed that they had only about a fifth of the poliomyelitis experienced by the un-inoculated children.* The British vaccine which differed in certain respects from the American vaccine, was thus shown to be safe and effective.

The second stage began with the resumption of vaccinations in November, 1956, when further supplies were available for those registered children who had not been inoculated in May and June. At this stage general practitioners were brought into the scheme and parents were able to elect for their children to be inoculated by their family doctors or at the Council's local clinics. In May 1957, the decision was taken to continue inoculations right through the summer, and to extend the offer of vaccination to children born in 1955 and 1956 and those born in the years 1947-54 who had not previously registered.

The third stage began in November, 1957, when the decision was made to supplement supplies of British vaccine by importing American and Canadian vaccine, and to extend the offer to all children between the ages of six months and 15 years, to expectant mothers, general practitioners and their families, ambulance personnel and their families, and certain hospital staff and their families. This presented a most formidable administrative problem, as parents had to be given the choice of having the inoculations carried out by their family doctor or by the Council, and they were also given the choice of having the British or American vaccine. This operation was in progress at the end of 1957.

In all, by the end of 1957 the course of two injections had been given to 105,672 children in London. Just over twelve thousand of these were given in the months of May and June, 1956. At the end of 1957 the supplies of North American vaccine had not commenced to be distributed.

* *Report—Brit. Med. J.*, 1957—1.1271.

LONDON AMBULANCE SERVICE

FOR THE FIRST year since the inception of the National Health Service there was a very slight reduction in the number of patients conveyed by the combined general and ancillary services and, for the second consecutive year, there was a drop in the journeys undertaken and mileage covered by the ambulance service as a whole. For every 100 patients transported in 1947 (the year preceding the inauguration of the National Health Service) the ambulance service as a whole conveyed 459 patients in 1957. Similarly, for every 100 miles covered and 100 journeys undertaken in 1947, vehicles attached to the ambulance service as a whole travelled 291 miles and undertook 297 journeys in 1955, 285 miles and 295 journeys in 1956 and 277 miles and 291 journeys in 1957. The expansion in demand for ambulance transport during the last decade has emphasised the need for the greatest care and economy in making the maximum use of the available resources of men and vehicles. The success of these efforts can be gauged from the figures given in table (iv)* from which it will be noted that since 1949, the first full year following the introduction of the National Health Service, the average mileage per patient in the general section of the Service has been reduced from 7.74 to 4.16 and the average miles per journey from 10.05 to 8.05, while the number of patients carried per 100 journeys increased from 130 to 194.

Accident section

Forty-six ambulances are deployed at the headquarters station and at 19 accident ambulance stations to deal with all emergency work and some of these are used, as opportunity offers, to relieve the pressure on the general section, principally by undertaking some of the more urgent removals normally dealt with by that section. Each day during 1957 an average of 267 '999' calls were received in the headquarters control room of which 66 per cent. were made by members of the public. The busiest day of the week was Friday with an average of 291 calls throughout the year, the heaviest demand being in December. At Christmas and New Year the accident section is augmented to meet the anticipated seasonal increase in emergency calls and during the peak period from 2 p.m. on Christmas Eve to 2 a.m. on Christmas morning, no less than 382 '999' calls were received, i.e., an average of one call every two minutes.

Table (ii) shows an analysis of the various categories of emergency calls and indicates that the highest incidence of emergency calls is from 11 a.m. to 7 p.m. and from 10 p.m. to midnight; the most dangerous periods for street accidents are between 5 p.m. and 7 p.m. and between 11 p.m. and midnight, and home accidents, as one would expect, occur most frequently between the hours of 10 a.m. and 7 p.m. when household activities are at their highest. Calls for the removal of maternity cases to hospitals and nursing homes still constitute the greatest single emergency demand and the majority of these removals occur during the night hours.

The total number of journeys undertaken by the accident section (corresponding to the total number of calls received) showed a slight reduction for the first time since the war although there was a further increase in the number of casualties removed (table (i)). This is accounted for by the fact that the number of journeys made for the transport of analgesia apparatus, which is held at all accident ambulance stations for use in home confinements, has dwindled considerably as a result of the introduction into the midwifery service of the more portable Trilene apparatus which the midwives carry with them.

An analysis of street accidents according to age and sex is shown in table (iii), from which it will be seen that the heaviest incidence for males and females occurs between the ages of 15 and 24 years. The average time to reach the scene of street accidents, to which there were 17,704 calls in 1957, was 5.8 minutes and the casualties were admitted to hospital within an average of 17.3 minutes from the time the initial call for assistance was received.

* The tables to which reference is made in this section are at pages 78 to 80.

Emergency cases, other than maternity patients, are normally taken to the nearest casualty receiving hospital. There are 51 hospitals in the metropolitan area prepared to admit casualties of any kind at any time of the day or night and a further 10 hospitals accepting child casualties only. St. James' Hospital, Balham, received the highest number of patients, 4,255.

Eighteen major incidents occurred during the year. There were 5 fires involving 39 casualties, 6 major road accidents involving 61 casualties, 3 relatively small railway incidents involving 26 casualties and 3 miscellaneous incidents involving 11 casualties. The remaining incident was the tragic Lewisham railway disaster from which 223 persons including 85 dead, were removed by the ambulance service. This accident occurred at about 6.20 p.m. on 4 December, 1957, in dense fog near St. John's Station, Lewisham, when a steam train collided with the rear of a ten-coach electric train which was stationary at a signal. A number of carriages in each train telescoped and carried away one of the pillars supporting a fly-over railway bridge which partially collapsed on to the wreckage. Vehicles and men were quickly deployed and, within half an hour of the initial call for assistance, 12 ambulances were at, or on their way to, the scene. A further 19 ambulances were dispatched during the succeeding half hour and ultimately, 37 ambulances and crews were in attendance. Ambulances were sent to the scene by the Kent Ambulance Service and the Essex and Surrey Ambulance Services undertook to respond, if necessary, to calls in East and South West London, respectively, where London ambulances had been depleted. The last injured person was taken to hospital by about 10.30 p.m. but the work of locating and removing bodies continued and the last ambulance was withdrawn some 60 hours after the occurrence of the disaster.

During the year there were 3,639 calls describing emergencies in which medical assistance rather than ambulance transport was required and callers were advised to summon the patients' doctors or were given particulars of other doctors who could be called upon locally.

The work of the general section of the Service, concerned mainly with the removal of sick persons to and from hospitals, clinics, railway stations, etc., continues to grow (table (i)), in spite of the very slight reduction in the total number of patients dealt with by the combined general and ancillary services. The bulk of this work is the conveyance of out-patients to and from hospitals and clinics and no less than 83 per cent. of the 886,839 patients dealt with by the general section came within this category. Vehicles to meet this considerable transport problem are housed mainly at six large ambulance stations which together accommodate some 280 ambulances and cars. About 100 of these vehicles are stationed at the larger hospitals daily, or as often as required, to work from these hospitals under the direction of the hospital transport officers.

General
section

The conveyance of about 1,100,000 patients each year over a distance of about 6,000,000 miles without incurring some delay in dealing with the less urgent cases is a problem which requires for its solution the most careful use of available resources.

Table (iv), shows the improvements which have been achieved by the general section of the Service. By the careful planning and co-ordination of journeys and by the increasing co-operation of hospital authorities, lost journeys have been considerably reduced, delays in the 'turn-round' of ambulances at hospitals are now relatively infrequent and there has been a steady improvement in patient/mileage ratios.

Despite these improvements, however, delays in the conveyance of out-patients do still sometimes occur. Moreover, it is evident that the present-day tendency to treat more and more patients as out-patients and the schemes which several London hospitals already have in hand for the very considerable extension of out-patient treatment of all kinds, will entail still further increases in the demand for ambulance transport. It is likely, therefore, that while emphasis must continue to be laid on the importance,

from the point of view of economy in public expenditure, of meticulous care and restraint in the ordering of ambulance transport, some expansion of the Council's directly provided resources will be necessary. Among these resources, radio telephony may play an increasing part, judging by the experience gained from its experimental use on a restricted scale over the past two years.

During recent years there has been a great increase in the transport of patients by rail to and from out-county areas and a sample analysis made in 1957 indicates that about 24,000 patients are being taken by ambulance to or from the 11 main London railway termini in the course of a year. The number of patients for whom railway fares were paid by the Council was 1,762, compared with 2,928 in 1956.

Agency and
supplementary
services

The Ambulance Department of the Joint Committee of the Order of St. John of Jerusalem and the British Red Cross Society and the County of London Hospital Car Service continued to render invaluable assistance in relieving the directly provided service of a large volume of work. The Council's thanks are again due to the Director and the County Organiser respectively.

The Ambulance Department of the Joint Committee is mainly concerned in undertaking, on behalf of the Council, the transport of patients by road to out-county areas and the Hospital Car Service in conveying ambulant patients to and from Hospital out-patient departments and clinics. A summary of the work carried out by these Services during 1957 will be found in table (i), from which it will be noted that, although there was a reduction in the number of patients carried by the Hospital Car Service compared with the previous year, the combined total of patients dealt with by the two Services was 137,118 which represents 12 per cent. of the patients conveyed by the ambulance service as a whole.

On 1 October, 1957, a scheme was put into operation to integrate the Hospital Car Service more closely with the directly provided service by arranging for all requests for transport to be made in the first instance through the Council's own control organisation. Thus it was anticipated that the combined resources of the two Services would be used with greater efficiency and less duplication of effort as a result of the greater scope for the combination and co-ordination of journeys. During the first three months' operation of the revised scheme the number of patients conveyed by the Hospital Car Service showed a reduction of 5,104 (17 per cent.) compared with the corresponding period of the previous year whilst the number of patients transported by the general section of the Service during the same period showed a proportionate increase. This is a measure of the initial effect of this scheme.

The arrangements in North Woolwich whereby the West Ham Borough Council undertakes to provide on behalf of the Council, ambulance services in those parts of the Metropolitan Borough of Woolwich which lie North of the Thames continued during 1957 and details of the work done appear in table (i).

Vehicles

Trials continued throughout the year of the new type 'plastic' ambulance (described in the 1956 report) as a projected replacement vehicle for ambulances which will be going out of service during the next few years.

The operational vehicle strength at the end of 1957 was as follows :

Large ambulances	227
Single-stretcher, sitting-case ambulances ..	61
Sitting-case cars	38
Ambulance buses	8
Tenders	2
	336

Premises

A continuation of financial restrictions necessitated the further postponement of major schemes for re-building or improving the Oval, Poplar and South Eastern Ambulance Stations. Details of other works undertaken are given in the section dealing with health service premises at page 45.

Staff

Three drivers in the accident section of the Service were awarded the Royal Humane Society's Resuscitation Certificates during the year. Award of Resuscitation Certificates

A large percentage of the drivers continue to qualify for awards in the National Safe Driving Competition held by the Royal Society for the Prevention of Accidents. Safe driving and First Aid
609 drivers gained awards in the Competition for 1957. It is gratifying to record that four ambulance drivers hold awards for 30 years and over of safe driving and nine for 25 to 29 years.

The interest of the staff in securing further qualifications in first aid to the injured has been maintained.

Civil Defence

Continued efforts were made in accordance with a Home Office Circular of 1956, during the course of 1957 to eliminate those members who had definitely lost interest. Elimination of non-active members
Volunteers who had not recently attended training courses were written to and in some cases visited to see if they wished to resume active membership of the Civil Defence Corps. As a result 47 names were removed from the roll of volunteers and the present strength of the Section at the end of 1957 was 1,747.

Recruitment of new volunteers, largely as a result of the autumn recruitment campaign more than offset the number of withdrawals. Evening searchlight displays, intended to show the various Civil Defence sections working as an integrated body, were staged by the Council and the Metropolitan Borough Councils. Recruitment

Six officer selection courses were given throughout 1957 and, as a result, 44 new officers were appointed from among the fully trained volunteers—16 shift leaders and 28 deputy shift leaders. Selection of officers

The following other courses were held during 1957 :

Ambulance Section, Part I	..	..	..	..	10
Ambulance Section, Part II	..	..	..	..	10
First aid	..	..	..	..	12
First aid practical revision	..	..	..	..	9
Elementary Driving and Maintenance, Part I	..	..	..	..	7
Elementary Driving and Maintenance, Part II	..	..	..	..	5
Introductory	..	..	..	..	3

Training courses

(One member of the staff attended and received the full certificate of the Civil Defence School at Falfield.)

Driving instruction was continued throughout the year, except for the period during which petrol rationing was in force, when it was necessarily curtailed. As a result of petrol rationing, it was necessary to suspend for a considerable period the arrangements for volunteers who did not hold driving licences to undergo courses of training with a recognised school of motoring. In order to retain the interest of these volunteers, a special series of courses was arranged to give them some instruction in the working of motor vehicles before they commenced their driving instruction on the road. It was found that these courses were much appreciated by the volunteers and they have been continued. Driving instruction

TABLE (i)—Work performed by the directly provided service and by the agency and supplementary services

	1947	1949	1950	1951	1952	1953	1954	1955	1956	1957
<i>Patients :</i>										
Accident Section	61,136	65,989	73,853	77,661	78,692	81,800	82,850	87,164	88,608	91,801
General Section	182,206	362,963	480,048	550,621	660,206	721,334	797,937	851,997	881,006	886,839
Total—directly provided service ..	243,342	428,952	553,901	628,282	738,898	803,134	880,787	939,161	969,614	978,640
Joint Committee	—	9,557	7,966	10,111	13,682	15,272	17,493	21,539	24,358	25,090
Hospital Car Service	—	107,667	144,669	149,046	135,523	131,763	125,352	127,938	120,122	112,028
West Ham B.C.	—	113	246	208	591	457	434	416	378	499
TOTAL—agency and supplementary services	—	117,337	152,881	159,365	149,796	147,492	143,279	149,893	144,858	137,617
Grand Total	243,342	546,289	706,782	787,647	888,694	950,626	1,024,066	1,089,054	1,114,472	1,116,257
<i>Journeys :</i>										
Accident Section	64,560	75,901	83,791	87,012	87,691	90,896	92,401	96,661	97,823	97,535
General Section	155,122	279,600	340,876	361,664	410,469	428,755	448,004	462,615	463,158	457,976
Total—directly provided service ..	219,682	355,501	424,667	448,676	498,160	519,651	540,405	559,276	560,981	555,511
Joint Committee	—	5,716	4,785	5,499	6,886	7,628	8,848	10,118	10,837	11,745
Hospital Car Service	—	84,306	109,860	99,947	89,633	83,561	78,447	82,652	76,756	71,556
West Ham B.C.	—	113	246	199	583	454	433	414	378	494
TOTAL—agency and supplementary services	—	90,135	114,891	105,645	97,102	91,643	87,728	93,184	87,971	83,795
Grand Total	219,682	445,636	539,558	554,321	595,262	611,294	628,133	652,459	648,952	639,306
<i>Mileage :</i>										
Accident Section	362,880	410,917	437,416	443,683	442,268	458,602	466,415	488,292	491,929	485,431
General Section	1,768,550	2,808,550	3,041,569	3,092,902	3,470,442	3,625,430	3,804,544	3,856,850	3,736,550	3,687,353
Total—directly provided service ..	2,131,430	3,219,467	3,478,985	3,536,585	3,912,710	4,084,032	4,270,959	4,345,142	4,228,479	4,172,784
Joint Committee	—	376,564	281,223	263,087	285,075	319,869	371,372	429,980	436,927	430,373
Hospital Car Service	—	1,496,090	1,787,434	1,740,930	1,504,138	1,424,788	1,320,582	1,425,624	1,399,355	1,292,177
West Ham B.C.	—	1,468	4,373	3,338	7,806	5,358	5,008	4,621	4,152	5,052
TOTAL—agency and supplementary services	—	1,874,122	2,073,030	2,007,355	1,797,019	1,750,015	1,696,962	1,860,225	1,840,434	1,727,602
GRAND TOTAL	2,131,430	5,093,589	5,552,015	5,543,940	5,709,729	5,834,047	5,967,921	6,205,367	6,068,913	5,900,386

TABLE (ii)—Emergency calls—Analysis

<i>Hours</i>				<i>Street accidents</i>	<i>Home accidents</i>	<i>Maternity removals</i>	<i>*Other calls</i>	<i>Total calls</i>
<i>A.M.</i>								
12-1	..	..	..	468	168	1,425	1,520	3,581
1-2	..	..	..	237	95	1,498	968	2,798
2-3	..	..	..	150	61	1,489	629	2,329
3-4	..	..	..	96	50	1,577	531	2,254
4-5	..	..	..	71	30	1,475	432	2,008
5-6	..	..	..	84	27	1,374	453	1,938
6-7	..	..	..	170	42	1,239	520	1,971
7-8	..	..	..	588	97	1,230	929	2,844
8-9	..	..	..	867	227	1,028	1,715	3,837
9-10	..	..	..	776	387	1,075	2,367	4,605
10-11	..	..	..	740	458	953	2,826	4,977
11-12	..	..	..	906	522	756	3,408	5,592
<i>P.M.</i>								
12-1	..	..	..	1,039	592	692	3,278	5,601
1-2	..	..	..	1,137	561	732	3,068	5,498
2-3	..	..	..	991	509	698	3,077	5,275
3-4	..	..	..	1,102	406	671	3,486	5,665
4-5	..	..	..	1,175	416	708	3,362	5,661
5-6	..	..	..	1,511	468	804	2,937	5,720
6-7	..	..	..	1,249	464	900	2,440	5,053
7-8	..	..	..	952	435	989	2,231	4,607
8-9	..	..	..	717	339	1,028	2,112	4,196
9-10	..	..	..	733	287	1,127	2,100	4,247
10-11	..	..	..	919	250	1,427	2,473	5,069
11-12	..	..	..	1,026	247	1,449	2,645	5,367
Total	..	..	..	17,704	7,138	26,344	49,507	100,693
Percentage	..	..	..	17.6	7.1	26.1	49.2	100.0

* Includes accidents (other than home and street accidents) (12.6 per cent.) ; assault (2.9 per cent.) ; attempted suicide (1.7 per cent.) ; urgent illness (22.9 per cent.) ; non-patient carrying journeys (1.9 per cent.). Ambulance not required (7.2 per cent.).

TABLE (iii)—*Street accidents—by age and sex*

	<i>Males</i>	<i>Females</i>	<i>Total</i>
0-4	308	169	477
5-14.. .. .	1,495	685	2,180
15-24.. .. .	2,597	997	3,594
25-34.. .. .	1,826	737	2,563
35-44.. .. .	1,328	641	1,969
45-54.. .. .	1,422	873	2,295
55-64.. .. .	1,017	853	1,870
65-74.. .. .	688	896	1,584
75-84.. .. .	386	591	977
85 and over	84	82	166
Not known	15	9	24
Not specified	—	—	5
TOTAL	11,166	6,533	17,704

TABLE (iv)—*General Section*

	<i>1949</i>	<i>1950</i>	<i>1951</i>	<i>1952</i>	<i>1953</i>	<i>1954</i>	<i>1955</i>	<i>1956</i>	<i>1957</i>
Average mileage per patient	7.74	6.34	5.62	5.26	5.03	4.77	4.53	4.24	4.16
Average mileage per journey	10.05	8.92	8.55	8.45	8.45	8.49	8.34	8.07	8.05
Patients carried per 100 journeys	130	141	152	161	169	178	184	190	194
Percentage of lost journeys	4.2%	3.2%	2.8%	2.6%	2.5%	2.4%	2.2%	2.1%	1.9%
Delays at hospitals of over half hour's duration	N/A	N/A	N/A	N/A	2,996	1,813	1,372	745	334

PREVENTION OF ILLNESS : CARE AND AFTER-CARE

Foot clinics

Particulars of new cases and attendances

Year	New cases	Attendances	Staff at the end of the year (in terms of whole units)
1949	9,446	129,682	35
1950	10,165	153,687	44
1951	10,348	162,163	43.5
1952	10,828	169,598	43.2
1953	11,374	180,588	43.5
1954	10,143	185,614	44.8
1955	9,089	184,628	43.8
1956	7,362	170,855	41.8
1957	8,149	166,987	44.2

The majority of treatments provided at the clinics were for superficial excrescences (corns, callosities, etc.), and malformed nails. Advice was given on shoe fitting, foot hygiene and exercises.

Recuperative holidays

The total decline in demand for recuperative holidays was far less marked in 1957 than in recent years and there was a slight increase in the number of children sent for holidays.

Admissions to recuperative holiday homes

Years	Unaccompanied children		Accompanied children	Expectant and nursing mothers	Other adults	Total
	Under 5 years	School children				
1954 ..	486	3,404	424	197	2,954	7,465
1955 ..	403	2,803	405	153	2,784	6,548
1956 ..	278	2,793	373	141	2,590	6,175
1957 ..	294	2,731	487	138	2,510	6,160

The total includes 38 persons sent away under arrangements introduced in 1957 to provide holidays for parents when considered necessary to prevent mental or physical breakdown which might lead to the breaking up of the family or to neglect or ill-treatment of the children. Hitherto adults had only been eligible for recuperative holidays if they were recovering from an illness.

During the year the Council accepted an offer to lease a large home at Bognor Regis and this will replace two establishments of which the Council has sole use at Aldeburgh and Deal. The new home is due to open in October, 1958.

Venereal disease

Treatment of venereal disease at London out-patient clinics

Year	New cases										Total attendances	
	Syphilis		S. Chancre		Gonorrhoea		Total venereal cases		Total non-venereal cases			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1918..	3,764	3,002	116	13	4,844	1,940	8,724	4,955	1,345	1,348	169,485	
1928..	3,433	1,837	229	6	8,249	2,647	11,911	4,490	6,369	3,226	544,969	218,566
1938..	1,799	1,065	235	9	7,120	2,151	9,154	3,225	8,249	5,269	588,815	263,908
1939..	1,573	904	164	5	5,982	1,652	7,719	2,561	7,468	5,008	412,067	189,355
1940..	1,493	709	146	9	4,591	1,319	6,230	2,037	5,383	3,515	305,693	131,375
1941..	1,381	773	205	12	3,862	1,425	5,448	2,210	4,675	3,709	224,954	122,492
1942..	1,369	917	148	9	3,082	1,444	4,599	2,370	4,960	5,177	222,864	155,559
1943..	1,362	1,107	104	15	2,839	1,442	4,305	2,564	7,627	8,867	219,014	177,859
1944..	1,176	967	89	13	2,929	1,363	4,194	2,343	6,568	8,234	188,450	155,332
1945..	1,417	1,176	102	3	3,962	1,738	5,481	2,917	9,517	9,849	196,074	160,697
1946..	2,371	1,354	154	11	7,718	1,785	10,243	3,150	17,153	8,654	284,108	161,839
1947..	2,207	1,301	128	6	7,236	1,408	9,571	2,715	13,847	7,132	269,435	147,717
1948..	1,949	1,155	102	6	7,008	1,346	9,059	2,507	16,349	6,821	268,203	148,212
1949..	1,572	790	62	5	6,463	1,207	8,097	2,002	16,140	6,533	245,250	134,897
1950..	1,278	664	90	3	5,740	1,127	7,108	1,794	17,385	6,180	238,986	122,482
1951..	1,077	549	105	6	5,060	1,028	6,242	1,573	16,443	5,648	200,778	101,787
1952..	811	490	91	3	5,625	1,176	6,527	1,669	16,920	5,632	220,871	100,420
1953..	720	401	88	4	6,103	1,546	6,911	1,951	17,615	6,121	220,316	102,365
1954..	651	340	64	2	5,816	1,422	6,531	1,764	17,875	6,304	219,258	100,554
1955..	625	400	77	6	5,916	1,457	6,618	1,863	18,735	7,056	221,381	103,815
1956..	691	493	72	4	7,468	1,718	8,231	2,215	19,802	7,468	222,695	101,034
1957..	701	562	78	2	8,943	2,003	9,722	2,567	20,554	8,102	223,821	97,149

	1956	1957
Percentage of patients resident in County of London	79	81
Number of patients completing treatment and of defaulters—		
Syphilis—patients completing treatment—		
Males	818	828
Females	645	627
patients not completing treatment—		
Males	639	675
Females	326	294
Gonorrhoea—patients completing treatment—		
Males	3,663	4,938
Females	780	985
patients not completing treatment—		
Males	3,172	3,501
Females	801	900

Tracing of contacts of patients

Analysis of work undertaken by Council's male and female welfare officers

Contacts referred by hospitals, medical services of the Armed Forces and by local health authorities	370	384
Insufficient information for following-up	277	276
Contacts brought to treatment	44	27
Contacts traced but not brought to treatment	6	14
Contacts not treated	43	67

In addition the female welfare officers attended clinics at St. Paul's Hospital and H.M. Prison, Holloway and followed-up persons defaulting in attendance at these clinics.

Health Education

The year-round efforts of the medical and nursing staff who as part of their normal duties take every available opportunity of carrying out health education have again been the most important factor in this field. Supporting activities centrally organised have covered a very wide field and emphasis was again placed on home safety and diphtheria immunisation which were the subject of intensive campaigns.

The home safety campaign was of a general nature and followed the lines of that for previous years as described in an appendix to my report for 1956. As a central focus and to impress on London's public the danger to life and limb from the hazards that abound in their own homes, and especially those homes where there are young children and elderly people, an exhibition was mounted in collaboration with the Royal Society for the Prevention of Accidents and with the co-operation of the London Transport Executive in the booking hall at Charing Cross Underground Station. Entitled 'Danger at Home', it was opened by the Rt. Hon. Herbert Morrison, M.P., on 28th October and remained open to the public for three weeks. Some 30,000 people passed through during this time. The exhibition did not attempt to deal with every possible cause of home accidents nor did it go into every detail of prevention but it did draw attention in clear and simple fashion to the risks arising from the three most numerous causes, falls, poisoning (including coal gas poisoning) and burns and scalds so that its impact would be felt by people passing through the station in the very short time at their disposal. Visits of longer duration were made by several school parties and other organisations. Considerable interest was evinced by members and officers of other local authorities who saw it. The exhibition was widely publicised by a striking poster displayed on London underground railway stations and elsewhere. A special leaflet dealing with the risks arising from falls, poisoning and burns and scalds was distributed, with others appropriate, to a total of 58,500. Home safety

The diphtheria immunisation campaign held during the two weeks commencing 4th February, was followed by a marked increase in primary injections. Diphtheria immunisation

During the year 134 film shows were arranged (the majority being for educational classes at maternity and child welfare centres) during which 270 films on health topics were shown and 477 film strips were used from the library of film strips. A short film made for the Council during 1956 to publicise B.C.G. vaccination was shown for one week at each of 67 cinemas in London. Films and film strips

A second competition was held to stimulate the interest of health visitors and other staff engaged in health education work in display techniques and to secure a flow of suggestions for use in future teaching. 114 entries which included both posters and three-dimensional displays were submitted. The great variety of the entries, coupled with the high standard of workmanship and ideas, made selection a difficult task and it was decided to award two second and two third prizes of equal value in each case. A group of health visitors from division 9 were awarded the first prize, second prizes were awarded to staff in divisions 2 and 7, third prizes to staff in divisions 5 and 7, and commendations were given to staff in divisions 2 (2) and 5 (2). All entries received in the competition were later displayed for two days in County Hall so that officers of the department should have an opportunity of studying them. Staff competition

During the year distribution continued of a safety handbook through the Council's welfare centres, etc., and with the co-operation of other authorities and voluntary organisations. More than 68,000 handbooks were distributed. Safety handbook

A wide range of health topics was covered during the year by talks given by health visitors, school nurses and other qualified staff to schools, parents, parent/teacher associations, community clubs, etc.

Increasing attention was given to this important subject and an illustrated leaflet in the form of a guide to health was prepared which gave prominence to the connection between cigarette smoking and lung cancer. Distribution to all leavers from the Council's schools through its youth employment bureaux commenced at the end of the summer term. Cancer education

MENTAL HEALTH

The Royal
Commission

IN MAY, 1957, the Royal Commission on the Law relating to Mental Illness and Mental Deficiency appointed in February, 1954, issued a unanimous report.* The report had been eagerly awaited and its publication was without doubt the most important event of the year in the field of mental health and, indeed, probably in the whole realm of public health.

Pressure for reform has probably been directed principally towards the Mental Deficiency Acts because of allegations of the illegal detention of high-grade defectives and also, to a lesser degree, the cumbersome and legalistic procedure for securing the admission to hospital of low-grade defectives whose need for care is obvious even when parents or guardians desire it. Judgments in the High Courts in recent years in cases arising out of the detention of mental defectives have made the administration of the Acts by local health authorities extremely difficult. The outstanding case was that of *Regina v. The Board of Control ex parte Ratty* (February, 1956), the effect of which was given in my annual report for 1956.

In another case in which application for a writ of *habeas corpus* had been made the learned judge found that an order sending a defective to an institution was bad because he did not consider that an ulterior motive on the part of the parent in refusing consent had been proved, and that accordingly the parent's consent must be regarded as being withheld with the *bona fide* intention of benefiting the defective. An implication of this decision is that, however misguided or mistaken a parent or guardian may be in withholding consent and however unsuitable the circumstances in which the defective is living may be, consent cannot be regarded as being unreasonably withheld unless positive proof of bad faith is produced. It is obvious that such proof is extremely difficult to obtain which means that it is now virtually impossible to remove a person to a mental deficiency institution in the face of the refusal of consent by his parent.

It may be that there have been instances of the law being stretched by zealous local authority officers and that a corrective was necessary, although I cannot feel that these instances have been at all frequent or that the intention of the officers concerned has been other than well-meant. The effect of the Court decisions, however, has been to swing the pendulum so far the other way that some sections of the Act have been completely nullified and for this reason alone fresh legislation is urgently needed.

In broad outline, and with few exceptions in detail, the Council is in substantial agreement with the proposals of the Royal Commission which are welcomed as providing an imaginative charter for a complete mental health service.

The proposed changes in nomenclature and procedure, which are in accord with modern opinion, would in the main need legislation, but so far as the Council is concerned could be put into effect without great difficulty. On the other hand the proposed development and extension of the services, which in the opinion of the Royal Commission could largely be carried out under existing powers, would involve practical difficulties in the fields of finance, staffing, and the provision of accommodation which could not be completely overcome for a long time.

As regards the procedures for the admission and discharge of patients, which have been the source of much criticism during the past few years, the Royal Commission's proposals are more liberal even than the recommendations of any of the witnesses who appeared before it. In my report for the year 1954, I set out a summary of the Council's recommendations to the Royal Commission. It is extremely gratifying to the Council that the pattern of the services proposed by the Royal Commission for the mentally backward is very much on the lines of the recommendations of the Council in respect of mental defectives.

* *The Report of the Royal Commission on the Law relating to Mental Illness and Mental Deficiency, Her Majesty's Stationery Office, 10s. 6d.*

The comment on the Royal Commission's proposals later in this report is concerned principally with a few matters on which the Council does not agree with the recommendations of the Royal Commission and with difficulties which it is anticipated may arise. This should not, however, obscure the Council's admiration of the general excellence of the report and the thorough and painstaking manner in which the complex and difficult problem of the care and treatment of the mentally disordered has been dealt with.

Summary of Royal Commission's proposals

It is not practicable, of course, to set out here all the recommendations of the Royal Commission. The principal recommendations affecting the services of local health authorities are, however, summarised as follows :

Nomenclature and classification of patients—The Lunacy and Mental Treatment Acts and the Mental Deficiency Acts should be repealed and the terms 'certified patient', 'certification', 'person of unsound mind', 'mental deficiency', 'mental defective', 'idiot' and 'imbecile' should no longer be used. The term 'mental disorder' should be used as a general term to cover all forms of mental ill-health or disability and for legal and administrative purposes the following three main groups of patients should be recognised :

(i) *Mentally ill patients*—The term mental illness would be used in the same sense as at present, including the mental infirmity of old age.

(ii) *Psychopathic patients or patients with psychopathic personality*—This term would be used in a wider sense than it is commonly used at present and is intended to include any type of aggressive and inadequate personality which does not render the patient severely sub-normal in the sense of the third group. It would include patients at present classified as feeble-minded or moral defectives not coming in group (iii) and the term 'Feeble-minded psychopaths' is proposed to describe these patients.

(iii) *Severely sub-normal patients*—This term would be used when the general personality is so severely sub-normal that the patient is incapable of leading an independent life. This group would include all patients at present classified as idiots and imbeciles and some of those classified as feeble-minded.

Admission procedures, etc.—All forms of hospital and community care should be available in future to mentally disordered patients who are content to receive them with no more restriction of liberty or legal formality than is applied to people who need care because of other types of illness, disability or social difficulty. The law should not prevent mentally ill persons from entering hospital without being subject to detention if they cannot make a valid positive application for admission, but these patients, like physically ill patients, should be assumed to be content to enter hospital unless they positively object.

Compulsory admission to hospital or legal control under guardianship while receiving community care should be permitted for mentally ill or severely sub-normal patients when compulsion is necessary for their own welfare or for the protection of others, but it is considered that there is not now sufficient justification for special compulsory powers for older feeble-minded or other psychopathic patients, whose characteristic is their general behaviour, not loss of reason or serious lack of intelligence, except when they have broken the criminal law. Psychopathic patients should be liable to compulsory admission to hospital or guardianship if this is necessary for their own welfare or the protection of others, if under the age of 21 at the time of admission, the compulsory powers to lapse when the patient reaches the age of 25, if he has not already been discharged, unless his admission follows court proceedings or transfer from prison or approved school or unless he has become liable to compulsion in another category. Psychopathic patients, as well as mentally ill and severely sub-normal patients, should be liable to compulsory admission to hospital for medical observation at any age,

provided that they are not compulsorily detained for longer than 28 days. Psychopathic patients of any age who break the criminal code should be liable to compulsory admission to hospital or guardianship on medical advice if ordinary penal measures alone are considered to be insufficient or inappropriate.

The above recommendations should apply irrespective of the age of onset of the patient's mental disorder or the level of his intelligence.

Compulsory powers should be used only after every effort has been made to persuade patients and their relatives to agree to care without compulsion, but, if such efforts fail, doctors and others should not be too hesitant to use compulsory powers when this seems the only way of giving the patient the necessary treatment or training or when necessary for the protection of others.

A distinction is drawn in the compulsory procedures proposed according to whether compulsion is necessary to override the unwillingness of the patient himself only or to override the unwillingness of the patient's nearest relative.

The Royal Commission are opposed to the existing practice of bringing the patient before a magistrate when compulsion is used as they do not regard this as so effective a safeguard to the patient as requiring more than one medical certificate to be provided, extending the powers of discharge and providing new opportunities for review by a strong independent body.

No one who is not medically qualified should be required to take action without medical advice and, except in emergency, compulsory admission to hospital or guardianship should be effected on the application of a relative (or by a mental welfare officer acting in place of a relative) supported by two medical recommendations, one of which should be given by a doctor experienced in the diagnosis or treatment of mental disorders, and one, if possible, by a doctor who already knows the patient. Except for paying patients, it should be permissible and usual for one certificate to be given by a doctor on the staff of the receiving hospital or of the local health authority which is to act as guardian.

It is proposed that, in an emergency, admission could be arranged with only one medical recommendation, the second to be obtained within 72 hours (or 28 days in cases of guardianship which could be provided for any type of patient) if the patient is to be detained longer than that. The medical recommendation should include either a firm recommendation for hospital or community care or a recommendation for up to 28 days' observation in hospital.

The foregoing compulsory procedures apply in those cases in which the patient objects to admission but the nearest relative does not. It is proposed that the patient should have a right of appeal at prescribed times to one of the Mental Health Review Tribunals, which the Commission recommend should be set up on a regional basis. These tribunals should be independent bodies and have medical and non-medical members appointed by the Lord Chancellor in consultation with the Minister of Health.

In cases in which the nearest relative unreasonably opposes the provision of hospital or community care, it is proposed that a mental welfare officer of the local health authority (or another relative) should apply to a magistrates' court for the relative's power to apply for admission and to order discharge to be transferred to the local health authority or to another person or for the local authority or other person to be authorised to act as guardian. If the application were granted, the patient would be admitted informally or, if he also objected, under one of the compulsory procedures mentioned above. The relative would have a right of appeal to quarter sessions against the magistrates' decision, would be able to apply at any time to the appropriate authorities for the patient's discharge and would have the right once a year to ask for review by a Mental Health Tribunal.

The proposed compulsory procedures cover both admission to hospital or community care for treatment or training and admission to hospital for observation and are the same for all three groups of patients.

Mental welfare officers should be free to decline to act on a medical recommendation in favour of admission but they should never act without the support of at least one such recommendation.

Powers of discharge should be held by each of the following :

- (a) The patient's nearest relative, subject to a barring certificate which might be given only if the patient is dangerous to himself or others ;
- (b) the medical superintendent or other responsible doctor ;
- (c) any three members of the hospital management committee, or board of governors (or of the appropriate committee of the local health authority in cases of guardianship) ;
- (d) Mental Health Review Tribunals on specific occasions ; and
- (e) the Minister of Health.

The law should allow patients to be placed under the guardianship of local health authorities, as well as of private individuals, analogous to local authorities' present duty to act as a ' fit person ' under the Children and Young Persons Acts, but admission to hospital or placing under guardianship, even when compulsory powers are used, should be contingent upon medical acceptance of the patient by the hospital or local health authority concerned. The proposed new procedures should authorise the authorities to receive the patients, but should not be construed as *orders* that they must do so.

Community care—The Royal Commission lay down a clear division of functions as between the hospitals and the local authorities. The hospitals should provide in-patient and out-patient services for patients who need specialist medical treatment or continual nursing attention, including the care of helpless patients in the severely sub-normal group.

Local authorities should be responsible for preventive services and for all types of community care for patients who do not require in-patient hospital services or who have had a period of treatment or training in hospital and are ready to return to the community. This will involve the provision of day or residential training centres for severely sub-normal children ; training or occupation centres and social centres for adult severely sub-normal patients, psychopathic patients or patients with residual disability after mental illness ; residential accommodation in private homes or in homes or hostels provided by voluntary societies or the local authorities themselves for many types of patient, including old people with mild mental infirmity ; and general social help and advice to patients of all types and ages and to their relatives.

Social work for patients who are not receiving hospital treatment, including patients who have left hospital, should be the responsibility of local authorities, who, in the opinion of the Royal Commission, could also do a great deal in co-operation with the hospital staff for hospital out-patients and even for in-patients. Arrangements should be made in each area to ensure the closest co-operation between the hospitals and the local authorities.

Attendance at occupation or training centres by children who require training in place of education at school should be compulsory and the procedure to be followed in individual cases should be similar to that used when a child is recommended for education at a special school. The Royal Commission are of opinion that the centres should continue to be run by the Health Authority and not by the Education Authority.

Children not attending school should receive health and welfare services similar or equivalent to those provided for school children.

Sub-normal children should not be excluded from the general child care services if they can suitably mix with other children, although it is recognised that most such children need specialised care which can more suitably be provided through the mental health services.

Local authorities and hospitals should develop their services for young psychopathic patients.

Local authorities, in collaboration with the hospitals should be responsible for organising diagnostic clinics and case conferences for severely sub-normal and psychopathic patients.

The National Assistance Board should be responsible for financial grants to patients in hospital or in the community who need such assistance. Local authorities should be able to make augmentation grants to patients who are in full-time employment but are paid a sub-standard wage because of mental disability.

The medical officer of health should be responsible for the central direction of the local authorities' mental health community services and should be in charge of the medical and administrative staff and social workers who deal with the needs of individual patients but local authorities should be free to provide specific services such as residential homes, etc., under their powers under the National Health Service Acts or the National Assistance Act as they think appropriate and no one should be excluded from benefiting from any of the general social services because his need arises from mental disorder rather than from some other cause, if he can suitably benefit from such services.

Special financial help should be given from the Exchequer towards local authorities' capital expenditure incurred during a limited period on services for mentally disordered patients.

Hospitals and homes outside the National Health Service Act and other private care—Local authorities should take over from the Minister of Health and Justices of the Peace responsibility for registering or approving hospitals and homes provided for persons suffering from mental disorder by charitable societies or private individuals and should also take over from the Board of Control, which will be abolished, responsibility for the general oversight of patients in private houses not liable to registration.

Comment on the Royal Commission's proposals

Nomenclature and classification of patients—The proposal that many of the terms hitherto used in respect of persons dealt with under the Lunacy and Mental Deficiency Acts should no longer be used was expected. The recommendation that many of the persons at present classified as feeble-minded persons should be described as 'feeble-minded psychopaths' and included in the group of patients to be known as 'psychopathic patients' or 'patients with psychopathic personality', however, gives rise to some misgiving, notwithstanding that the term is used in a wider sense than it is commonly used at present and that the term, together with the terms proposed for the other two groups of mentally disordered patients, viz., 'mentally ill patients' and 'severely sub-normal patients', should be used only for legal and administrative purposes.

The suggestion that, with some exceptions if there are serious personality defects in addition, the broad dividing line between the seriously sub-normal and the psychopathic should be an I.Q. of 50–60, would mean that a large proportion of children leaving E.S.N. schools would have to be classified as 'feeble-minded psychopaths' if they are to be provided with community or any other form of care within the scope of the proposed new mental health services. It has been the practice of the Council's Education Committee, on the advice of the school medical officer, to refer the majority of E.S.N. school leavers to the Health Committee for supervision under the Mental Deficiency Acts since it is felt that it is to their advantage that they should be given help and guidance in the difficult transition from school to working life. Such assistance has in the main been welcomed by parents. The suggestion of the Royal Commission that these children should be helped by social workers employed by local health authorities as a matter of course without formality does not remove the difficulty since legal classification would be necessary in replacement of the term 'mental defectiveness'

contained in section 28 of the National Health Service Act, 1946, from which the power to act would derive. Moreover, the Royal Commission clearly envisage that compulsion might be necessary in some of these cases, not necessarily only because of the mental state of the patient, but because of the home circumstances and here again classification would be necessary.

The Royal Commission point out that there are wide differences of opinion on the question whether the term 'mentally defective' should be confined to people who are sub-normal in intelligence or whether it should include those whose intelligence is normal or even above normal but who show serious lack of maturity in other aspects of their personality. The Royal Commission take the view that as applied to the feeble-minded and to moral defectives the wider interpretation is the correct one.

Whether or not this interpretation was intended by Parliament when the Act was passed, there is no doubt that it is not understood or accepted by the general public and that the certification of persons of normal or above normal intelligence as mentally defective has given rise to the widespread public misgiving about the administration of the Mental Deficiency Acts. This misgiving has even extended to the feeble-minded who intellectually are below the accepted level of normality with I.Q.s of around 70-75.

Of course it is not the intention of the Royal Commission that all types in the same group should be accommodated in the same institution. Although they consider that any hospital, home, hostel or training centre should be at liberty to receive any type of patient for whom it has the requisite facilities for treatment or training, they envisage that, as at present, some hospitals will specialise in treating certain types and that the local authorities will provide small residential establishments to accommodate 20 to 30 residents (with a maximum not much over 50) of different types. Nevertheless the diagnosis as a psychopath of a mentally backward person with no other personality defect is likely to give rise to the same sort of misgiving in the mind of the public as the classification of moral defectives and high-grade feeble-minded persons as mental defectives has done hitherto. Although it is the intention of the Royal Commission that the terms should be used only for administrative and legal purposes and the patients themselves would not normally know the category in which they were placed, it is inevitable that inquiry would be made by some parents or interested persons which would make disclosure unavoidable.

From a practical point of view, the effect of the Royal Commission's proposal is minimised by their recommendation that psychopaths should be dealt with compulsorily after the age of 21 only if they commit a criminal offence. Nevertheless it is considered that the terminology would be more acceptable and less likely to give rise to contention if those persons hitherto classified as high-grade feeble-minded, whose sub-normal intelligence can be demonstrated by standardised tests, were not included in the same group as persons of normal or above normal intelligence who possess pathological moral or emotional deficiencies. It is suggested that they might be described as 'sub-normal persons' as against the term 'severely sub-normal persons' proposed by the Royal Commission for low-grade defectives, leaving the psychopaths as a separate group.

Admission procedures

(a) *Mentally ill patients*—As shown in the detailed analysis by Dr. Herd at page 106, of the 7,439 cases of persons alleged to be mentally ill and in urgent need of care and control referred to the Council's mental welfare officers for investigation during 1957, of whom 5,486 were referred from medical and 1,953 from non-medical sources, no action by the mental welfare officers was possible or necessary in 1,691 cases, 3,924 cases were removed to observation wards, 1,296 were brought before a Justice and in the remaining 528 cases other action or disposal was arranged or recommended by the mental welfare officers. About one-sixth of the cases are referred between the hours of 9 p.m. and 9 a.m. There is no specific provision under the present law for voluntary

admission to an observation ward, and patients have been admitted under 'three day orders' of the mental welfare officer. The Ministry of Health have, however, recently authorised the voluntary admission of patients to some observation units. About 21 per cent. of the patients admitted to observation wards were subsequently certified.

In view of the facts that, under the arrangements proposed by the Royal Commission, it would not be possible, as it is now, for the mental welfare officers on their own authority to remove patients to hospital and that patients are to be presumed to be willing unless they positively object, it may be expected that some patients hitherto dealt with by the mental welfare officers would be admitted to hospital, as many voluntary patients are at present, by arrangements between the patient's doctor and the hospital without reference to the mental welfare officers. On the other hand, it is not unlikely that many doctors would continue to refer their patients, whether they object or not, to the mental welfare officers for disposal and cases would continue to be referred to them from non-medical sources. Most patients do not positively object to admission and in these cases it would be possible for the mental welfare officers to arrange admission without any formal medical certificates although the majority would be referred by general practitioners, hospitals or other medical sources and it would be necessary for the receiving hospital to agree to the patient's admission. No doubt some patients, who do not positively object to admission at the time they are seen by the mental welfare officer, would do so on or after admission. In these circumstances, compulsory action would then have to be taken if it was essential for the patient to be retained at the hospital.

As a very tentative estimate it is possible that compulsion would be necessary in 10-15 per cent. of the cases which have hitherto been admitted to observation wards or brought directly before a Justice (5,220 in 1957) in respect of whom two (one in emergencies) medical certificates would be required. The Royal Commission envisage that normally one of these would be given by the doctor attending the patient and the other by a doctor specially experienced in the diagnosis and treatment of mental disorders and approved by the local authority, who would usually be a doctor on the staff of the receiving hospital. It is possible that some general practitioners, although prepared to initiate the proceedings by referral, might be reluctant to give certificates in the prescribed terms which would be required and some patients have no doctor. It would accordingly be necessary for the mental welfare officers to be able to secure the services of a doctor at short notice. As regards the second certificate it would be necessary for the receiving hospitals to send a psychiatrist out to see the patient or for the certificate to be obtained from another approved doctor. It should not be too difficult in London for a panel of doctors, who would be available to be called out when necessary either when there is no usual medical attendant or to give a second certificate, to be drawn up from the list of approved doctors. Clearly, however, the closest liaison will be necessary between the mental welfare officers and the doctors at the receiving hospitals.

The Council is disturbed by the suggestion that mental welfare officers should be completely deprived of their power to remove patients on their own authority. It may be argued that purely in the interests of the patient it is desirable that he should always be seen by a doctor before being compulsorily removed against his will. It has yet to be seen to what extent general practitioners will be willing to be associated with the process of compulsion. In the past, some of them have been very ready to pass the responsibility on to the mental welfare officer. In any case the interests of the community cannot be entirely disregarded. Some patients display extreme violence and in such cases the need to obtain even one medical certificate could give rise to dangerous delay and even result in tragedy. The Royal Commission propose that the police should be able in certain circumstances to remove without a medical certificate a mentally ill person found in a public place. The Council is of opinion that mental welfare officers should have a similar power for use in cases of acute emergency. The difficulty of defining the circumstances in which the power should be used without some risk of its

extension to cases in which it would not really be necessary is recognised but this is the lesser of the two dangers, at least until medical resources are such that a doctor is as readily available as a lay officer in a round-the-clock service. Under the existing law it is only under section 20 of the Lunacy Act, 1890 (i.e., removal to an observation ward on a three-day order) that the mental welfare officer has this power.

It is difficult to forecast the effect the Royal Commission's proposals would have on the volume of work of the mental welfare officers. While, as previously stated, there might be a reduction in the number of cases they would deal with, many individual cases would undoubtedly take up more time.

For the past year or so, there has been an arrangement with Bexley hospital by which, whenever possible, when cases in that hospital's catchment area have been referred to the mental welfare officers, the hospital has been notified and a doctor from the hospital has visited the patient. This has facilitated the proper disposal of the patient. It must be remembered, however, that this arrangement has been possible because the catchment area is reasonably accessible to the hospital. A similar arrangement has recently been instituted with Cane Hill hospital and it is hoped to extend it to other hospitals but difficulties arise when, as is the case with a number of the mental hospitals serving London, the catchment area is remote from the hospital.

It has always been the Council's view that it is desirable that patients needing removal by the mental welfare officers should, whenever possible, be admitted in the first instance to an observation ward. The reasons for this view are that (i) in many cases this procedure avoids admission to a mental hospital, e.g., when the condition clears up in a short time, and (ii) even when admission to a mental hospital is found to be necessary, compulsion is often avoided and the patient is admitted on a voluntary basis.

It is felt that under the proposed arrangements accommodation in general hospitals should be available for psychiatric patients on the lines of the existing observation wards for the reception of selected mentally ill patients whether they are willing to be admitted or whether compulsion is necessary. It is also considered that as regards patients needing compulsion the procedure authorising compulsory detention for not more than 28 days should normally be used in the first instance. This would comply with the Royal Commission's expressed opinion that the use of compulsion should be kept to a minimum.

No suggestion has been made that observation ward (or similar) facilities will not be available in future. In fact, since the Royal Commission envisage that any suitable hospital may receive any patient for treatment or observation, there is scope for enlargement of these facilities within the framework of the proposals. In view of the Royal Commission's intention that one of the two medical certificates required for compulsory detention shall normally be given by the receiving hospital, it is considered that the facilities for the treatment of mentally ill patients would be much improved if a small unit were established in a general hospital in the catchment area of each mental hospital (or of two or more mental hospitals) with appropriately qualified medical staff, including a consultant from the mental hospital who would visit regularly. Individual mental welfare officers could be allocated to deal with cases arising in the catchment area and the doctors could decide which patients should be admitted direct to the mental hospital and which to the local unit or otherwise dealt with and give any necessary medical certificates.

An arrangement on these lines would seem to be very necessary if the admission arrangements proposed by the Royal Commission are to work smoothly. It would also provide a better integrated service although it might necessitate the employment of more doctors by the hospitals and would involve inter-regional agreement since the catchment areas of some hospitals are not in the same region as the hospital.

The Royal Commission's opinion that their proposed new procedures for compulsory admission should authorise the authorities to receive the patients but should not be construed as *orders* that they must do so, should not be allowed to give hospitals

the opportunity to avoid acceptance of difficult cases. Under arrangements made by the Regional Hospital Boards, each mental hospital serving London is responsible for receiving all patients needing mental hospital treatment from a given area, known as the hospital's catchment area. These arrangements have obvious practical advantages, but if the Royal Commission's proposal is implemented, and the appropriate hospital should refuse to admit a patient in respect of whom the necessary medical certificate or certificates had been given, the intolerable situation might arise that local health authorities would have to seek accommodation in other hospitals having no specific responsibility to take the patient.

(b) *Severely sub-normal patients and feeble-minded psychopaths*—The admission arrangements proposed by the Royal Commission as regards sub-normal persons or feeble-minded psychopaths would not create any difficulty so far as the Council is concerned and a good deal of work would be saved. The overwhelming majority of these cases would be admitted informally as opposition to admission is raised in only a small proportion of cases. The removal of the necessity for formal ascertainment and for proof of the existence of defect before the age of 18, as proposed by the Royal Commission, would obviate the need for the completion of the elaborate case history, at present prepared in every case. The practice of completing these histories no doubt arose because of the information required for the completion of the formidable legal documents necessary in cases sent to institutions or placed under guardianship. A case history would still be necessary but not in the present comprehensive form. If informal admissions are agreed to, it would seem that, after the appropriate form of care has been decided, all the arrangements could be left to the Council's existing local offices of the mental deficiency service, except that, while the present bed shortage persists, a central system of bed finding and allocation would be necessary.*

Guardianship—The powers proposed for voluntary admission to local authority and voluntary residential homes are such, it is thought, that the need for formal guardianship would seldom arise.

Community care—The clarification by the Royal Commission of the respective functions of the hospitals and the local authorities in the field of after-care of patients discharged from hospitals is welcomed.

(a) *Mentally ill patients*—Notwithstanding the terms of section 28 of the National Health Service Act, 1946, mental hospitals in the main have regarded it as their function to keep in touch with their own discharged patients. In its evidence to the Royal Commission the Council suggested that owing to the distances of the catchment areas from the hospitals and the limited amount of after-care which can be provided by hospital staff having many other commitments it would be expedient for the local authorities to carry out this work in many cases. If the view of the Royal Commission in this matter is accepted, a considerable enlargement of the Council's after-care service for the mentally ill may be expected and more psychiatric social workers will be needed although the shortage of these workers may make it difficult to secure their services. If, as suggested earlier, the mental hospitals were associated with units in general hospitals in their catchment areas for observation, etc., these units would provide useful media for liaison between the psychiatric social workers (as well as the mental welfare officers) and the mental hospitals. It would, of course, be necessary for the Council's officers to visit the mental hospitals as well.

(b) *Severely sub-normal and psychopathic patients*—As regards social work for the severely sub-normal and psychopathic patients this will take the place of the existing service of statutory and voluntary supervision of the mentally defective. The fact that this has been a statutory duty has no doubt caused local authorities to endeavour to supervise some defectives in the face of opposition from parents and perhaps to continue to supervise some defectives beyond the time when it is useful.

*NOTE.—In January, 1958, the Minister of Health authorised the informal admission of patients to mental deficiency hospitals and institutions—Ministry of Health Circular, 2/58.

It is estimated that of the 5,000 cases at present under statutory supervision nearly 3,000 are over 16 and in employment. This arises because of the conditions of full employment that exist and because of the policy of the Council of reporting under section 57 of the Education Act, 1944, the majority of children leaving special schools for the educationally sub-normal who are of the highest mental grade of persons a local health authority is called upon to deal with under the Mental Deficiency Acts. Although it would still be possible under the Royal Commission's proposals for these young persons still to be visited on a voluntary basis if they and their parents desired it, no doubt visiting would be discontinued or at least very much reduced after a period which in most cases would not need to exceed two years. The fact that under the Royal Commission's proposals a considerable proportion of this group would not be subject to any sort of compulsion as regards hospital or institutional care or guardianship after the age of 21 unless they committed a criminal offence would also tend to reduce the number of persons visited.

On the other hand, the scope of the duties of the local authorities in the field of social work would be very much extended by the Royal Commission's proposals. They would have to take over the visitation of patients discharged from mental deficiency hospitals which in some instances is now done by the hospitals themselves. They would have to keep in touch with patients admitted to hospitals and homes and hostels and their relatives for the purpose of advising on the suitability for discharge, finding employment and many other matters. This expansion would greatly increase the usefulness of the work, but of course it would necessitate a reduction in the case load of individual social workers.

In the Council's evidence to the Royal Commission it was stated that, at 31st December, 1954, 555 children of school age were attending occupation centres and that the parents of 70 children refused to allow them to attend. If attendance is made compulsory, as recommended, more accommodation will be needed but not to the extent to cause serious difficulty.

Homes and hostels—The proposal of the Royal Commission that the function of the hospitals should be restricted to patients who need specialist medical treatment or continual nursing attention, including the helpless severely sub-normal, although perfectly logical, would throw an enormous burden on the local authorities as regards the provision of residential homes, hostels and training centres, etc., particularly for patients at present classified as mentally defective. This proposal involves a partial return to the pre-1948 position. It is, however, much more difficult to effect the change now than it would have been to retain the patients concerned within the ambit of the local health authorities in 1948. There are at present over 7,000 London mentally defective patients accommodated in mental deficiency hospitals and institutions and about 300 new admissions are arranged each year. There is at present a waiting list of about 150. It could be that a third of these patients (or even more) would be the responsibility of the local authority, according to the Royal Commission's definition of duties of the hospitals and local authorities. A wide range of residential homes with training and entertainment facilities for the higher-grade patients and with occupational and entertainment facilities for the lower-grade and hostels for those suitable for employment would therefore be needed.

In view of the Royal Commission's opinion that local authority residential homes should not be large and that 20-30 residents might be the usual size, with a maximum not much over 50, it is obvious that the Council would need a very large number of such establishments and it is doubtful whether the Royal Commission's suggestion that some hospital buildings might be transferred to the local authorities would contribute much since there are few such buildings as small as suggested.

In addition to these residential homes for the mentally defective (as classified at present), residential homes and hostels will be needed for the aged mentally infirm and for those mentally ill patients in mental hospitals who, although needing a minimum of

supervision, could be discharged but have no suitable homes of their own. Some of these patients could go to Mental After-Care Associations homes or welfare homes but much more accommodation would be needed. It is not possible to indicate the extent of this need but at a meeting which I had in October, 1956, with physician-superintendents of mental hospitals and representatives of the Metropolitan Regional Hospital Boards, it was the general feeling of those present that the need for hostels for patients in the latter category was considerable. In view of the extensive demands which would be made on local authorities for the transfer of hospital patients to homes and hostels it would be very desirable that the hospitals should agree to re-admit those patients who prove unsuitable for care outside a hospital.

In addition to the staff which would be necessary to conduct the day-to-day running of all these homes and hostels, it would be necessary for medical staff to be employed for supervisory and clinical work and social workers to carry out the social work.

There is the further point to be borne in mind that, with the exception that if they go out to work hospital patients may be required to contribute towards the cost of their maintenance, hospital care and treatment is provided free, whereas services by the local authority under section 28 of the National Health Service Act, 1946, are normally provided subject to payment, according to means, by the recipient or liable relatives. The transfer of patients needing prolonged residential care from a free service to one for which payment is required would be likely to give rise to controversy, although the question would not arise in many cases because of the absence of means.

Health and welfare services—With regard to the Royal Commission's recommendation that children not attending school should receive health and welfare services similar or equivalent to those provided for school children, children attending the Council's occupation centres are at present virtually receiving all the health and welfare services (meals, milk, medical and dental inspections) provided for school children but there are a small number (100-200) who are too low-grade or otherwise unsuitable to attend occupation centres to whom some small extension of some of these services might be necessary if practicable.

Diagnostic services—The need for the provision of additional diagnostic clinic services for severely sub-normal and psychopathic patients as recommended by the Royal Commission is probably less in London than elsewhere. The Council already has clinics throughout the County for backward children under five attended by a specialist doctor, a mental deficiency social worker and a health visitor. It employs a number of medical officers who have specialised in mental deficiency who hold regular sessions at the County Hall where consultation with appropriate specialists, e.g., otologist, neurologist, oculist, etc., is readily available if required. In addition there are 33 child guidance clinics (4 administered by the Council and 29 by hospital authorities). Regular case conferences are held under the aegis of the Council to consider maladjusted children. All of these facilities will doubtless be made available for the young psychopath.

Guardianship of relatives—The view of the Royal Commission that the National Assistance Board should be responsible for financial grants for patients in hospital and in the community re-opens the question of the position of defectives who are under the guardianship of relatives and friends and receiving financial assistance from the Council. In 1948 there were 162 such cases for whom the Council was responsible. Following the issue of a Ministry of Health circular (December, 1948) pointing out that these persons were now entitled to assistance under the National Assistance Act, it was decided (January, 1949) that no new cases would be placed under guardianship for the sole purpose of providing financial assistance and that the existing cases should be reviewed. As a result of the review 51 patients were discharged from guardianship but the Council decided that the remainder for reasons peculiar to them should remain under guardianship. In the light of the Royal Commission's recommendations the position is to be reviewed shortly.

Hospitals and homes outside the National Health Service Act and other private care—The recommendations of the Royal Commission that local authorities should take over from the Minister of Health and Justices of the Peace responsibility for registering or approving hospitals and homes provided for persons suffering from mental disorder by charitable societies or private individuals and should also take over from the Board of Control, which will be abolished, responsibility for the general oversight of patients in private houses not liable to registration would necessitate additional work of visitation and inspection by the Council's medical officers and other staff but it is thought that relatively the additional work would not be considerable.

Review of Council's mental health services

Apart from the proposed new admission procedures, the most important feature of the Royal Commission's proposals is their recommendation for an expansion of local authority community services both as regards help and advice to be given by social workers and the provision of day and residential occupation and training centres and homes and hostels.

So far as London is concerned, and no doubt many other areas as well, the pattern of the service proposed by the Royal Commission already exists although of course there is scope for almost unlimited expansion, if and when the resources of finance, staff and accommodation permit.

Social workers have been employed on mental deficiency work in London ever since the Mental Deficiency Act, 1913, came into operation. From the beginning the social inquiries necessary for the ascertainment of new cases were carried out by social workers directly employed by the Council but the supervision of defectives living in the community was undertaken on the Council's behalf by social workers employed by the London Association for Mental Welfare. This organisation was taken over by the Council in April, 1931, and now social workers based on four district offices are engaged exclusively on mental deficiency social work under the direction of a senior social worker on the central staff. The duties of these workers include the social inquiries necessary for the ascertainment of new cases (769 in 1957), the visitation of 5,061 cases under statutory supervision and 1,494 cases under voluntary supervision and the supervision of 108 cases under guardianship in London and 111 cases on licence from hospitals and institutions. (The figures given relate to the position at 31st December, 1957.) In addition these workers also report in the course of each year on the home circumstances of many patients in hospitals in connection with applications for leave of absence or discharge and the statutory review of orders of detention.

Mental
deficiency
social work

For the purposes of ascertainment the social workers visit the homes of mental defectives to obtain necessary information as to the social background and to discuss the future welfare of the defective: they obtain relevant data from many other sources such as school reports, Children's Officers' papers, hospital reports, etc., and condense the whole into manageable proportions, and in a form which, with the addition of the social workers' recommendation, provides a basis for the decision of the medical officer and for future action.

Although there remains a legal distinction, there is now very little difference between statutory and voluntary supervision as regard the help and assistance that are given and it is envisaged that if the recommendations of the Royal Commission are implemented this legal distinction will also disappear. The overwhelming majority of mentally deficient persons remain in their own homes under supervision. It is the responsibility of the social workers as far as possible to gain the confidence and co-operation of the parent and the defective, without which supervision—statutory or otherwise—would in most cases be ineffectual and meaningless.

It is for the social workers to make some assessment of the relative urgency of cases awaiting institutional care, and, with the continuing long waiting lists for such care, it is their function to help the family to accept and adapt themselves to a situation which

may continue for many months, and to assess whether, and at which stage, efforts should be made to relieve this by short-term care.

The social workers are the link between the home and the occupation centre, and they attend at the periodical medical examinations carried out at the centre. It is their function too to assist as far as they are able in settling the higher grade mental defective into the employment and social setting, by discussion and/or co-operation with other social agencies.

Suitable boys and girls leaving schools for the educationally sub-normal are placed under the personal guardianship of the social workers. This usually involves finding suitable lodgings, hostel, or other accommodation and invariably necessitates close and careful supervision, particularly in the early stages.

Except for those placed under personal guardianship of the Council's social workers, mental defectives placed outside the County are normally supervised by the appropriate local health authority, but, in many cases, occasional informal contact is maintained, and infrequent periodical visits are paid to all those placed and supervised by the Guardianship Society, Brighton, on the Council's behalf.

As stated above the Council's social workers have continued to do a good deal of work on behalf of the regional hospital boards in respect of the patients in mental deficiency hospitals. Their function as regards patients who return to their homes on licence is mostly to assist rehabilitation and the indications are that this will play an even larger part, with the changes foreshadowed by the recommendations of the Royal Commission.

Psychiatric
social work

The Council early recognised the importance of social work in the care and treatment of the mentally ill. Psychiatric social workers were employed at the Maudsley Hospital even before the first mental health course for psychiatric social workers in this country was started at the London School of Economics in 1929. Some of the staff of the Maudsley Hospital assisted in the training of the students taking the course and in 1930 psychiatric social workers were employed at the mental observation wards in the Council's hospitals and subsequently at the County mental hospitals. When the hospitals were transferred to the Minister of Health in 1948, the social workers employed at the hospitals were of course retained in the hospital service. In the scheme which the Council submitted to the Minister in 1948 under section 28 of the National Health Service Act, 1946, however, it was stated that the Council would consider appointing psychiatric social workers as might be necessary and as they became available, to provide care and after-care for persons who were mentally ill.

The first community after-care service for the mentally ill was started in 1943 at the request of the Ministry of Health by the National Association for Mental Health for ex-service personnel discharged from the services on psychiatric grounds. In 1948, however, the numbers of ex-service personnel needing to be dealt with had dwindled to negligible proportions and the overwhelming majority of persons needing assistance were civilians. The Ministry accordingly suggested that local health authorities should undertake responsibility for this work under section 28 of the National Health Service Act, 1946, either through their own staff or through the National Association and reimburse the Association for its services.

In London, the work was first carried on by the National Association for Mental Health and the Mental After-Care Association jointly acting as agents of the Council, but from April, 1953, the service was undertaken directly by the Council which, since then, has been building its own service by the direct engagement of psychiatric social workers under the general direction of the consultant psychiatrist employed by the Council as its adviser in mental health. In 1955 the number of psychiatric social workers rose to four—one of the positions becoming a senior post during 1957.

Nature of
psychiatric
case-work

Psychiatric social workers working in the community, as opposed to the more specific environments of hospital or child guidance clinic, see a very wide range of mental illness and employ accordingly varied means in trying to help patients remain out of

mental hospitals or, when this is inadvisable, in encouraging their acceptance of in-patient treatment and furthering their social readjustment after discharge.

The work, at the stage to which it had developed in 1957, can therefore be discussed in two main aspects, with an ancillary service arising from them which, in the light of the Royal Commission's recommendations, is likely to assume increasing importance. It must be emphasised that these divisions are of more theoretical than practical consequence, and the ways in which the categories interact will be discussed later. They are—

(a) preventive, in the sense both of delaying and avoiding the total breakdown of social life ;

(b) after-care ; with

(c) a psychiatric consultative service.

(a) *Preventive care*—While the importance of physical conditions for public health was well recognised by the beginning of the century, and this knowledge has been steadily implemented since, the view that the emotional conditions under which people live may have an equally important bearing on health has emerged comparatively recently and gained ground very slowly. Yet illness that is psychosomatic in origin crowds general practitioners' surgeries, fills waiting lists for consultative and hospital services, and has a very high cost—indirectly in absenteeism, delinquency or the break-up of homes and directly in unemployment, national insurance or assistance payments. Though it is certainly not invariably the case, many nervous disturbances show themselves in the form of comparatively minor physical symptoms (for example, headaches, rashes, indigestion or loss of energy) which call for only minor physical remedies and are not likely to lead to in-patient treatment in a mental hospital. They are, however, both the sign and the cause of much individual suffering, are socially disruptive and wasteful, and their underlying disharmony is very infectious in the community. They have the common characteristic of anxiety, nearly always arising from social pressures which the patient feels unable to meet. To help him recognise this when he has the ability to do so, to help in simplifying the social situation when he has not, or to do both together, in co-operation with general practitioners is a large part of the preventive side of community care work.

(b) *After-care*—The rehabilitation of patients after hospital treatment is an especially important part of community care, because the nature of psychiatric illness and the general fear of its symptoms add to the difficulties of readjustment. It is not during treatment or training courses, but when he returns home and has to meet the claims of his family and employment, that a person's ability to readjust is tested. It may be that treatment has had to be prolonged—in spite of the present trend to shorten it as much as possible—involving medical, surgical or psychological investigations carried out while the patient is deprived of initiative and independent action. On his return to the community the time comes for him to act as a self-reliant individual, and for those with residual psychiatric disabilities this may present extraordinary difficulties. It is at this crucial point that the patient needs to be able to turn for help to someone who will not only understand the situation as it presents itself to him, but also offer a relationship through which he may 'grow back' into the community.

In fact, of course, these two aspects of community care work are closely allied. What is officially after-care may well become preventive work against another breakdown, or while after-care is being given to one person, other members of the family may need help in a preventive sense to deal with the resultant strain.

(c) *Consultative help*—This is provided for those who, in their private or professional capacities, are already in contact with the mentally disturbed.

Though it would be a mistake to underestimate the superstitious fear of any form of mental disorder still existing in the community, with the growing recognition of

social—i.e., emotional—factors in general health there seems to be a perceptible move towards accepting even quite gross neurotic disturbance as illness, so long as it can be seen to be an exaggeration of 'normal' emotional processes. Partly as a result of the work of psychiatric services of all kinds in making this connection clearer, and partly following the attention focused by the Royal Commission's report on local authority mental health services, more referrals and requests for help are received than could possibly be dealt with by the four psychiatric social workers at present employed, if they were to make direct contact with every case themselves. In many instances, however, much has already been done by workers in other agencies, who are quite prepared to continue to carry the problem so long as they have someone to whom they can turn for discussion of the issues involved when their patients' anxieties become too pressing. This type of interpretative work has increased steadily through 1957 and it is hoped that it will continue to do so, as it has the obvious advantages of continuity of relationship for the patient, economy of effort for the workers involved, and the two-way exchange of views on the situation. It also lessens the chances of 'playing off' by the patient of one agency against another—so often the pattern of dependence—with the consequent rise of anxiety all round. Further, should the Royal Commission's recommendation be legally implemented in its present form and all the after-care work of mental hospitals become the responsibility of the local authorities, it seems clear that social workers without mental health training would have to be employed under the general direction of psychiatric social workers. The present consultative development is therefore invaluable, both as giving information about the ways in which such a 'diluted' service might function, and in showing psychiatric social workers how to make the best use of other social and welfare systems and the high standard of case-work achieved by many of them.

Sources of referral

As already indicated, these are varied and, as would be expected, reflect administrative and social contacts with other departments and welfare services working in the community.

During 1957, when for seven months there were only three psychiatric social workers in the department, approximately 500 referrals were accepted, of which 269 (54 per cent.) were thought to call for at least one visit, and 231 (46 per cent.) were dealt with on an advisory basis. Referrals came from the following sources :

Almoners	L.C.C. P.S.W.'s working in schools for maladjusted children
Borough Council officers	The Marriage Guidance Council (1)
Care committee organisers	Mental hospitals serving the L.C.C. area
Chest clinics	Mental hospitals serving the rest of the country
Child guidance clinics	Mental welfare officers
Children's offices	Ministers and missionaries of different denominations
Citizens' advice bureaux	Moral welfare workers
Community care services of other local authorities	The National Assistance Board
Divisional treatment organisers	The National Association for Mental Health
Divisional medical officers	The National Children's Homes (1)
Dr. Barnardo's Homes (1)	Old people's welfare workers
Employment exchanges and youth employment bureaux	Out-patient Clinics—psychiatric and otherwise—and day hospitals
Family Service Units	The police
The Family Welfare Association	Prison medical officer (1)
General practitioners	Probation officers
Health visitors	Problem families—intensive case-workers
Housing welfare officers	Prospective patients themselves
The Hungarian Relief Service	Psychiatrists—regional hospital board and private practice
Industrial welfare workers	Relatives or friends of prospective patients
The Invalid Children's Aid Association	The Royal Courts of Justice (1)
The Jewish Board of Guardians	St. Katharine's Foundation, Stepney (1)
Lodging houses and hostels	The Samaritans Service
L.C.C. M.D. Organisers	Welfare offices

Although the largest single source of referrals for the provision of after-care is from mental hospitals, there are various factors that keep this number lower than might have been expected : amongst these are probably :

(a) the administrative and treatment gaps that since 1948 are involved in making referrals to local authority psychiatric services. Apart from the break in relationship with the patient, it is very understandable that psychiatrists, who have taken considerable interest in cases under their care, feel some concern about referring these to almost unknown workers whose professional standards they have little chance of assessing and over whose approach they have no influence because the present pressure on both services seldom allows time for personal contacts ;

(b) the open question whether, having come to rely on one doctor or social worker, it is in the interest of patients or their relatives to be asked to change to another psychiatric service, when they are prepared to make the effort to keep in touch with their hospital ; for example, through out-patient clinics ;

(c) the geographical problem in London—where in most cases patients are taken so far from their own neighbourhoods for in-patient treatment. This makes it very difficult for the local authority psychiatric social worker to maintain any previous contact there may have been, or, with new referrals, to make the first approach while they are still in hospital and their relationship to the psychiatrist and other staff is actively appreciable. The fact that the community care psychiatric social worker knows so little of this aspect is usually a great handicap in trying to carry the patient's hospital treatment through into normal life ;

(d) the almost inevitable frustration involved in administrative co-operation conducted mainly through the post, and sometimes also through several official levels.

The ultimate saving by time spent in liaison is not yet fully recognised. Certainly, if through the national shortage of trained personnel the service should have to continue at the 1957 strength of four psychiatric social workers for the whole of London, there will, regrettably, be little opportunity of demonstrating this economy.

The number of referrals from general practitioners was comparatively few. This is regretted, since it is felt that from this source cases could be taken up at an earlier stage of illness.

In London, a staff of mental welfare officers and assistant mental welfare officers, under the direction of a senior mental welfare officer, is employed virtually exclusively on the work of taking the initial proceedings in providing care and treatment for persons suffering from mental illness. This arrangement, which as shown below, does not mean that the officers' duties are confined strictly to taking statutory action under the Lunacy and Mental Treatment Acts, has resulted from the way the mental health services in London have developed. Such an arrangement is possible only because of the volume of the work and the comparative compactness of the area. It has advantages and disadvantages : the principal disadvantage is that, apart from a small amount of escorting of mental defectives, the officers are subjected to the strain and tension of dealing continuously with persons suffering from acute or chronic mental illness and having to decide what action shall be taken in respect of them frequently against their wishes.

The Council's mental welfare officers provide a continuous service available throughout the 24 hours of each day. Most calls for their services come from general practitioners but requests are received also from hospitals, from other health and welfare services of the Council, from social agencies of every kind, from the police and from other sources, including ordinary members of the public.

As stated earlier many voluntary patients are admitted to mental hospitals by arrangement between the patient's doctor or out-patients clinic and the hospital without reference to the mental welfare officers. Persons referred for action by those officers

are usually represented to be in urgent need of care, treatment and control for their own welfare or for the protection of others because of acute or advanced mental illness. Sometimes the officers are unjustifiably criticised for not facilitating procedure by petition by a relative as an alternative to the summary reception order apparently under the erroneous impression that certification is thereby avoided. This, of course, is not so. Moreover, if a relative proceeds by petition he must pay out of his own pocket for medical examinations by two doctors to obtain the two medical certificates which are required, apart from running the risk of subsequent recriminations from the patient or other members of the family. It is surely a good thing that the relatives should be saved as much trouble as possible at a time which must in any event be extremely distressing to them. It is obvious that relatives who would be willing to present a petition for a reception order are not likely to be concerned that two medical certificates should be provided instead of one as required for a summary reception order.

In some cases which the officers are called upon to investigate, they find that no action by them of any kind is possible or necessary. Sometimes trouble has arisen because of domestic disagreement in which violent temper has been displayed by a member of a household which has subsided by the time of the officer's intervention or which in his opinion is a matter for the police ; or it may be that a person possesses an isolated eccentricity or even delusion which although extremely annoying to other members of the household or neighbours is not sufficient to justify compulsory removal. In other cases the officer may find that the patient is too ill physically to be moved or he may suspect that the patient's mental symptoms derive from some physical cause which should be investigated before he should take action, or he may have other doubts about the case. Further possibilities are that he may think that the patient's needs could be satisfactorily met by admission to a welfare home (this is often the case with elderly patients) or by visits by a psychiatric social worker or by other means. In all these cases, it is the practice of the mental welfare officer to explain his views to the general practitioner as a result of which the patient may continue to be treated at home or be admitted to a general hospital or be dealt with by one of the methods referred to above or be referred to a consultant psychiatrist for a further opinion and advice.

When in his opinion a patient is in need of in-patient mental treatment the officer considers whether it is possible for this to be provided without resorting to compulsion. Before 1948 there was an arrangement by which elderly senile patients could be admitted in certain circumstances to Tooting Bec Hospital without legal formality. This practice has been continued and many old people are admitted in this way each year. Suitable patients are admitted also to psychiatric geriatric units in other hospitals. Recently the Ministry of Health has given authority for some mental hospitals, where conditions are appropriate, to receive any suitable patients informally on a non-statutory basis and the mental welfare officers not infrequently arrange such admissions. Many patients are also admitted as voluntary patients and some as temporary patients under the Mental Treatment Act, 1930.

An example, fortunately extreme but by no means without parallel, of the difficult situations with which the mental welfare officers may be confronted occurred during the early hours of 13th March, 1957, when the police were called to deal with a Nigerian who had become very disturbed mentally. In response to a request from the police, the Council's mental welfare officer on duty went to the house at 12.45 a.m. A police officer and a police dog had been stabbed by the patient who had locked himself in his room, which was a small room on the second floor reached by a narrow stairway. The patient was stamping about his room screaming and chanting in a foreign tongue. He was armed with a knife and stiletto and was threatening to kill anyone who approached him. It was agreed with the superintendent of police that a hole should be bored in the door and a barricade erected outside to prevent the patient breaking out and running amok. After many hours of patient persuasion by both the police and the mental welfare officer, the patient was persuaded to surrender his weapons. The

mental welfare officer endeavoured by all possible means to convince the patient that he was ill and to assure him that it was intended to take him to hospital and not to prison. Finally, at about 7 a.m., he entered the room, but the patient closed with him and in the course of the struggle the mental welfare officer was bitten on the chin and leg. The police gave prompt assistance in restraining the patient, who was sedated by the mental welfare officer and then admitted to St. John's hospital mental observation ward, Battersea.

After conveying the patient to the observation ward, the mental welfare officer called at St. Thomas's hospital for attention to his injuries. He had then completed his tour of night duty and, after the normal rest period, returned to duty on 18th March, apparently recovered from his ordeal which, although exceptionally severe in this case, is the sort of experience the mental welfare officers may be required to face in any of the cases they have to deal with.

There is at present unfortunately no nationally organised course of training for mental welfare officers. This does not mean, however, that they receive no training at all for their work. In 1948, when this work was first placed under the direction of medical officers of health, relieving officers with experience in the work were transferred to form the nucleus of the staff of mental welfare officers under the new arrangements. Many of these officers were in possession of the certificate of the Poor Law Officers Examinations Board, the examination for which included the subject Lunacy and Mental Treatment. Since then trained social workers, mental and general trained nurses and others with suitable experience and character have been appointed to fill the vacancies that have arisen. In London, a part-time consultant psychiatrist was engaged at the outset to advise on matters of policy and to supervise the work of the mental welfare officers. In the performance of the latter duty, the psychiatrist has given lectures to the staff, has advised them on difficult cases and has investigated complaints (in most of which, incidentally, he has upheld the action of the mental welfare officer). The consideration of individual cases is, of course, a valuable means of training. In addition, the psychiatrist has introduced a system of statistical recording which ensures that the officers must always keep in mind all the essential considerations involved in their work and also records tendencies and results on which future policies are planned and directions given to the officers.

As a part of their training, all officers also visit mental hospitals and psychiatric out-patients clinics to observe and to take part in discussions with the medical and other staff.

Apart from these methods, all new officers are given basic training, the length of which is, of course, to some extent influenced by their previous experience, by their more experienced colleagues, and they are not permitted to exercise their powers independently until they have worked for a period under the wing of an experienced officer and the senior mental welfare officer is fully satisfied that they are competent to work alone.

As regards the Royal Commission's proposals for the provision by local authorities of day and residential occupation and training centres and homes and hostels, the Council has long been alive to the need for these establishments for all types of mentally disordered patients. In the schemes which the Council submitted to the Minister in 1948 under sections 28 and 51 of the National Health Service Act, 1946, it stated that the Council would (i) make use of homes found by voluntary organisations for patients who do not or have ceased to need treatment in a mental hospital and would consider itself making direct provision in suitable cases and (ii) would consider the provision of hostels for mental defectives under guardianship.

The Council has made use of homes found or provided by voluntary organisations, principally the Mental After-Care Association, for the long-term and short-term care of persons suffering from mental illness and it has provided a small hostel for twelve mentally defective girls at Dover Lodge, Wood Vale, S.E.23, the first of its kind in the

country. These, however, are the only arrangements which the Council has been able to make for the residential care of mentally disordered persons. The reasons for this are (i) the conditions of financial stringency which have existed and (ii) the view which has undoubtedly been held by the Ministry of Health that apart from accommodation which can be provided by local authorities under the National Assistance Act, 1948, the provision of long-term residential care for sick people has been the responsibility of the hospital authorities. It is the Council's view, however, that many patients could not be discharged from mental hospitals unless they could be given more supervision than is available at ordinary welfare homes or hostels.

The experience gained at Dover Lodge, which was opened by the Council in September, 1955, as a hostel primarily for girls leaving E.S.N. Schools, is of special interest, in view of the recommendation of the Royal Commission regarding the development of hostel accommodation by local authorities. Since the opening, 19 girls have been admitted; of these, 14 were under guardianship orders and the other five were placed informally (this being made possible when sanction was given by the Minister of Health to the Council maintaining in appropriate cases mentally deficient persons in hostels without judicial certification). In addition to the 19, there were two other purely temporary placings.

Of those under guardianship, seven were still at the hostel at the end of 1957, two had returned home, two had gone into lodgings, and one into resident work. Two girls with behaviour problems had been admitted to a mental deficiency hospital during the year, although one of these was allowed out again after a short period. Of the five placed informally one had returned home after a short period, and three had been placed in the hostel only a few days before the end of the year. It is early yet to judge the effect of the informal placings.

The work record of the girls has remained consistently good, with only isolated exceptions, and in no case has there been more than two changes of work while at the hostel. The girls continue to be employed in local factories and laundries, and one girl was placed as a learner machinist. There is good co-operation between the youth employment bureau, the employers, and the social worker who is the guardian of the girls under order at the hostel. The warden also takes a close interest in the girls' employment progress.

The indications are—firstly, that the number of educationally sub-normal school-leavers for whom hostel accommodation is required immediately on leaving school is smaller than was at first anticipated; secondly that, as might be expected, the hostel training is more effective where there is good co-operation and support from the relatives and close friends; thirdly—that even where there is such stabilising influence, there is no simple answer to the problem which the care of such a group of mentally handicapped adolescent girls presents. Although all reasonable precautions compatible with some degree of liberty were taken to ensure adequate supervision during the year, four girls became sexually involved with two rather unscrupulous men, leading to police enquiries (which did not result in a charge), and a fifth girl became pregnant by a casual acquaintance whilst on holiday. Much thought is still being given to the best means of minimising the risks which are inevitably involved, while at the same time affording satisfactory recreational facilities.

The hostel continues to afford excellent training in the day-to-day running of a home. The girls play their part in domestic duties, including doing their own washing and ironing. It is early to assess the value of this, but there are indications that, in most cases, some standards are maintained after the girls leave the hostel.

In October, 1955, the Council instituted an arrangement whereby a number of boys leaving schools for the educationally sub-normal were placed at the Wallingford Farm Training School. As the period of training is normally about 18 months, it is now possible to make some assessment of the results.

As might be expected, some boys, after admission, proved to be either unsuitable for or not sufficiently interested in farm work. Training, however, is not confined to farm work and, when necessary, other training is provided in trades or hotel work.

Of the 12 lads placed at Wallingford since the commencement of the scheme, seven successfully completed their training during the year. Of these, two were successfully placed in farm work on leaving and another was about to be so placed at the end of the year. One lad who had been trained for shoe-repairing was placed in that trade in April, 1957, and he was still in the same job at the end of the year. Of three boys trained for hotel work, two were suitably placed in hotels and the third returned home to live. Two lads were still undergoing training and making satisfactory progress at the end of the year and there were three failures. Two of these had marked behaviour difficulties and it became necessary to place them in mental deficiency institutions and the third was found to be unsuitable after a short time. It should be pointed out, however, that there had been some doubt at the time of placing as to the suitability of these three and it is not considered that their failure in any way reflects on the establishment.

As previously stated, the Council has set up clinics conducted by a doctor, experienced Clinics in both mental deficiency and maternity and child welfare, assisted by a mental deficiency social worker and a health visitor, for backward children under five.

The service started in Bethnal Green in 1952 as an experiment because it had been noticed that parents with children who presented physical features of obvious mental subnormality were loth to bring their babies to maternity and child welfare centres attended by normal infants. Moreover, it was felt that specialist advice on mental deficiency matters should be available for parents who needed it. The clinic was an immediate success and similar clinics have since been provided in all nine health divisions in the County. Advice and simple treatment similar to that given at ordinary maternity and child welfare clinics is provided and, in addition, parents are advised and trained to deal with the many varied difficulties involved in the handling and bringing up of mentally deficient infants. The clinics serve as diagnostic clinics in cases where the parents are uncertain as to the nature of their child's disability and are anxious for advice as to the facilities available for the training and education of mentally backward children. The clinics also provide an opportunity for parents to get together to discuss their problems among themselves, with advice from the staff if necessary, and the doctor gives talks from time to time to groups of parents on matters relevant to the care of mentally deficient children.

Occupation centres for mentally defective persons living in the community were Occupation centres provided in London long before the Mental Deficiency Act, 1927, made it a duty of local authorities to provide training or occupation for defectives. As early as 1923 the Council paid the London Association for Mental Welfare for the attendance of London defectives under supervision at centres managed by the Association. The centres were run on a modest basis with, to start with, five sessions of two hours each a week. In 1931, when the Council took over the Association, there were 17 small centres in London (13 for children, two for elder boys and two for elder girls) accommodating over 300 defectives. Two of the centres were open for 10 and the remainder for five sessions a week. By the outbreak of war in 1939, larger premises had been acquired and there were seven centres (three holding ten and four holding five sessions a week) for children, two centres (one holding ten sessions a week and the other five) for elder boys, and three holding five sessions a week for elder girls. At that time there were places for 340 defectives. The centres were closed during the war years.

Owing to war damage and other difficulties, it was not possible to start re-opening centres after the war until the middle of 1948, but by the end of 1949 sixteen centres had been opened. Now there are 20 full-time centres with places for 1,145 defectives, nine for juniors of both sexes, five for elder girls and women and six for elder boys and men. Particulars of these centres and the accommodation at each are given in a table

elsewhere in this report. Five of the centres are held in premises owned by the Council and used exclusively for occupation centre purposes, but the remainder are in rented premises, mainly church halls. Plans are in hand, however, for the erection of three large purpose-built centres (two to be completed in the coming year) and for the adaptation of another building and when these have been provided it will be possible to discontinue using some of the less satisfactory premises.

All children under 16 and elder girls attending the centres are conveyed by special transport. Elder boys attending centres travel by public transport, alone or with a parent, or guided in groups.

The centres for children are run as closely as possible on the same lines as schools, and those for adults, where shoe-repairing and woodwork for men, and needlework and cookery for women, and other occupations are carried on, resemble craft centres. One of the centres for elder boys is conducted as a workshop where articles are made for the Council's Supplies Department for use in other services of the Council. It is hoped to extend this sort of activity for both men and women. Particulars of the value of the work done at the workshop and of the proceeds from the sale of articles made at the other occupation centres are given in a table elsewhere. Speech therapy sessions started as an experiment at two junior centres during 1957 have produced promising results and consideration is being given to an extension of this work to other centres.

A feature of the Council's occupation centre service which is much enjoyed and eagerly looked forward to is the annual fortnight's holiday organised for some 200 children and adults attending the centres, accompanied by staff, at a seaside holiday camp. Necessitous persons (81 in 1957) received free or assisted holidays. Some centres organised day outings to the sea or country and facilities are provided for periodic visits during the summer months to local parks for recreation and sports. Senior boys' centres organise inter-centre cricket and football matches. At one of these centres a selected group is taken to the swimming baths weekly and one boy has recently gained a certificate for swimming 100 yards. Christmas parties are held at all centres and parents' associations and other persons donate gifts to provide extra amenities and outings.

Everyone attending a centre is medically examined at least once a year and chest X-ray examinations are arranged for all staff and for defectives over fifteen years of age attending the centres. During 1957 two cases of tuberculosis were discovered and are receiving treatment at home or in hospital.

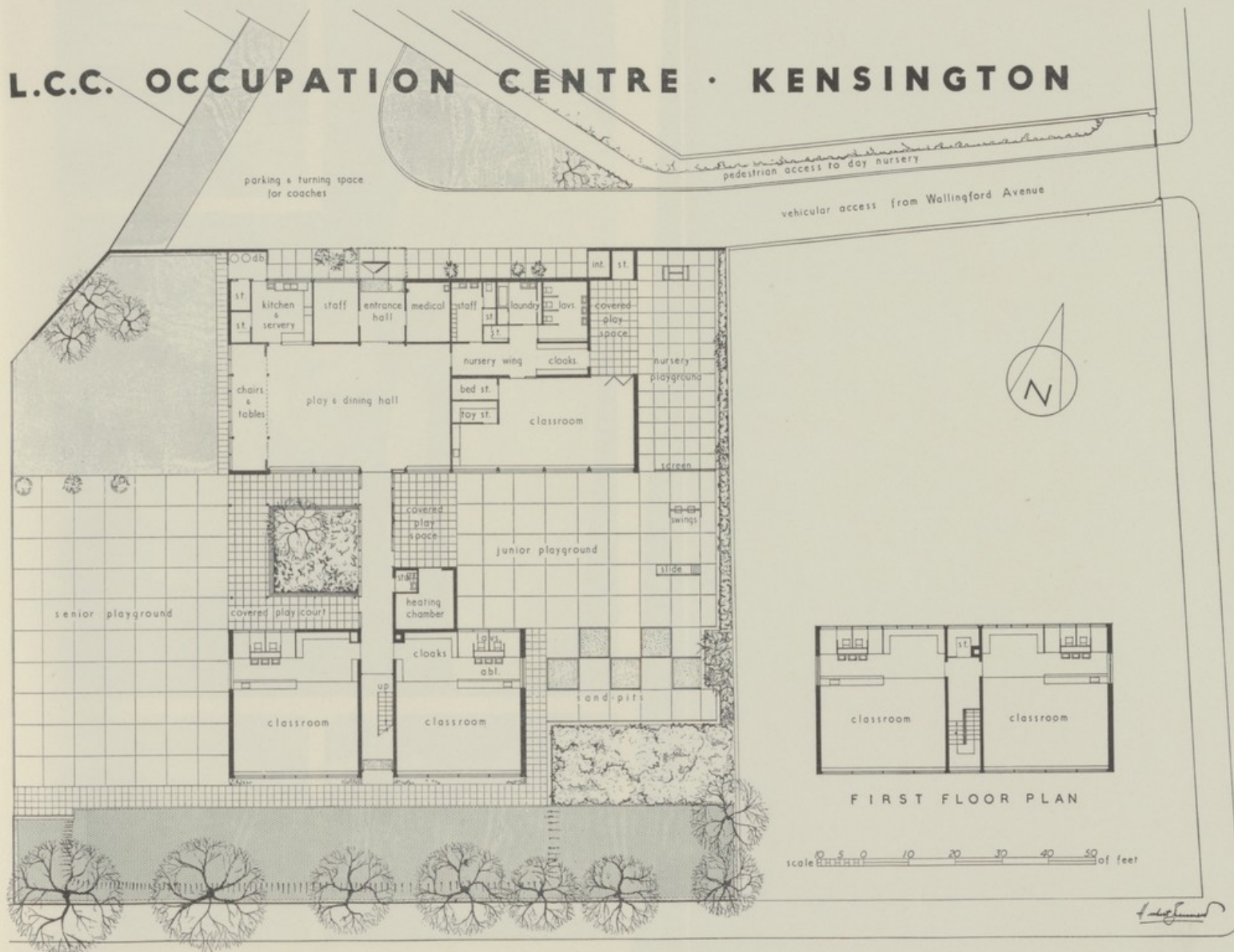
Facilities are given for groups of students undergoing courses of training, and interested persons from other authorities and countries, to visit occupation centres. Students taking the National Association for Mental Health's course of training for occupation centre staff and associated work undertake periods of practical training in the Council's centres, and medical officers taking the Association's course on educationally sub-normal children and mental defectives carry out testing practice in the centres.

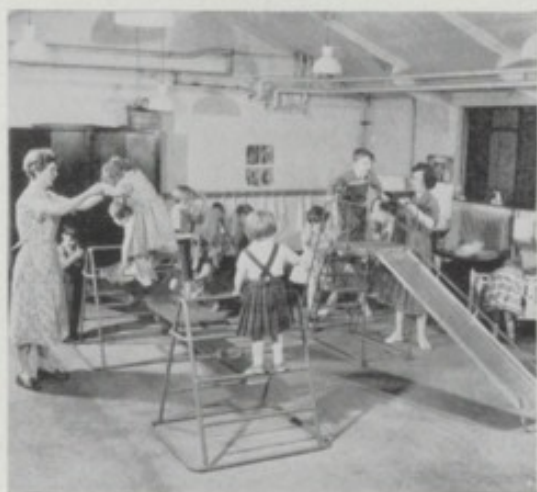
The Council has borne the cost of fees for a number of staff of occupation centres who have undertaken part-time courses of training organised by the National Association of Mental Health and has given leave of absence for them to undertake practical work at centres and hospitals of other authorities.

There is no doubt that defectives derive much benefit from attendance at the occupation centres and, in addition, relief is afforded to parents. Some parents who have found the burden of caring for their defective children at home so great that they have pressed for their admission to an institution have withdrawn their requests after attendance at an occupation centre because of the progress made. In the course of 1957, six children improved to such an extent that they were admitted or re-admitted to special schools and 19 older boys or girls left to take up employment.

During 1957 an experimental scheme was introduced for a home teacher to visit and instruct in their own homes defectives who are physically unable to attend occupation centres. This has proved of great benefit and consideration is being given to the

L.C.C. OCCUPATION CENTRE · KENSINGTON





A bus brings children to an occupation centre. Psychiatric testing at a special welfare clinic. Play activity by a nursery group. Juniors make up scrapbooks.



*A speech therapist at work.
Midday meal is served. While girls cook, boys look after the garden*



*Elder boys visit a nearby swimming bath. Elder girls carry out musical movements. Elder girls sew and knit.
Elder boys do metalwork*



Work in progress at the industrial centre



Football boots used in the centres are mended by the elder boys



*Junior boys on holiday at play in the grounds of the camp
Junior girls on holiday on the beach*

establishment of this work as a permanent part of the service and to the employment of a second teacher to allow of more frequent visits. 33 defectives are at present receiving tuition in this way.

The Council has taken full advantage of the authority given in Ministry of Health Circular 5/52 to provide under section 28 of the National Health Service Act, 1946, temporary care for periods not normally exceeding eight weeks for mentally deficient persons when removal from home is necessary in an emergency such as the illness of the mother. Since 1952 when the circular was issued the number of persons dealt with has increased from year to year. The number rose from 165 in 1956 to 244 in 1957. Of these, 176 were admitted to mental deficiency hospitals and 68 were admitted to various approved or private homes. No charge either to the Council or to the liable relatives is made when admission is to a hospital, but the cost of maintenance in approved or private homes falls on the Council, and until 1957 the liable relatives were required to re-imburse the cost to the Council, subject to abatement if they had not had sufficient means to pay the whole cost. At the end of 1957 the Council decided, on the grounds of equity, that from 1st January, 1958, all short term care for mentally deficient persons should be provided free of charge to their relatives. Short term care

As stated previously, the Council makes use of homes provided by voluntary organisations for the care of mental patients. During 1957, 124 chronic and senile psychiatric patients were maintained by the Council in such homes, 115 in homes owned or sponsored by the Mental After-Care Association, four at Parnham House, run by the National Association for Mental Health, four at a hostel run by the Jewish Board of Guardians, and one at Finchden Manor, Tenterden, Kent. Long term care

The Council also provides recuperative holidays for persons recovering from mental illness. During 1957, 129 persons recovering from mild psychiatric illness were granted holidays for periods of two to three weeks in general recuperative holiday homes, and 22 who had had more serious breakdowns were sent for similar periods to homes sponsored by the Mental After-Care Association. In addition, 28 persons were accommodated for periods up to 12 weeks at the Mental After-Care Association homes at Dartford, Cheam and Chiswick, which provide specially for the rehabilitation of younger patients capable of work. As a result of the closing of two houses sponsored by the Mental After-Care Association during the year, difficulty was experienced in placing patients in need of recuperative holidays. The total of 179 compares with 212 in 1956. Recuperative holidays

Since 1948, the Council has contributed 90 per cent. of the approved cost of the attendance of London patients attending the psychotherapeutic social clubs run by the Institute of Social Psychiatry, of which there are now six in London. These clubs, which meet on one evening a week, provide in practical form the means by which mentally ill patients can secure social re-adjustment and maintain normal social relationships with the guidance of a psychiatrist and a social therapist. In 1949 the Institute started a rehabilitation centre for the mentally ill and the Council has made a similar grant in respect of London patients attending this establishment. The centre is open each morning and afternoon on five days a week and is staffed by an occupational therapist and two assistants, with a doctor from the Institute giving regular medical supervision. A wide variety of occupations is carried on and, having regard to the fact that most of the patients referred to the centre are difficult cases for whom other treatments have failed, a satisfactory proportion of the patients attending derive benefit. During 1957, 60 London cases attended the centre for periods ranging from two weeks to the whole year. At the end of the year, 13 had been attending for an insufficient time to assess the value of attendance. Of the remaining 47, 13 were discharged home, to a job or elsewhere for further training, four were making good progress, 11 were benefiting from long-term occupational activities, seven returned to hospital for further psychiatric treatment, eight ceased attendance and four were discharged as unsuitable. Social clubs and rehabilitation centre

Thus, 60 per cent. derived benefit from attendance, although 2/5ths of these were not strictly undergoing rehabilitation. It is unfortunate that the long-term patients have to be treated in association with those who are recoverable.

In addition, the Council gives financial assistance towards the cost of two psycho-therapeutic social clubs run by two mental hospitals for patients in their catchment areas and makes an annual grant of £200 to the National Association for Mental Health in recognition of their general services to the community and to local health authorities in the field of mental health.

Analysis of investigations by mental welfare officers

Dr. J. Alan Herd, the Council's consultant in mental health, reports :

It was stated in the Annual Report for 1956 that a new system of recording had been devised to provide additional information about cases referred to mental welfare officers. The idea behind the new system was that it would provide information, as a basis for the conscious development of the service in the interests of the patients, about

- (a) the extent to which the various possible types of initial action were used ;
- (b) the relationship of the status of the case at closure with the type of initial action ;
- (c) the relative advantages and disadvantages of certain procedures ;
- (d) current trends.

Tables setting out the salient features of the data recorded for 1957 together with comments thereon, and, in some instances, comparable figures for 1956, are set out in succeeding paragraphs.

Number of
investigations
and sources
of referral

The number of persons referred to the mental welfare officers during the year, classified according to the number of times they were referred, together with the number of separate investigations is shown in the following table :

<i>Persons referred in the year</i>									<i>1956</i>	<i>1957</i>
Once	..	..	..	..	..	..	..	..	5,347	5,005
Twice	..	..	..	..	..	..	..	..	753	797
Three times	..	..	..	..	..	..	..	..	138	169
Four times	..	..	..	..	..	..	..	..	49	46
Five or more times	..	..	..	..	..	..	..	..	31	27
Total ..									6,318	6,044*
Number of separate investigations ..									7,630	7,439†

* 857 of these were also investigated in 1956 and yet another 814 were known to the mental welfare officers in earlier years.

† In addition there were 17 out-county cases.

As may be seen from the comparative figures set out below of the sources of referral of cases, the slight reduction in numbers between 1956 and 1957 is largely attributable to a decline in the numbers referred from hospital wards.

<i>Source</i>	<i>1956</i>		<i>1957</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
General practitioners ..	3,257	42.6	3,261	43.8
Psychiatrists* ..	861	11.2	841	11.3
Hospital wards ..	874	11.5	704	9.5
Hospital casualty departments ..	737	9.7	680	9.1
Non-medical ..	1,901	25.0	1,953	26.3
	7,630	100.0	7,439	100.0

* These numbers exclude cases referred to a psychiatrist, with the consent of the general practitioner, by the mental welfare officer after seeing the patient and before taking action.

Initial action

The following table shows the extent to which the mental welfare officers used the various forms of initial action open to them :

Initial action	1956		1957	
	No.	%	No.	%
None possible or necessary	1,666	21.8	1,691	22.7
Referred for continued care* (other than at mental hospital)	62	0.8	63	0.8
Admitted to mental hospital—				
(a) as voluntary patient	181	2.4	235	3.2
(b) as non-statutory patient†	20	0.3	41	0.6
(c) under urgency order, temporary certificate, Magistrates' Courts Act, or as returned escapee	39	0.5	51	0.8
Referred to psychiatrist	123	1.6	138	1.9
Removed to observation ward	4,091	53.6	3,924	52.6
Referred to J.P. other than at observation ward ..	1,448	19.0	1,296	17.4
	7,630	100.0	7,439	100.0

* Referral to welfare department, sanitary authority, psychiatric social worker, back to general practitioner for possible help on general medical grounds, etc.

† An arrangement applicable largely to Tooting Bec Hospital, antedating the National Health Service, and relating in the main to persons aged 70 or more who have not previously been certified.

It will be seen that in 1957 there were increased numbers both absolute and relative where no action was possible or necessary, in informal admissions to mental hospitals and in referrals to a psychiatrist; on the other hand there were fewer removals to observation wards or referrals to Justices of the Peace. If 'no action' cases are excluded the percentage of the balance can be classified as follows:

	1956	1957
Independent action by mental welfare officer ..	5.1	6.8
Referred to psychiatrist	2.1	2.4
Removed to observation ward	68.5	68.3
Referred to J.P.	24.3	22.5
	100.0	100.0

Viewed in this light the changes are limited to an increase in independent action or referral to a psychiatrist accompanied by a decrease in referral to Justices of the Peace.

It is a matter of policy that in cases where the choice open to the mental welfare officer is restricted to removal to an observation ward or referral to a Justice of the Peace the former option is exercised in so far as vacancies permit.

No action cases—In view of the fact that over a fifth of the total investigations resulted in no action being found possible or necessary by the mental welfare officers, a sample of such cases was examined independently both by myself and the senior psychiatric social worker concerned to see what proportion of cases might have benefited from the services of a psychiatric worker. In the event it was found that in only one or two per cent. might help usefully have been given and the outstanding impression left as the result of the examination was the very wide range of situations to which the mental welfare officers were called and in which, without doubt, no action was the proper course.

Cases referred to psychiatrists—Details of the disposal of the cases referred to psychiatrists by the mental welfare officers are shown in the following table:

No action possible or necessary	15
Out-patient appointment not kept	23
Recommended for continued care other than as in- or out-patient	5
Out-patient	23
Admitted to observation ward and discharged by medical officer	2
Admitted to mental hospital as:	
(a) voluntary patient*	60
(b) non-statutory patient	3
Certified (Secs. 14/16)*	2
Result of assessment unknown	5
	138

* One via observation ward.

Mental welfare officers are free to select cases for possible attendance at out-patient clinics or, if the patient is unfit for such attendance, for a domiciliary visit by a psychiatrist in any area. Such action is in all cases subject to the consent of the general practitioner concerned who may choose the consultant if he so desires ; otherwise the mental welfare officer will make arrangements on his behalf.

In practice, reference to psychiatrists is largely confined to those parts of London that fall within the catchment areas of Bexley and Cane Hill Hospitals. Special arrangements were made with the former in 1956 and extended to the latter in 1957. Basically the scheme is that if the patient had previously been known to the hospital concerned or there is no observation ward vacancy, the mental welfare officer contacts the hospital for advice with a view to out-patient attendance or urgent domiciliary visit. In practice a knowledge of the existence of the scheme has sometimes led the general practitioner to refer the case initially to the psychiatrist instead of to the mental welfare officer.

Although as a group these cases are unlikely to contain the normal proportion who are potentially certifiable there is little doubt that reference to a psychiatrist under the scheme has contributed to a lower certification rate ; of the 138 cases referred to psychiatrists 72 were given out-patient appointments—none of the 23 who failed to attend were so seriously disturbed as to be referred back to the mental welfare officer for other action and it is interesting to note that another 23 were considered to merit only out-patient attendance.

It is intended to expand the arrangements for referral of suitable cases to psychiatrists but the problem of providing coverage for the whole of the county is by no means a simple one.

Cases admitted to observation wards—The ultimate disposal of patients admitted to observation wards is shown in the following table :

	1956	1957
Discharged by medical officer	1,334	1,317
Transferred to general ward	78	65
Admitted to mental hospital—		
(a) as voluntary patient	1,383	1,477
(b) as non-statutory patient		
(i) to Tooting Bec	76	66
(ii) other hospitals	36	68
(c) with temporary certificate or as returned		
escapee	48	45
Certified (Sections 14/16)	1,075	826
Died	70	56
Miscellaneous	12	8
	<u>4,112*</u>	<u>3,928†</u>

* Including 4 cases referred by mental welfare officer to psychiatrist.

† Including 4 cases referred by mental welfare officer to psychiatrist.

The proportion of observation ward cases subsequently entering mental hospitals was almost exactly the same in 1957 as in 1956, i.e., 63.2 per cent. and 63.5 per cent. respectively. The percentage of these cases who were certified under sections 14/16 fell, however, from 40.7 in 1956 to 33.3 in 1957.

There are differences in the proportion of various disposals from the five major observation wards (A to E) and from a group of small units based at mental hospitals (F). These are as follows :

	A	B	C	D	E	F
	%	%	%	%	%	%
Discharged by medical officer	49.9	31.6	41.2	25.5	25.3	12.0
Admitted to mental hospital—						
(i) as voluntary or non-statutory patient ..	19.6	50.8	33.1	35.0	37.2	66.0
(ii) with temporary certificate	0.5	0.9	1.9	1.0	3.2	—
Certified (Sections 14/16)	26.7	14.3	20.3	28.4	32.3	19.2
Percentage certified of those admitted to						
mental hospital	<u>57.1</u>	<u>21.6</u>	<u>36.7</u>	<u>44.0</u>	<u>44.4</u>	<u>22.5</u>

At observation ward A, there are considerable facilities for treatment and this possibly explains the high discharge rate and low admission rate to mental hospital of which over half were certified. Group F, on the other hand, show the highest rate of admission to the main sections of the mental hospitals and as at observation ward B, a low proportion of certified patients. As there is no special selection of cases for different observation wards so far as mental state is concerned, other factors must play their role in producing the variations shown.

Analysis of disposals from observation wards, sub-divided according to initial source of referral, continues to show, as in 1956, that the greatest discharge rates occur among referrals from general hospitals, 46.3 per cent. of casualty department cases and 40.6 per cent. of general ward cases compared with a range of 29.0 to 33.9 per cent., with average of 30.9 per cent. for all other cases. In both 1957 and 1956, the highest proportion of certified cases amongst those transferred to mental hospitals applied to cases referred originally to mental welfare officers by non-medical sources, 42.9 per cent. in 1957, compared with a range of 24.9 per cent. to 31.6 per cent. medical referrals.

Cases referred to Justices of the Peace—The outcome of cases referred to Justices of the Peace is set out below :

	1956	1957
No (further) action	325	282
Other continued care including Section 22	107	83
Admitted to mental hospital—		
(i) as voluntary patient	179	155
(ii) as non-statutory patient	151	184
(iii) with temporary certificate	2	1
Certified (Sections 14/16)	695	587
Referred to psychiatrist	—	4
	1,459	1,296

The proportions (70–72 per cent.) entering mental hospitals is similar in the two years, but somewhat higher than for observation ward cases except where such (section 20) accommodation is based at a mental hospital. The percentage of these cases who were certified was, however, much higher in comparison, and although there was a reduction from 67.7 per cent. in 1956 to 63.3 per cent. in 1957, the reduction was not so marked as in the observation wards.

Initial action and age—It was mentioned earlier that removal to observation wards was used, when appropriate, in preference to referral to a Justice of the Peace. Younger patients, however, receive preference in the use of beds because the elderly tend to block them whilst awaiting vacancies for other accommodation. Within this general policy framework, however, each case is individually considered and some older patients are removed to observation wards where the mental welfare officer considers that this is without doubt in the best interests of the patient. In fact, in 1957, 88 per cent. of observation ward patients were under the age of 65.

The table below shows the major types of initial action taken by the mental welfare officer for age groups of under 65 and 65 and over.

	Age Group				Total	
	Under 65		65 and over		No.	%
	No.	%	No.	%		
Removed to observation ward (less those referred to psychiatrist)	3,463	79.5	458	32.9	3,921*	68.3
Brought before a Justice (less those referred to psychiatrist)	504	11.6	792	56.9	1,296	22.5
Other action	386	8.9	142	10.2	528	9.2
Total investigations where action was taken	4,353	100.0	1,392	100.0	5,745	100.0
No action	1,230	22.0	456	24.7	1,686†	22.7
Total investigations	5,583	100.0	1,848	100.0	7,431	100.0

* Age not stated in three cases.

† Age not stated in five cases.

It will be seen that Justices of the Peace dealt with proportionately more of the elderly : of the 792 such cases, 283 (35.7 per cent.) were certified. On the other hand, of the 458 elderly persons removed to observation wards only 69 (15.1 per cent.) were certified. Whilst it is not unreasonable to suppose that most of the few younger patients referred direct to Justices of the Peace were so acutely disturbed that certification would follow, it is policy rather than the degree of disturbance which had led to many of the elderly being so referred ; hence, in view of the high certification rate among these latter, it is considered that more of them should receive a psychiatric assessment before final action is taken, and, as indicated earlier, considerable attention is being paid to methods of achieving this difficult but desirable end.

As will be seen in the later paragraph devoted to the final closure of investigations, whilst the proportion entering mental hospital was roughly the same as in 1956 there was a reduction in the proportion of those who were certified ; this reduction was greater with increasing age, being 15 per cent., 17.7 per cent. and 30.6 per cent. respectively for those aged under 65, 65-79 and 80 and over.

Closure of investigations—The final disposal of all cases investigated is shown in detail in the following table.

	No.	%
No action possible or necessary	1,988	26.8
Discharged by medical officer at observation ward	1,317	17.7
Transferred to general hospital	65	0.9
Other continued care including section 22	158	2.1
Out-patient (psychiatric)	23	0.3
Admitted to mental hospital—		
(a) as voluntary patient	1,928	25.9
(b) as non-statutory patient		
(i) Tooting Bec Hospital	279	3.8
(ii) other hospital	83	1.1
(c) on temporary certificate	48	0.6
(d) on urgency order	42	0.6
(e) as returned escapee or under Magistrates' Courts Act	7	—
Certified (Section 14/16)	1,414	19.0
Died	56	0.8
Miscellaneous*	31	0.4
	7,439	100.0

* Including 23 who failed to keep out-patient appointment.

It will be noted that just over half the cases referred to mental welfare officers were admitted to mental hospitals and of these just under two-thirds entered as voluntary or non-statutory patients. There were, however, considerable variations in these two proportions dependent upon the nature of the original source of referral as may be seen from the succeeding table.

	Source of referral					Total
	Psychiatrist	G.P.	General Ward	Casualty Dept.	Non-medical	
Percentage admitted to mental hospital	59.2	53.2	54.0	40.9	46.7	51.1
Percentage of these certified (Section 14/16)	41.2	33.1	39.7	23.7	45.9	37.2

It will be noted that proportionately fewer of the casualty department referrals were admitted to mental hospital and that these few also gave rise to the smallest certification rate. An overall comparison with the disposal of cases investigated in 1956 reveals a reduction in certifications from 23 per cent. to 19 per cent., an increase in voluntary patients and non-statutory admissions from 27.4 per cent. to 30.8 per cent. and an increase in no action cases from 21.7 per cent. to 26.8 per cent.

The following table shows the final disposal of cases investigated by age group :

	Under 65		65 and over		Total	
	No.	%	No.	%	No.	%
No action possible or necessary	1,346	24.2	637	34.5	1,983*	26.8
Admitted to mental hospital—						
(a) as voluntary patient	1,658	29.8	269	14.6	1,927†	25.9
(b) non-statutory patient	80	1.4	282	15.2	362	4.9
(c) on temporary certificate	41	0.7	7	0.4	48	0.6
(d) on urgency order	38	0.7	4	0.2	42	0.6
Certified	1,061	19.0	352	19.0	1,413†	19.0
Miscellaneous (discharge, etc.)	1,359	24.2	297	16.1	1,656†	22.2
	5,583	100.0	1,848	100.0	7,431	100.0

* Age not stated in five cases.

† Age not stated in one case.

Conclusion—The aim of the department is increasing liaison with individual mental hospitals and psychiatrists both with respect to cases referred to mental welfare officers and in the field of preventive care and after care by the Council's psychiatric social workers. Some progress has been made. Co-operation with the hospitals takes different forms according to their individual circumstances such as their distance from their catchment areas. The assistance of psychiatrists not directly connected with the mental hospitals concerned is also, and will continue to be, sought on an increasing scale, in particular for elderly patients referred to mental welfare officers and of whom so comparatively small a proportion received psychiatric assessment before entering mental hospital. There is still scope for a continued reduction in the certification rate irrespective of new legislation. Mental welfare officers are not in a position to assess the finer clinical aspects of cases referred to them but they show a very high standard of good judgement in the actions they take after considering the known alternative facilities at any given time.

Mental Deficiency Acts

Statistics

The following table shows the sources from which cases were brought to notice under the Mental Deficiency Acts and the action taken thereon :

	1956	1957
<i>Source of information—Local education authority—</i>		
Reported under Section 57 of the Education Act, 1944	490	415
Not reported, referred for voluntary supervision	94	133
	584	548
Police authority (Section 8)	14	12
Home Office (Section 9)		
from prison	2	1
from approved school	2	3
	4	4
From hospitals, residential nurseries, etc.	71	66
Miscellaneous	137	139
Total	810	769

The position as at 31st December, 1957, together with comparable figures for 1956 :

	1956	1957
<i>Under guardianship—</i>		
Personal guardianship of council's social workers	52	49
Nominees of the Guardianship Society, Brighton	64	60
Guardianship of relatives and friends	65	59
Guardianship of superintendents of small homes and institutions	31	26
In institutions awaiting decision as to their future	3	2
In mental hospitals	1	1
Escaped and not traced	1	—
	217	197
In hostels without orders under the Mental Deficiency Acts	—	6
Under statutory supervision	5,032	5,061
Under voluntary supervision	1,329	1,494
In place of safety awaiting presentation of a petition	1	—
In institutions	7,549	7,399
In institutions without orders under the Mental Deficiency Acts	—	2
In hospitals, residential nurseries, etc., awaiting institutional care	46	33
Still under consideration	25	26
Total	14,199	14,218

The following is a summary of the cases dealt with during the year together with comparable figures for 1956.

	1956	1957
<i>Placed in institutions—</i>		
Under section 3	55	127
Under section 6	184	93
Under section 8	29	37
Under section 9	5	6
	273	263
Placed under guardianship	25	14
<i>Varying orders—</i>		
from guardianship to guardianship	17	40
from guardianship to institution	15	13
from institution to guardianship	—	4
	32	57

	1956	1957
Placed in hostels without order	—	10
Placed in places of safety	14	3
Placed under statutory supervision (including licence cases)	748	714
Placed under voluntary supervision	308	313
Discharged—		
from institutions	393	300
from guardianship	14	18
	407	318
Removed to mental hospitals	20	15
Withdrawn from supervision	408	469
Withdrawn from voluntary supervision	169	148
Removed from London	75	70
Died	153	170
Cases still awaiting institution care	186	149
Cases dealt with by way of short term care—		
In Mental Deficiency hospitals	128	176
In approved homes and private homes	37	68
	165	244

The accommodation available at the Council's occupation and training centres for the mentally defective at the end of December, 1957, was as follows : Occupation centres

<i>Centres for children</i>	<i>Accommodation</i>	<i>Centres for elder girls</i>	<i>Accommodation</i>
Bethnal Green	90	Brockley	60
Clifton	60	Clapton	60
Finsbury	75	Earlsfield	60
Fulham	75	Greenwich	35
Greenwich	60	Islington	40
Herne Hill	60	<i>Centres for elder boys</i>	
North Kensington (including a class of elder girls)	70	Archway	40
Peckham	45	Balham	60
Wandsworth	90	Dalston	50
		Hammersmith	35
		Peckham	60
		<i>Industrial training centre (elder boys)</i>	
		Stepney	20
		Total	1,145

Articles made in the occupation centres realised the following amounts :

	£	£
Junior centres	70	
Elder girls' centres	181	
Elder boys' centres	982	1,259
Stepney I.T. centre :		
(a) sales	26	
(b) value of orders executed for Supplies Department		718
Total		£1,977

SCHOOL HEALTH SERVICE

Pupils on school rolls

AT THE END of 1957 there was a total of 443,612 pupils on the roll of the Council's day schools ; 313,304 children of primary and secondary school age were in attendance at County schools and 105,069 at voluntary or assisted schools ; there were 17,133 children under five years of age in nursery schools and classes or in primary schools and 8,106 children in day special schools.

Medical inspections

Details of the medical inspections carried out in 1957, with comparable figures for the two previous years, are as follows :

						1955	1956	1957		
General medical inspections	Routine age groups	Entrants	..	..	..	41,162	37,423	37,610		
		7 years old	..	..	..	38,161	34,259	31,459		
		11 years old	..	..	..	37,290	34,033	42,923		
		Leavers	..	..	..	25,308	25,650	29,272		
	Total	..	..	..	..	141,921	131,365	141,264		
	Nursery	..	..	..	..	8,164	8,632	8,018		
	Other ages	..	..	..	..	26,552	23,492	21,322		
	Special schools	..	..	..	..	2,518	2,450	2,322		
	Training colleges	..	..	..	..	177	156	N/A		
	Secondary schools annual surveys	..	..	..	..	13,978	11,811	11,941		
Total general inspections					..	193,310	177,906	184,867		
Other inspections	Special inspections	'Urgents' and 'Specials' (a)	..	..	..	24,380	23,256	20,564		
		Employment certificates	..	..	..	4,521	5,377	4,985		
		School journeys	..	..	..	22,400	25,220	24,270		
		Miscellaneous (b)	..	..	..	6,210	6,549	6,775		
	Total	..	..	..	..	57,511	60,402	56,594		
	Re-inspections	Nutrition cases (c)	..	..	..	..	68,051	64,565	56,304	
		Other	..	..	..	..	101,278	96,186	90,060	
Total other inspections					..	..	..	226,840	221,153	202,958
Total all inspections					..	..	..	420,150	399,059	387,825

NOTES :

(a) Pupils referred by parents, heads, school health visitor, care committee, etc.

(b) Handicapped pupils for their special defect ; candidates for nautical school ; children engaged in theatrical employment, etc.

(c) Pupils receiving vitamin capsules on the recommendation of the school doctor.

Apart from annual surveys in secondary schools, pupils seen at general medical inspections in 1957 formed 39 per cent. of the total on the school rolls, compared with 37 per cent. in 1956.

Pupils referred for treatment
(Referrals for infestation and teeth are not included)

				1955	1956	1957
				Percentages		
Age group and sex						
Nursery	Boys	..	..	11.1	10.9	8.6
	Girls	..	..	8.4	8.2	8.5
Entrants	Boys	..	..	12.4	11.5	10.7
	Girls	..	..	10.5	9.7	9.3
7 years old	Boys	..	..	15.3	15.3	15.0
	Girls	..	..	14.1	14.0	14.2
11 years old	Boys	..	..	14.0	13.7	13.1
	Girls	..	..	14.6	14.2	14.9
Leavers	Boys	..	..	11.6	10.4	11.6
	Girls	..	..	14.9	13.4	12.6
Other ages	Boys	..	..	15.4	14.4	15.7
	Girls	..	..	17.7	15.7	17.0
All pupils*				13.7	12.9	12.9

* Exclusive of special schools and annual surveys in secondary schools.

The principal defects noted, and referred for treatment or observation, expressed as percentages, were as follows :

				1955	1956	1957
				Percentages		
Skin diseases				1.35	1.10	1.16
External eye diseases				0.58	0.57	0.55
Defective hearing				0.59	0.60	0.64
Otitis media				0.66	0.66	0.60
Enlarged tonsils and adenoids				5.97	5.88	4.84
Defective speech				0.75	0.77	0.80
Enlarged cervical glands				1.30	1.22	0.97
Heart and circulation				0.79	0.74	0.75
Lung disease (not T.B.)				1.41	1.35	1.32
Orthopaedic defects				4.82	4.41	4.06
Defects of nervous system				0.39	0.34	0.41
Psychological defects				0.97	0.94	0.86
Anaemia				0.14	0.13	0.11
Enuresis				1.57	1.62	1.54

Compared with 1956, lower rates were shown for tonsils and adenoids for all groups except girls in the nursery group, for cervical glands for all groups except seven-year-old boys and for orthopaedic defects for all except boys in the leavers and 'other ages' groups and seven-year-old girls. For all other defects, the variation in the figures was minimal.

The results in this, the second year of the enquiry conducted at the request of the Ministry of Education, were much the same as in the previous year, with 19.2 per cent. of the children inspected having undergone tonsillectomy, the rate rising from 3.9 per cent. in the nursery group to 27.9 per cent. in the leavers' group, and with rather more boys than girls having had the operation in all age groups except leavers. Again the greatest number of tonsillectomy operations was shown to have been performed on children aged between 5 and 11 years.

Routine medical inspections, 1957
Pupils known to have had tonsillectomy

<i>Age groups</i>	<i>Numbers inspected</i>			<i>Pupils who had tonsillectomy</i>			<i>Percentage</i>		
	<i>Boys</i>	<i>Girls</i>	<i>Total</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Nursery (under fives)	4,118	3,900	8,018	187	126	313	4.5	3.2	3.9
Entrants	19,226	18,384	37,610	1,561	1,201	2,762	8.1	6.5	7.3
Seven-year-olds ..	16,027	15,432	31,459	3,020	2,579	5,599	18.8	16.7	17.8
Eleven-year-olds ..	21,930	20,993	42,923	6,234	5,602	11,836	28.4	26.7	27.6
Leavers	15,191	14,081	29,272	4,185	3,974	8,159	27.5	28.2	27.9
Total	76,492	72,790	149,282	15,187	13,482	28,669	19.9	18.5	19.2

A circular from the Ministry of Education giving the results of the survey throughout England and Wales for 1956 shows that the tonsillectomy rates for the three main age groups were as follows :

Entrants	6.9%
Eleven-year-olds	20.2%
Leavers	20.9%

The Ministry state that 'For all practical purposes the rates were the same in English counties and county boroughs . . . and the frequency of the operation was about the same in both sexes'. In London, the corresponding rates were 7.8 per cent., 28.7 per cent. and 30.8 per cent. respectively, with higher rates for boys than for girls in the first two groups and a higher rate for girls in the leavers group.

Nutrition

As was explained in last year's report, the Ministry of Education now require a 2 point classification of 'physical condition', so that no direct comparison is possible with previous years. It is apparent, however, that the physical condition of the pupils continues to improve, only 2.7 per cent. being graded 'unsatisfactory' in 1957, compared with 5.0 per cent. in 1956.

The table below shows the classifications under the two separate scales for 1953/55 and 1956/57 respectively, together with the percentages referred for treatment or observation of nutrition defects :

Classification				Treatment	Referred for Observa- tion	Total	
A—Good	B—Fair	C—Poor	Percentages				
1953	..	53.3	44.3	2.4	1.1	0.8	1.9
1954	..	57.6	40.4	2.0	1.0	0.8	1.8
1955	..	60.4	38.0	1.6	0.8	0.8	1.6
		Satisfactory		Unsatisfactory			
1956	..	95.0		5.0	0.9	0.9	1.8
1957	..	97.3		2.7	0.6	0.6	1.2

Nutrition
re-inspections

Pupils receiving vitamin capsules on the recommendation of the school doctor are re-inspected each term. During 1957 the number of such re-inspections was 56,304. The classification of general condition recorded at these 'nutrition' re-inspections, with comparable figures for previous years, was as follows :

	<i>Good</i>	<i>Fair</i>	<i>Poor</i>
1952	10.7	68.0	21.3
1954	13.0	70.1	16.9
1956	17.5	70.3	12.2
1957	19.2	69.1	11.7

School meals, milk and vitamin supplements

A return to the Ministry of Education for a day in the Autumn Term, 1957, showed that 201,914 pupils, 55·2 per cent. of the number present, were provided with school dinners ; of these 16,524 received dinners free of charge. On the same day, 332,636 children had school milk, including some children absent through sickness whose milk was collected for them. Vitamin capsules are supplied daily without charge to children recommended for them by the school medical officer ; other children whose parents so desire may have them on payment of 1s. a term.

The figures for school meals are lower than normal, owing to the large number of absences caused by the influenza epidemic. At the peak of the epidemic over 25 per cent. of the children on the school rolls were absent. The epidemic is discussed in fuller detail on page 16.

Vision

Vision is tested at the periodic general medical inspections, and also at age 13, as part of the comprehensive health survey. The results of the tests at general medical inspections during 1957 are as follows :

		<i>Visual acuity (with glasses, if worn)</i>				<i>Percentage referred for treatment</i>		
		<i>6/6</i>	<i>6/9</i>	<i>6/12 or worse</i>	<i>% wearing glasses</i>	<i>Total</i>	<i>Already wearing glasses</i>	<i>Not wearing glasses</i>
		<i>%</i>	<i>%</i>	<i>%</i>				
7-year-old	Boys ..	79·1	13·6	7·3	3·4	7·0	0·8	6·2
	Girls ..	78·9	14·1	7·0	3·7	7·3	0·8	6·5
11-year-old	Boys ..	84·2	8·1	7·7	7·8	7·8	2·6	5·2
	Girls ..	80·8	10·3	8·9	9·0	9·6	3·0	6·6
Leavers	Boys ..	84·2	7·3	8·5	10·3	8·3	3·5	4·8
	Girls ..	80·8	9·6	9·6	13·4	9·9	4·5	5·4
Other ages	Boys ..	83·0	9·0	8·0	8·0	9·0	2·8	6·2
	Girls ..	79·3	11·5	9·2	10·1	11·1	3·7	7·4

As can be seen, a proportion of those referred for treatment of defective vision were wearing spectacles already. This proportion rose from about one-tenth at age seven to rather more than two-fifths at age 15. The higher total percentages of children referred for treatment at older ages was thus almost wholly due to cases needing natural adjustment of refraction correction with the passage of time.

In 1957, the incidence of defective vision and the percentage of pupils referred for treatment of defective vision remained fairly stable compared with the preceding years. As experienced over many years, the recorded incidence of defective vision was greater among girls than boys.

Squint was most prevalent in the entrant group, falling to insignificant residual level in the leaver group. The overall figure of pupils referred for treatment of squint was 0·6 per cent., compared with 0·7 per cent. in 1956, 0·8 per cent. in 1955 and 0·8 per cent. in 1954.

Hygiene inspections and the cleansing scheme

The number of pupils found at the school health visitors termly and annual health surveys to be 'verminous' continues to decline, although at a slower rate than has been the experience during the years since the war. The figures for 1957, with comparable percentages for the last four years, are as follows :

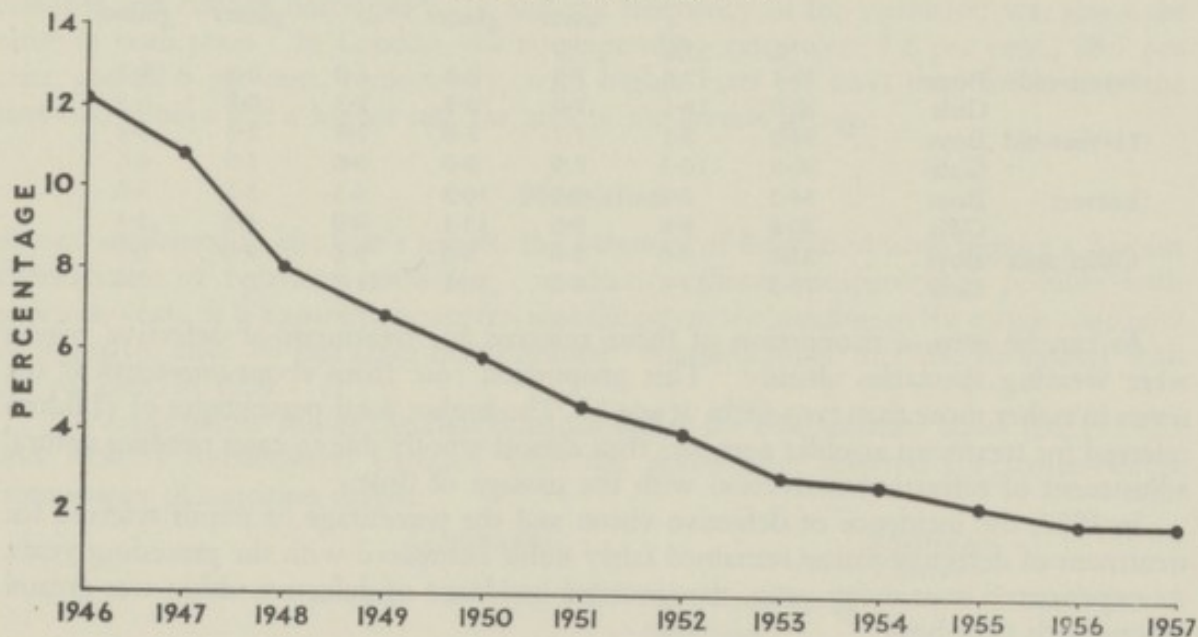
		Total Number of inspections	Number found to be verminous*	Percentage found to be verminous			
				1954	1955	1956	1957
Boys		370,240	2,048	0.8	0.6	0.6	0.6
Girls		421,602	7,591	2.7	2.1	1.8	1.8
Infants		336,192	4,451	1.5	1.2	1.3	1.3
		1,128,034	14,090	1.7	1.4	1.3	1.2

* 'Verminous', in this context, has a special meaning in that it includes cases with only one 'nit' (ovum), as well as cases with live vermin present.

During the year the number of individual children found to be verminous at these inspections, as distinct from the number of occasions on which vermin was found (in which one child might appear more than once), was 7,772 (8,238 in 1956, 9,613 in 1955 and 11,801 in 1954). The total of advice cards issued during the year was 8,830 compared with 9,614 in 1956. Children who attended a cleansing centre after the issue of advice cards numbered 6,183 (6,452 in 1956); the number of statutory notices served was 998 (1,223); 243 (325) of the children concerned attended voluntarily, and 704 (853) were cleansed compulsorily.

The diagram below shows how the percentage of 'verminous' pupils has fallen since 1946.

PERCENTAGE OF THE TOTAL PUPILS ON THE SCHOOL ROLLS FOUND TO BE VERMINOUS



Scabies, impetigo and ringworm

Pupils treated for scabies totalled 697 compared with 762 in 1956. The number of 'verminous' pupils treated at bathing centres fell by 1,494 to 8,175 while treatments needed decreased by 983 to 13,787.

Cases of impetigo treated at minor ailment and bathing centres numbered 2,433 compared with 2,766 in 1956.

The incidence of scalp ringworm showed a rise, with 17 cases recorded compared with nil in 1956 and 9 in 1955.

Employment of children

During the year, 4,985 medical examinations were carried out locally in respect of the issue of employment certificates. In addition 315 medical examinations of children were carried out in respect of employment under licence in public entertainments.

Choice of employment

Pupils advised, at their 'school leavers' general medical inspection, against particular forms of employment formed 13.9 per cent. of all leavers examined. The following table gives the main contra-indications disclosed :

Contra-indications	Boys	Girls
Occupations involving :		
Heavy manual work	287	158
Sedentary work	21	8
Indoor work	7	3
Exposure to bad weather	139	94
Wide changes of temperature	68	45
Work in damp atmosphere	77	85
Work in dusty atmosphere	142	49
Much stooping	29	32
Climbing	67	48
Work near moving machinery or moving vehicles	72	56
Prolonged standing, much walking or quick movement from place to place	118	126
Eye strain	651	839
Normal vision	817	629
Normal colour vision	400	3
Normal use of hands	24	11
Exposure of hands to moisture, chemicals, etc.	41	28
Handling or preparation of food	87	116
Normal hearing	83	46

School Treatment Centres

At the end of the year there were 113 school treatment centres, 93 run directly by the Council and 20 by voluntary committees. The following table shows the number of clinics available in school treatment centres for the treatment of each defect (these numbers do not include sessions held in hospital premises) :

Type of clinic	
Minor Ailments (doctors' sessions)	86
*Dental	68
†Vision	43
†Orthoptic	15
†Ear, Nose and Throat	8
Audiology	11
‡Speech Therapy	41
†Enuresis	1
Special Investigation	41
†Rheumatism (Supervisory)	9

* Several of these are 'twin' surgeries.

† Specialists provided in most cases by regional hospital boards.

‡ In addition to 27 in day E.S.N., 12 in day P.H., and 9 in boarding schools. (Speech therapy is, technically, 'special educational treatment').

Treatment Statistics

The numbers of sessions, new cases and total attendances at school children's clinics during 1957 were as follows (including sessions held in hospital premises) :

Type of clinic	Sessions	New cases	Attendances
*Vision	5,091	35,648	88,011
*Orthoptic	2,120	1,110	8,618
*Ear, nose and throat	789	3,871	9,685
Audiology	294	1,077	3,032
Minor ailments (doctor)	2,843	45,565	641,337
Minor ailments (nurse)	25,719	92,346	
Dental	33,435	102,568	308,862
*Rheumatism (supervisory)	482	329	3,174
*Enuresis	353	454	2,890
Special investigation	2,012	1,745	14,341

* Hospital and specialist services provided by boards of governors or regional hospital boards.

Infectious diseases in schools

When a pupil is absent from school, and the cause is either known or suspected to be due to infectious disease, the head of the school notifies the divisional medical officer and the borough medical officer of health.

These notifications are uncorrected for diagnosis, but they form the best available index of the trend of infectious disease in the school community and are the only figures available in respect of diseases which are not statutorily notifiable.

When the number of cases of infectious disease reported from a particular school indicates the possibility of an outbreak, special visits are made by a school health visitor and, if necessary, by a school doctor, in order to investigate the situation and take whatever control action is considered desirable.

The numbers of cases of infectious diseases reported during 1957 and the preceding years are given below :

	1955	1956	1957
Chicken pox	8,366	8,424	4,496
Dysentery, diarrhoea or enteritis ..	510	1,570	486
German measles	639	1,775	2,081
Impetigo	522	354	301
Jaundice	122	123	75
Measles	16,724	2,903	13,039
Mumps	1,982	6,059	5,509
Ophthalmia and conjunctivitis ..	271	280	291
Poliomyelitis	206	66	41
Ringworm	80	49	55
Scabies	72	53	61
Scarlet fever	984	1,020	1,037
Sore throat or tonsillitis	937	897	864
Whooping cough	1,614	1,857	1,372

Dysentery outbreaks in schools

During 1957 the Education Committee gave attention to the problem of the prevention of dysentery outbreaks in schools. The infection is transmitted mainly by personal contact, and it has been shown that this often occurs in the water closet. To break the chain of infection three things are desirable : (i) an adequate number of sanitary fittings that can be easily cleaned ; (ii) a high standard of day-to-day cleanliness of these fittings ; and (iii) facilities for washing hands, and such training or supervision as is necessary to see that they are used.

Some £250,000 has been spent since the war on the provision of urinals, water closets, wash basins and the supply of hot water to wash basins in the older schools to bring them up to the standard required in the School Building Regulations. The current sanitary programme is devoted almost entirely to the improvement of existing facilities, involving expenditure at the rate of over £50,000 a year. The work includes roofing and the enclosure of outside blocks, glazed urinals, wash basins and wherever possible, some water closets inside the school.

In most schools ordinary roller towels have been in use. This is the least satisfactory method of hand drying and is a ready means of spread of infection ; moreover the fabric of this type of towel is often practically unabsorbent. Following successful experiments at both new and old schools, it has been decided, in principle, to install cabinets with automatic pull-down linen roller towels in all schools. During the financial year 1957-58 they were to be installed in all secondary schools, and in 50 junior and 30 infants' schools, at a cost of about £30,000.

Head teachers and school keepers have accordingly been asked to continue to take every step to ensure that scrupulous attention to good hygienic practice is observed.

Handicapped pupils

The changes over the past 30 years in the special educational treatment provided for physically handicapped pupils are reviewed on pages 124 to 142 of this report. This

review includes, *inter alia*, a summary of the results of the survey of children suffering from cerebral palsy, to which reference was made on page 113 of last year's report.

At the end of 1957 special educational treatment was being provided for nearly 11,000 pupils and the following table shows the main categories of handicap and numbers of pupils receiving full-time special educational treatment :

	Day special schools	Boarding special schools	Hospitals	Non-Council boarding schools, hostels, foster-homes
Blind	—	59	—	61
Partially sighted	281	—	—	9
Deaf and partially deaf	303*	33	—	84
Physically handicapped	1,025	75	380	75
Delicate	1,430	204	—	155
Educationally sub-normal	3,350	598	—	35
Epileptic	—	—	—	42
Maladjusted	83	259	55	365

* Includes 73 pupils in partially deaf units.

In addition, part-time special educational treatment at day special classes was provided for 324 maladjusted pupils and 1,867 pupils with speech defects.

During the year the numbers of new formal ascertainment were as follows :

	Day	Boarding
Blind	—	21
Partially sighted	34	1
Deaf and partially deaf	52	5
Delicate	362	526*
E.S.N.	583	100
Epileptic	—	4
Maladjusted	147	255
Physically handicapped	194	16
Speech defect	1,140	32†
Dual defect	—	52

* Including diabetic and E.S.N./Delicate.

† Including 23 pupils already E.S.N. and 8 already P.H.

Section 57 of the Education Act, 1944, deals with the examination and reporting to the local health authority of children considered incapable of receiving education at school, of children whom it is considered inexpedient to educate with other children and of children needing supervision under the enactments relating to mental health after leaving school. Details of the numbers reported under this section are given below :

Section 57 (3)—Incapable of receiving education :

Children not in any school	57
Children in normal schools	3
Children in special schools	75
	—
	135

Section 57 (3) and (4)—Inexpedient to educate with other children 4

Section 57 (5)—School leavers 322

In 1957 another 109 school leavers were in need of voluntary supervision only. Section 8 of the Education (Miscellaneous Provisions) Act, 1948, provides for a review in the case of any child reported to the local health authority under Section 57 (3) of the Education Act, 1944 and authorises the cancellation of the report where the child on re-examination is found to be educable. During 1957 three reports were cancelled and the children admitted to special schools.

The number of reports issued under section 57 (3) is smaller than of recent years because in 1957 the procedure to be adopted in such cases was under discussion with the Ministry of Education and during this time action was held in abeyance.

At the end of the year 124 speech therapy sessions were held at 41 clinics. In addition 47 sessions were held in 27 day schools for the E.S.N. ; 27 sessions in day schools for the P.H. ; and 18 sessions in residential schools. During the year 1,211 pupils (including 208 in special schools) were formally 'ascertained' as requiring speech therapy ; 483 (including 50 in special schools) were 'discharged' as either cured or improved ; and 304 (including 52 in special schools), most of whom showed some improvement, ceased to receive treatment for various reasons (e.g., removal). The number of children under treatment at the end of the year was 2,200, whilst 270 remained on the waiting list. By the end of the year the total staff employed was the equivalent of 225/11 full-time speech therapists.

Audiometry

During 1957 both the traditional 'group gramophone' and the recently introduced 'rapid pure tone sweep' methods of audiometry were used in the schools. Pupils failing either test were referred for a full pure tone test, which was carried out either in the school, or at a convenient local centre.

Numbers of audiometer tests carried out during 1957 were as follows :

First gramophone tests	31,499
Second gramophone tests	8,323
'Sweep' tests	11,497
Full pure tone tests	3,924
Pupils referred to otologists	1,120

Maladjusted pupils

Divisional
case
conferences

In each of the nine divisions a case conference is held regularly to consider problem children. Each conference consists of the education district inspector, the divisional medical officer, the education divisional officer and the district organiser of children's care work (education) and, whenever possible, an educational psychologist attends and headteachers are invited for discussion of children from their schools. During the year the conferences dealt with a total of 3,810 cases, of which 1,813 were new cases. Of these new cases 1,410 were referred to child guidance clinics.

Child
guidance

In London child guidance facilities, at over 30 clinics, are provided mainly by hospitals, although there are also some voluntary and local authority clinics.

The work done during 1957 at the four child guidance units maintained by the Council is summarised in the following table :

	<i>Battersea</i>	<i>Brixton</i>	<i>Earls Court</i>	<i>Woodberry Down</i>	<i>Total</i>
No. of applications received	112	193	56	201	562
No. awaiting first interview at 31st December	19	58	24	21	122
No. interviewed and awaiting treatment	14	7	16	16	53
<i>Number of patients</i>					
In treatment at 1st January	32	133	46	63	274
New cases treated	60	141	53	133	387
Total	92	274	99	196	661
In treatment at 31st December	29	140	44	64	277
Discharged	63	134	55	132	384
No. of home visits by psychiatric social worker	14	4	11	60	89
No. of school visits by staff	63	41	95	76	275

Special educational treatment for 324 maladjusted pupils is provided at 18 day special classes, at which the children attend part-time. Day special classes

During 1957 the Lilian Baylis school removed to new premises and was renamed the Gideon School. At the end of the year 83 pupils were in attendance at the Council's two day schools for the maladjusted. Day schools for the maladjusted

During 1957 the Council's eighth boarding school for the maladjusted was opened at Anerley, to the south-east of London. At the end of the year 259 pupils were in attendance at these eight schools. In addition 420 maladjusted pupils were placed in non-council boarding schools, hostels, foster homes, or hospitals. Boarding schools for the maladjusted

The arrangements for psychiatric services at other boarding special schools, approved schools and other residential establishments, described in previous reports, continued. Psychiatric services at other residential establishments

PHYSICALLY HANDICAPPED PUPILS

Historical

FOLLOWING the recommendation of a Royal Commission, the London School Board in 1891 decided that special schools should be established for children who could not be taught in the ordinary schools or by ordinary methods by reason of physical or mental defect. A sub-committee was given the responsibility of providing special education and its title was changed to the Special Schools Sub-Committee. Combined centres for children with mental and physical defects were set up in 1892. A departmental committee of the Education Department recommended in 1898 that children with physical defects should be admitted to special classes if they were incapable of benefiting from instruction in the ordinary schools. The Board's medical officer and the superintendent had to certify that each child required special treatment. The Elementary Education (Defective and Epileptic Children) Act, 1899, imposed a duty upon the parent of having a defective or epileptic child educated in a special class or school where such a class or school was within reach of the child's residence. In 1900 a committee of members of the School Board and specialists reported in favour of setting up special schools for the physically defective of normal intelligence. The School Board accepted this proposal which was approved by the Board of Education.

From a few hundred places the accommodation increased steadily to 3,500 places by 1915, and 4,000 places in the middle 1920's. Since then there has been a marked fall, and today the Council provides 1,350 places in 16 special schools, three of which are boarding schools.

Children in London special schools

'Physically handicapped' pupils are defined by the 1953 Regulations as 'pupils not suffering solely from a defect of sight or hearing who by reason of disease or crippling defect cannot, without detriment to their health or educational development, be satisfactorily educated under the normal régime of ordinary schools'. This definition obviously covers a wide range of degrees and types of handicap, and Table (i) gives an analysis (based on the International Statistical Classification of Diseases, Injuries and Causes of Death) of the pathological conditions of the children in London special schools for the physically handicapped in the Spring Term of 1957.

In essence, Table (i) shows that, apart from large categories such as cerebral palsy and poliomyelitis, the children attending the special schools for the physically handicapped are suffering from a very wide range of conditions, some of which in this survey occur only once. It is important to note that the figures given in Table (i) which relate only to those children in special schools for the physically handicapped, cannot therefore be used to measure the incidence of any particular condition amongst the child population, since there are many handicapped children satisfactorily placed in ordinary schools, and there are others who are in schools not maintained by the Council, or who are not in school at all. On the other hand the figures are of importance as a measure of the need for special educational provision.

TABLE (i)—1957 Survey of pupils in London schools for the physically handicapped

<i>Inter- national Code</i>	<i>Condition</i>	<i>Number</i>	<i>Inter- national Code</i>	<i>Condition</i>	<i>Number</i>
010	T.B. meninges and C.N.S.	9	724	Arthritis	4
011	T.B. of peritoneum	1	730-1	Osteomyelitis	14
013-0	T.B. of spine	24	730-3	Periostitis	1
013-1	T.B. of hip	33	732	Perthe's disease	14
013-2	T.B. of knee	11	733	Dysplasia epiphysealis	1
013-3	T.B. of other bones and joints	5	735	Prolapse intervertebral disc	1
081	Post poliomyelitis	240	744-1	Progressive muscular dystrophy	24
193	Malignant neoplasm of brain	2	745	Curvature of spine	14
199	Malignant neoplasm of leg	1	748	Clubfoot	22
223	Benign neoplasm of brain	5	749	Coxavara	2
225	Benign neoplasm of knee	1	751	Spina bifida	37
228	Haemangioma	2	752	Hydrocephalus	22
237	Tumour of brain	7	753-1	Congenital malformation of nervous system	6
241	Asthma	4	754-0	Tetralogy of Fallot	31
253	Cretinism	1	754-1	Patent ductus arteriosus	10
272	Diseases of pituitary gland	4	754-2	Interventricular septal defect	40
277	Dwarfism	3	754-3	Interauricular septal defect	27
284	Post rickets	1	754-5	Other congenital malformation of heart	19
286-0	Coeliac disease	1	754-6	Coarctation of aorta	1
289-0	Gaucher's disease	1	754-7	Other congenital circulatory malformations	18
289-2	Lipodystrophy	2	756-1	Imperforate anus	3
292-2	Cooley's anaemia	1	757	Congenital malformation of G.U. system	4
292-4	Aplastic anaemia	1	758-0	Congenital dislocation of hip	19
293	Anaemia	1	758-1	Chondrodystrophy	9
295	Haemophilia	21	758-2	Congenital malformation of skull	2
298-0	Hepatosplenomegaly	2	758-3	Brittle bones	10
344	Post inflammatory disease of C.N.S.	11	758-6	Other congenital malformations of bones and joints	33
351	Cerebral spastic infantile paralysis	312	759-1	Epidermolysis bullosa	3
352	Other cerebral paralysis	9	780-3	Jacksonian epilepsy	1
353	Epilepsy	23	780-4	Athetosis	21
355	Huntington's chorea	1	780-5	Ataxia	7
356-0	Progressive muscular atrophy	29	N.800/1	Fracture skull	3
357	Friedreich's ataxia	2	N.808	Fracture pelvis	1
364	Polyneuritis	1	N.813	Fracture arm	1
410	Rheumatic valvulitis—mitral	41	N.823	Fracture leg	2
411	Rheumatic valvulitis—aortic	4	N.836	Dislocation patella	1
—	Rheumatic valvulitis—combined	25	N.856	Traumatic cerebral paralysis	6
414	Rheumatic endocarditis	1	N.888	Amputation arm	2
416	Rheumatic carditis	1	N.891	Scarring leg	1
445	Malignant hypertension	1	N.897	Amputation foot	3
453-3	Vasomotor disturbance	1	N.898	Amputation leg	3
468-2	Lymphadenitis	1	N.901	Injury both legs	1
526	Bronchiectasis	3	N.945	Burns both thighs	1
560	Hernia	1	N.948	Multiple burns	1
587-2	Fibrocystic disease of pancreas	2			
593	Nephritis	8			
601	Hydronephrosis	2			
602	Renal calculus	1			
722-0	Still's disease	15			

Statistics of special educational provision

During recent years the annual number of 'ascertainments' of pupils as physically handicapped has been as follows :

			<i>Boys</i>	<i>Girls</i>	<i>Total</i>
1953	..	..	140	137	277
1954	..	..	148	109	257
1955	..	..	145	87	232
1956	..	..	145	99	244
1957	..	..	124	86	210

Pupils are placed not only in the Council's special schools, but in voluntary and independent schools, some receive tuition at hospital schools and others receive individual tuition at home or in hospital under section 56 of the Education Act, 1944.

The number of pupils receiving special educational treatment as physically handicapped on a day in September, 1957, at the different types of establishment quoted was as follows :

L.C.C. day special schools	..	..	..	1,118
L.C.C. boarding special schools	..	..	..	151
Voluntary, etc., boarding schools	..	..	..	66
Hospital schools	..	..	..	373

In addition, individual tuition was being given to 62 pupils in their own homes, and 33 pupils in hospitals, at which there were no permanent teaching arrangements.

The figures include pupils who are the responsibility of other local authorities, whilst there are some London children who are being educated by out-county authorities (e.g., by the Surrey County Council at Queen Mary's Hospital for Children, Carshalton).

Comparison with earlier years

Surveys similar to that carried out in 1957, the results of which are given in Table (i), have been done from time to time, but not on such a rigorous basis of classification. An attempt has been made in Table (ii) to compare the findings of the 1928, 1951 and 1957 surveys as representing the pre-war, settled post-war and current positions. Only broad comparison by combination of some categories is possible because of the differing basis of classification used in the three surveys. In the table the numbers recorded are also shown as percentage distributions, and as rates per 1,000 of the total school rolls, and some of the major changes in the percentage distributions are illustrated in Diagram A.

Any consideration of the changes shown in Table (ii) must be made against a background of knowledge of the differences which have occurred since 1928 in the attitude of both the education and school health services towards the physically handicapped child. The current aim is to fit the child emotionally as well as physically and academically into a normal environment at as early an age as possible, because it is such an environment that will have to be faced when the child eventually leaves school. Today a child is sent to a special school only if it is essential and, when it is, a return to the normal environment of an ordinary school is arranged as soon as possible. Moreover, medical knowledge has improved during the 30 years under review. Improvements in diagnostic techniques, new drugs and better treatment, have reduced the incidence of some diseases and the severity of the sequelae of others. On the other hand similar improvements which have reduced infant mortality over the period have at the same time increased the chances of survival of the congenitally handicapped.

DIAGRAM 'A'

Percentage distributions of pathological conditions of pupils in schools for the physically handicapped—1928, 1951 and 1957

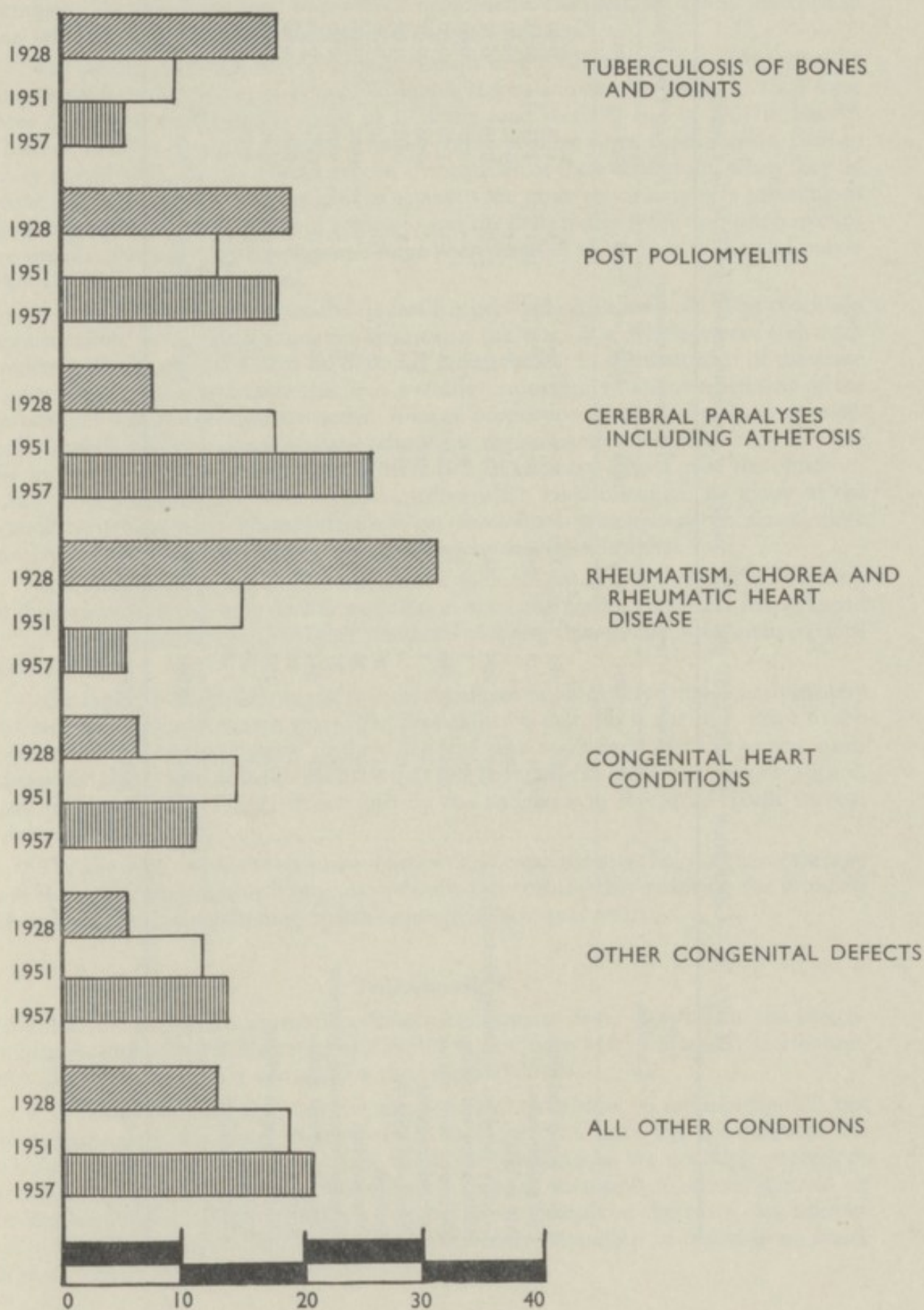


TABLE (ii)—Comparison of 1928, 1951 and 1957 Surveys of pupils in schools for P.H. in London

Condition	Numbers recorded			Percentage distributions			Rates per 1,000 of total school rolls		
	1928	1951	1957	1928	1951	1957	1928	1951	1957
T.B. of bones and joints	726	161	73	17.9	9.7	5.5	1.14	0.40	0.16
Post poliomyelitis	771	214	240	19.0	12.9	18.1	1.21	0.53	0.54
Post rickets	78	1	1	1.9	0.1	0.1	0.12	0.00	0.00
Cerebral paralyses (including athetosis) ..	314	294	342	7.7	17.8	25.8	0.49	0.72	0.77
Rheumatism and chorea	166	1	—	4.1	0.1	—	0.26	0.00	—
Rheumatic heart disease	1,088	244	72	26.9	14.8	5.4	1.70	0.60	0.16
Bronchiectasis, etc.	33	5	3	0.8	0.3	0.2	0.05	0.01	0.01
Diseases of kidney	6	9	11	0.1	0.5	0.8	0.01	0.02	0.02
Arthritis	61	26	19	1.5	1.6	1.4	0.10	0.06	0.04
Osteomyelitis	79	33	14	1.9	2.0	1.1	0.12	0.08	0.03
Progressive muscular dystrophy	22	37	22	0.5	2.2	1.7	0.03	0.09	0.05
Congenital heart disease	251	241	146	6.2	14.5	11.0	0.39	0.59	0.33
Brittle bones	7	10	10	0.2	0.6	0.8	0.01	0.02	0.02
Other congenital defects	223	193	180	5.5	11.6	13.6	0.35	0.48	0.41
Accidents	115	30	26	2.8	1.8	2.0	0.18	0.07	0.06
Other conditions	121	158	166	3.0	9.5	12.5	0.19	0.39	0.37
TOTAL	4,061	1,657	1,325	100.0	100.0	100.0	6.36	4.08	3.00
Total school rolls	639,000	406,000	443,000						

Orthopaedic cases

Mr. R. C. Baird, F.R.C.S., the Council's Consultant Orthopaedic Surgeon, has given the following comments on the changes over the years, as far as orthopaedic cases are concerned :

'In the three years surveyed in Table (ii) and Diagram "A" the proportion of orthopaedic cases has remained remarkably constant at approximately half of the total numbers. The fall in the total numbers of orthopaedic cases has, therefore, marched in step with the fall in the total numbers of all types of cases.

'The conditions which have contributed most to the fall in numbers of orthopaedic conditions are tuberculosis of bones and joints, rickets and osteomyelitis. In 1928 these three conditions totalled 883, whilst in 1951 the total was 195 and in 1957 it was 88. Thus ten children were at a special school because of these three conditions in 1928 to every one in 1957. As one would expect, the sequelae of these conditions, when they do occur, are undoubtedly very much less severe. One now very rarely sees tuberculosis involving more than one bone or joint site and the deformities following osteomyelitis are usually minimal : for this reason a large proportion of these cases will spend only a limited time at a special school.

'It is difficult to comment on the figures for post-poliomyelitis cases. This condition occurs mainly in epidemics and the severity of the cases as a whole varies with each epidemic. So far there has been no dramatic improvement in the treatment of the acute case when it occurs, but there has been a steady improvement in the treatment of the deformities which subsequently occur. A large proportion of the severe cases of post-poliomyelitis will remain at a special school for the remainder of their school life, but the less severe cases may well be transferred to an ordinary school once the optimum result from physiotherapy and surgical treatment has been obtained. As many of the schools now have physiotherapy facilities on the school premises, much school time can be saved by thus eliminating the travelling to and from hospital.

'Still's disease is responsible for the bulk of the cases listed as arthritis. The lowering of the incidence of this very disabling condition in schools for the physically handicapped is due very much more to the higher standards of living than to any advance in medical science.

'The figures in Table (ii) suggest that the incidence of progressive muscular dystrophy has increased in the post-war years. The probability is that this is not true. Prior to the advent of chemotherapy many of these children died at an early age from chest complications. Now these acute chest conditions can be rapidly cured and, as a consequence, they live very much longer. Consequently the incidence in the more recent surveys tends to be higher.

'The all round improved standards of treatment, with the great help of chemotherapy and the better standards of living, have resulted in considerably reducing the numbers of orthopaedic cases attending special schools in post-war years.'

Poliomyelitis

In Table (iii) are shown the notifications, admissions to fever hospitals of the Metropolitan Asylums Board, discharges and deaths from Queen Mary's Hospital, Carshalton, and admissions to special schools, for the period 1920-29.

It is clear from this table that the annual rate of admission to special schools is not inconsistent with the 'spot' figure of 771 cases in 1928, since the age-range of the schools was 7-16 years. On the other hand, the notifications are not high enough to account for the numbers of paralytic cases requiring admission to special schools, or having been treated at Queen Mary's Hospital. It would appear, therefore, that reliance on notifications alone would lead to a serious under-estimation of the level of attack in these earlier years when the disease was endemic.

‘ Heart Cases ’

Probably the most marked difference shown in Table (ii) and Diagram “A” is in respect of ‘ rheumatic heart ’ cases. Some indication of the attitude prevalent in the 1920’s is given in the following comment by a member of my staff who spent an official life time in the school health service.

TABLE (iii)—*Poliomyelitis*, 1920–1929

<i>Year</i>	<i>Notifications</i>	<i>Admissions to M.A.B. Fever Hospitals</i>	<i>Discharges and deaths—Queen Mary’s Hospital, Carshalton</i>	<i>Admissions of post poliomyelitis cases to L.C.C. special schools for P.H. pupils</i>
1920.. ..	42	6	32	196
1921.. ..	55	1	42	152
1922.. ..	36	3	32	110
1923.. ..	110	7	50	94
1924.. ..	123	10	66	110
1925.. ..	51	2	82	97
1926.. ..	96	13	62	106
1927.. ..	80	15	59	101
1928.. ..	47	9	73	108
1929.. ..	65	11	54	85

‘ My first direct and responsible experience of P.H. schools or P.D. (physically defective) schools as they were then called, was at the Cloudesley. I was horrified to find that the teaching staff had so conscientiously taken to heart the need for care of these children that a very high proportion including all the heart cases were not allowed to take any exercise at all and had to sit and read at any break intervals. It took a long time to introduce graduated exercises and games, and dispel the idea that every heart case was liable to drop dead if he exerted himself. I fear some of our school doctors contributed to this attitude and were not as well up on their cardiology as they should have been. For instance in the Robert Blair (then Blundell Street) School, the Head presented seven boys who had all been forbidden all games and drill because of heart murmurs by previous M.O.s. I put them all back on to full activities at once with excellent results. Perhaps I was lucky to have been taught by Sir Thomas Lewis and Frederick John Paynton at U.C.H. ! Some paediatricians still seem to think that we cotton wool all children in P.H. schools and recommend ordinary school for unsuitable cases, which is why I always urge upon our M.O.s not to be intimidated by consultant status or big names. The School M.O. is the one who knows conditions in both the ordinary and special schools and therefore is the best judge.

‘ The children themselves showed on occasion that they were ready for a more active life as is shown by the fact that a boy who attended a school for physically handicapped children on account of his heart condition and who was conveyed to and from school each day by ambulance told a consultant that at the week end he had “ Cycled to Southend, Doctor ”. ’

Rheumatic, and other cardiac conditions

Dr. R. Cove-Smith, cardiologist, who acts as the Council's consultant on rheumatism, has given the following observations on the changes over the years, as far as his specialty is concerned :

'This steady fall in the number of cases of rheumatic heart disease attending schools for physically handicapped pupils, does not necessarily signify any great advances in the treatment of juvenile rheumatism, although the inception in 1926 of the Council's rheumatism scheme, with its organisation of supervisory centres, played a big part in checking the spread of, and preventing complications from, this condition.

'The fact that rheumatic fever has become both a less common and a less severe disease during the last twenty-five years, as has scarlet fever, has diminished the incidence of rheumatic heart disease considerably. Apart from this, improved social conditions, a general advance in health consciousness of parents and teachers, the introduction of chemotherapy, together with the early diagnosis and effective treatment of throat infections, and particularly the early employment of penicillin in cases of β hæmolytic streptococcal infections have all played their part.

'As the cases of rheumatic heart disease requiring special schooling have diminished, so from 1928 to 1951 the cases of congenital heart defect increased.

'This is due in part to improved diagnosis and recognition by the medical profession that congenital heart conditions are not of themselves necessarily a label of prolonged invalidism. Consequently during the period from 1928 to 1951 more cases were brought into our physically handicapped schools, where they could obtain appropriate education and training instead of languishing idly at home.

'Since that date, however, the numbers are again diminishing as the rapid advance of cardiac surgery has enabled many of those with defective hearts to be restored to good functional activity. Whereas in 1928 the numbers of those with rheumatic heart disease greatly exceeded those with congenital heart defects (1,088/251), by 1951 they were about equal, while during the subsequent six years rheumatic heart cases diminished considerably in number, giving a ratio in 1957 of 72/147. This still left a hard core of severe rheumatic lesions to be catered for, but in addition, congenitally defective hearts are now being repaired so rapidly by the surgeons that the numbers of sufferers are gradually diminishing. Furthermore, it is being found quite feasible for a child with a mild congenital defect to cope with ordinary school life, provided activity is adequately supervised. Several children with cardiac lesions have achieved grammar school status during the last six years and more than one has been awarded a university scholarship. This shows that the modern outlook enables the individual to transcend the limitations of his apparent handicap.

'The largest number of congenital malformations comes under the heading of interventricular septal defect (40) while the interauricular septal defects (27) run closely parallel to the tetralogy of Fallot (31) ; though many of the latter have at some stage or other undergone an operation to improve their aeration and mobility, such as anastomosis or valvulotomy, or both. Ten cases of patent ductus and some forty other cases of less easily classifiable malformations and circulatory defects complete the picture with which the cardiologist has to contend. There is little doubt that without such scope as is provided for these children at a school for physically handicapped pupils, many by the very nature of their disability would be confined to their own homes. So far no mention has been made of the cases of rheumatism with chorea that numbered 166 in 1928, whereas in 1951 there was only one, yet not even one in 1957—perhaps this is due to the fact that subacute rheumatism is rarely seen now and to a more ready appreciation of the causes and cure of many cases of "limb pains" and "nerves", and their more satisfactory rehabilitation to ordinary school life.

'On the whole, therefore, the future outlook for the child with cardiac trouble, either congenital or acquired, is hopeful and the numbers that will need special attention in a school for physically handicapped pupils is steadily diminishing, thus altering the

personnel and the tempo of such schools ; nevertheless there will still remain a certain number of severe cardiac cases for whom such accommodation will be considered essential'.

Cerebral palsy

Table (ii) and Diagram 'A' clearly illustrate how today the special schools for the physically handicapped contain a much higher proportion of cerebral palsied pupils than formerly. Of recent years the subject of cerebral palsy has been prominent, and in Circular 300 the Ministry of Education has advised local education authorities on the provision of special educational treatment for cerebral palsied pupils.

Dr. William Dunham, the Council's consultant on cerebral palsy, has contributed the following note about the increased proportion of children with cerebral palsy in the schools for the physically handicapped :

'In view of the decreasing toll taken by chronic infective and nutritional conditions over the period studied, an increase in the proportion of children who have cerebral palsy was to be expected, and this expectation is borne out by the figures. The percentage in 1957 (25.8 per cent.) was over three times that in 1928 (7.7 per cent.). That the increase cannot be accounted for entirely in this way is, however, demonstrated by the fact that the rates for children with cerebral palsy attending schools for the physically handicapped per 1,000 children on the total school rolls have, in the period, increased from 0.49 in 1928 to 0.72 in 1951 and 0.77 in 1957. These figures, of course, reflect *inter alia*, the changes in duration of compulsory school attendance brought about by the passing of the 1944 Education Act.

'It may well be that a reluctance on the part of the parents of some physically handicapped children to leave the facilities in London or even an increased number in search of better facilities have operated to make the fall in the numbers of physically handicapped children smaller than the fall in the total school population, and so to produce an apparent increase in incidence of physical handicaps. It is impossible accurately to estimate this effect, but it seems likely that it will have been exerted equally on the figures for cerebral palsy and on those for "brittle bones", "muscular dystrophy", and "other congenital defects".'

'It can confidently be stated that much of the increase in the proportion of children who have cerebral palsy can be accounted for in the ways already discussed, but it seems likely that the increased interest taken in these conditions in recent years may also have had some influence. Some children who previously were kept at home or admitted to institutions of various kinds would probably, today, be admitted to schools for the physically handicapped. It is certain that the motor defects of many mentally retarded children with a minor degree of cerebral palsy would, in the past, have been overlooked, whereas now they are detected and the children are admitted to such schools. Further, a smaller number of children whose general incompetence due to mental retardation is reflected in motor incompetence are also admitted to the sheltered environment there provided.

'While it appears that the problem of cerebral palsy is not an increasing one, it is certainly one of increasing importance in the schools for the physically handicapped. The factors responsible for the increased proportion in such schools of children with cerebral palsy over the period studied are likely to remain operative in the future. The training of personnel in the specialised management called for if these children are to make the best progress of which they are capable is clearly a matter of great and increasing importance in these schools.'

Cerebral palsy survey

Starting in 1955 a survey has been made of the prevalence of cerebral palsy in London.* Information was obtained from hospitals, institutions, schools, clinics and general practitioners of all children known to be suffering from cerebral palsy and domiciled

* *Cerebral Palsy in the County of London. MacGregor, Pirrie and Shaddick. The Medical Officer, 27 December, 1957.*

in London. An educational assessment was carried out by an inspector of special education, with the assistance of two teachers with experience of work in schools for the physically handicapped, who interviewed the children receiving education.

Table (iv) shows the prevalence among 421,000 children aged 5-14 years, which gives a rate of 1.181 per 1,000 and there is no significant difference in incidence between the two sexes. Surveys have been carried out in other parts of the country from time to time, but the results have ranged between 0.4 and 2.2. It is difficult to ascertain the extent to which the different surveys were comparable, whether for example, ineducable children (included in this survey) were included or excluded, but the general consensus of opinion appears to be that in this country the prevalence lies between 1.0 and 2.0 per 1,000.

The smaller numbers found among the youngest children reflect the difficulty of diagnosis in early life. In previous annual reports I have referred to the scheme of research by Mrs. E. Collis and Dr. W. F. Dunham (under the aegis of the Medical Research Council) among selected babies at maternity and child welfare centres, which has the object of devising techniques for the earlier diagnosis of cerebral palsy amongst infants. This research still continues.

One feature worthy of comment is the lower prevalence at ages 14-16 years—this may possibly be due in part to slight cases leaving ordinary schools undetected. There does seem to be a 'shortage' of cases in later life presumably due to assimilation among normal young adults and possibly by death or admission to institutions. The Council has agreed to the use of the school organisation by the British Council for the Welfare of Spastics in a follow-up of cerebral palsied school leavers, which investigation may, in due course, throw some light on this matter.

In Table (v) are given the numbers of the 722 children under 17 years of age by types of cerebral palsy and degree of physical handicap. The nomenclature of cerebral palsy is not well defined, and it is not easy to ensure that commonly used terms mean the same thing to all users. The disadvantages of approaching a survey in this way were clear, but seemed to be inherent in any inquiry covering both a large population and a number of physicians with differing experience. An attempt was made to secure uniformity by including in the survey form a note to the effect that, 'for the purposes of this survey, spasticity should be interpreted as weakness of muscle power with rigidity; athetosis as complicated involuntary movement, and ataxia as inco-ordination of movement'.

To complete the clinical picture so far as was necessary for the purposes of the survey, data was sought on the number of handicaps other than limb involvement occasioned by the cerebral palsy. Details by certain age groups are given in Table (vi), which shows that about one-third of the children had no handicap other than limb involvement, another third had one additional handicap and the remainder had more than one additional handicap. The most common other defect was speech, followed by ineducability and epilepsy. It should be noted that 'ineducability' here is a clinical impression in certain cases, not a formal 'ascertainment', hence the figure does not agree with those shown in Table (viii), where numbers formally reported under Section 57 of the Education Act, 1944, or dealt with under the Mental Deficiency Acts, are quoted.

It is noticeable that only about 5 per cent. of these children are reported as having hearing defects. Since the date of this survey, Dr. L. Fisch, of the Audiology Unit, Royal National Throat, Nose and Ear Hospital, has examined children in schools for the physically handicapped in London, and found that, of the 240 children examined, 16.7 per cent. had some degree of defective hearing in either one or both ears. Whilst in some cases these defects would not have been sufficiently serious to affect a normal child, Dr. Fisch emphasizes that even a slight degree of deafness in one ear is of serious consequence to a cerebral palsied child who cannot, for example, easily move his head or body so as to make use of the better ear.

TABLE (iv)—*Number of cerebral palsied children domiciled in London by sex and age*

<i>Age in years</i>	<i>Boys</i>		<i>Girls</i>		<i>Total</i>		<i>Rate per 1,000 live births</i>
	<i>No.</i>	<i>Per cent.</i>	<i>No.</i>	<i>Per cent.</i>	<i>No.</i>	<i>Per cent.</i>	
0	7		4		11		0.217
1	18		16		34		0.667
Total under 2	25		20		45		—
2	23		17		40		0.778
3	25		19		44		0.840
4	27		27		54		1.006
Total 2-4	75		63		138		—
Total under 5	100		83		183		
5	34		27		61		1.078
6	37		33		70		1.151
7	39		26		65		0.920
8	23		26		49		0.742
9	22		27		49		1.069
10	22		19		41		0.914
11	26		25		51		1.133
12	22		22		44		1.078
13	20		17		37		1.108
14	19		11		30		0.649
Total 5-14	264		233		497		—
Total under 15	364	53.5	316	46.5	680	100.0	—
15	12		17		29		
16	5		8		13		—
Total aged 0-16	381		341		722		—
17	2		3		5		—
18	5		—		5		—
23	—		1		1		—
TOTAL CASES	388	52.9	345	47.1	733	100.0	—

TABLE (v)—*Type of cerebral palsy and degree of physical handicap (children aged 0-16 years)*

<i>Type of cerebral palsy</i>	<i>Degree of physical handicap</i>			<i>Total</i>	
	<i>Slight</i>	<i>Moderate</i>	<i>Serious</i>	<i>No.</i>	<i>Per cent.</i>
Multiple	5	26	47	78	10.8
Spasticity	143	173	167	483	66.9
Athetosis	8	14	36	58	8.0
Ataxia	14	14	18	46	6.4
Rigidity	3	4	2	9	1.3
Tremor	3	2	1	6	0.8
Other	19	11	12	42	5.8
TOTALS	195	244	283	722	100.0

TABLE (vi)—Other handicaps additional to cerebral palsy

Age	Impaired hearing	Impaired sight	E.S.N.	Epileptic	Speech defect	In-educable	Other	Total other Handicaps	Number of children			
									With multiple other handicaps	With single other handicaps	With no other handicaps	Total
Under 2 years Boys ..	5	3	—	3	9	2	2	24	6	11	8	25
Girls ..	1	3	1	—	4	1	1	11	2	6	12	20
Total ..	6	6	1	3	13	3	3	35	8	17	20	45
2-14 years Boys ..	17	29	40	53	133	94	20	386	117	113	109	339
Girls ..	11	44	33	46	98	81	13	326	102	89	105	296
Total ..	28	73	73	99	231	175	33	712	219	202	214	635
15-16 years Boys ..	—	—	2	4	9	4	1	20	6	7	4	17
Girls ..	1	4	3	3	8	11	3	33	10	10	5	25
Total ..	1	4	5	7	17	15	4	53	16	17	9	42
TOTALS Boys ..	22	32	42	60	151	100	23	430	129	131	121	381
Girls ..	13	51	37	49	110	93	17	370	114	105	122	341
Boys and Girls	35	83	79	109	261	193	40	800	243	236	243	722

DIAGRAM 'B'

I.Q. distribution of 332 cerebral palsied children receiving education, and tested, compared with that of children as a whole.

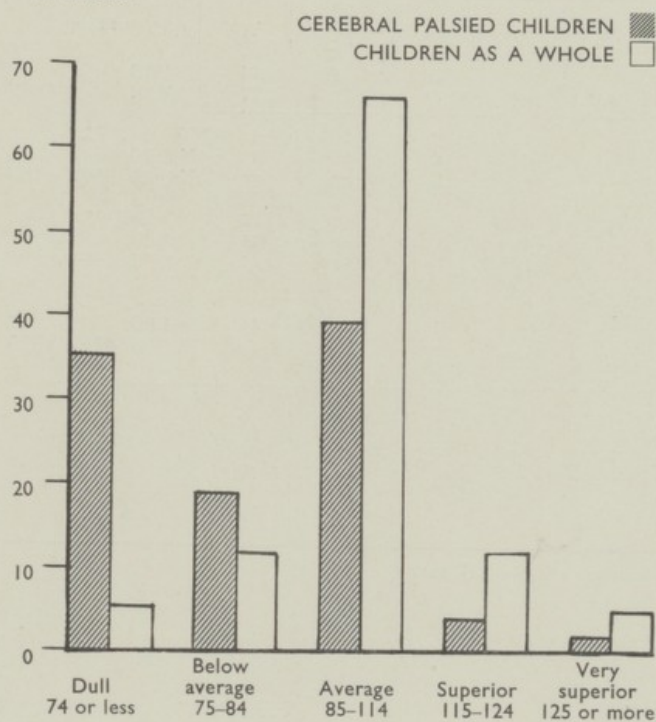
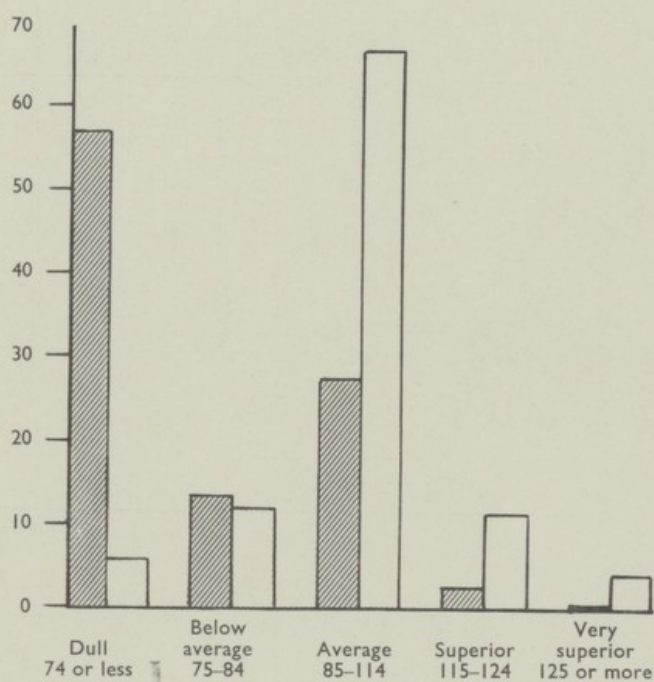


DIAGRAM 'C'

I.Q. distribution of all cerebral palsied children surveyed compared with that of children as a whole.





A "cripple cart" of fifty years ago

A modern bus with ramp for wheel chairs in use





A typical corridor, Franklin Delano Roosevelt School

Remedial exercises room, Franklin Delano Roosevelt School





Hall with lift, Penbury Grove School

Swimming party, Caldwell School





Refreshment after the swim

Physiotherapy at the Venetian School



There are various causes of cerebral palsy but one group of causes is associated with prematurity and the figures obtained merely confirm the fact that there is a far greater proportion of prematurity amongst cerebral palsied children than among children generally. Of those whose birth weights were known 34.6 per cent. were premature, and even if the lower figure of 24.8 per cent. of all births, including those whose birth weights were not known, is taken, the comparison is with an incidence of prematurity of 7 per cent. of all births.

For determining the intelligence of children receiving education the revised Stanford Binet Test Form L was used. There were 409 children receiving education, and of these 367 were assessed—wastage being due to removals, leaving school, and so on, and 35 were found to be untestable. Diagram B shows the distribution of intelligence quotients of the remaining 332 children compared with a normal distribution. A valid comparison of the intelligence of cerebral palsied children with that of the child population as a whole cannot however be made on the basis merely of those receiving education. When the others are added the true position is as set out in Diagram C, and the even more markedly skew distribution of the cerebral palsied children is revealed.

The disposal of the children according to whether they were being educated or not, and if so where, is set out in Table (vii). It will be seen that of the 188 children dealt with under the Mental Deficiency Acts, 105 had attended school for a period before being reported as ineducable, and 83 had never been to school. These figures are not wholly meaningful since there is no rigid dividing line between educability and ineducability. With the co-operation of institutions such as the Fountain Hospital, children classed as ineducable are kept under review and some are given a further trial in special schools. Similarly in the special schools themselves the classification of a child as ineducable is not treated as a matter of urgency, and may be deferred for some time, if the child is not 'inexpedient' from the point of view of the school authorities.

TABLE (vii)—*Type of school, etc., attended by cerebral palsied pupils*

<i>School—</i>	<i>Number of children</i>	
Ordinary Primary, Secondary, etc.	54	
Private/Independent	11	
Special day	300*	
Special boarding	28	
Receiving home tuition	16	
		409
Reported to L.H.A. as ineducable	105	
Others receiving care under M.D. acts	83	
		188
<i>Not included under any of the above :</i>		
Under 2 years of age	43	
Aged 2-4 years	75	
Aged 5 years but not attending school on 1.4.1955 (since moved out-county)	2	
Aged 15-16 years	5	
		125
TOTAL CASES		722

* One boy at special day school also receiving home tuition (not included in home tuition figure above).

Physiotherapy

Although the Council first appointed an orthopaedic consultant to the schools as long ago as September, 1905, children were always referred to hospitals for treatment, because in London suitable hospital and specialist services have always been readily available for school pupils referred to them.

As a result, children at schools for the physically handicapped for whom a consultant recommended physiotherapy, went by school bus to the hospital. Since, at any one school, children might be under the medical supervision of several different hospitals,

whose out-patient clinics were held at different times on different days, it will be appreciated that there was considerable loss of school time, as well as expenditure on transport.

Accordingly, a scheme was devised whereby each school was to be linked with a hospital, and visited regularly by a team of physiotherapists from the hospital, acting under the direction of the specialist in physical medicine. This entailed providing at the school the necessary physiotherapy equipment, and securing the consent of the consultants at the several hospitals originally attended by the children, to the transfer of their patients to the 'linked' hospital's department of physical medicine. The pioneer scheme was at the Venetian School, S.E.5, which was linked in this way with King's College Hospital in 1950. Largely owing to the enthusiasm of Dr. F. S. Cooksey, Director of Physical Medicine, the scheme was remarkably successful, and much mutual benefit has accrued therefrom. The school doctor has been appointed as an honorary clinical assistant at the hospital, whereby he has direct access to members of the medical staff of the hospital, and to the hospital records. The clinic at the school provides experience for students at the hospital school of physiotherapy. The Head of the school reported as follows after the scheme had been in operation for 18 months :

'The teaching staff have received great benefit. Their knowledge and understanding of the children under their care has been improved. The reciprocal information which has been passed between both staffs has been of greatest help to each other, and of ultimate benefit to the children. The one factor which stands out above all others is the relation of the child's age to its progress both medical and educational. The younger they come under treatment the more rapid and marked is their progress. Experience has convinced me that, placed under similar conditions at as early an age as possible, it could be expected that a good many more P.H. children could return to a normal school life at an earlier date'.

Since this first scheme was so successful, it was hoped that similar arrangements would soon be made at all the other schools for the physically handicapped, but, instead, a long period of negotiation ensued. The Regional Hospital Boards would not accept responsibility for a service in the schools, and it was not until December, 1957, that final authority was obtained from the Ministry of Education for the Council to incur reasonable expenditure on physiotherapy in the special schools.

The hospital authorities who are now co-operating with the Council on physiotherapy arrangements for physically handicapped pupils are set out in Table (viii). Unfortunately, at not all of the schools has it been possible to arrange for the treatments to be carried out at the school, nor has the transfer of patients between consultants always been effected.

However, the main problem is nearly solved, and as new premises replace older school buildings, then the improved accommodation will enable more pupils to be treated on the premises. The photographs shown in the inset contrast physiotherapy under improvised conditions at an older school, the Venetian, in 1951, with the specially equipped physiotherapy room at the new Franklin Delano Roosevelt school in 1957.

TABLE (viii)—*Physiotherapy arrangements at day schools for physically handicapped*

<i>Division</i>	<i>School</i>	<i>Hospital authority</i>
1	Queensmill	St. Mary's (Princess Louise)
2	Franklin Delano Roosevelt ..	Middlesex
	Mary Ward	Hospital for Sick Children
3	Cloudesley	Royal Free
4	Geffrye	London
5	Bromley Hall	
6	Griffin Manor	
7	Plassy	Woolwich Group Hospital Management Committee
	Lee Manor	
8	Venetian	
	Caldwell	King's College
9	Cotswold	King's College (Belgrave)
	Greenmead	Charing Cross

Speech therapy

Some of the children attending schools for the physically handicapped have speech defects. In earlier years such children went out from school to speech therapy centres, with the consequent waste of school time, but since 1952 the practice of carrying out speech therapy in the special school has been developed. The great benefit of better continuity in the handling of the speech problem has derived from the close contact between the speech therapist and teaching staff. By the end of 1957, 31 speech therapy sessions a week were held in 14 schools for the physically handicapped.

Transport of handicapped pupils

From the very beginnings of the special schools it was necessary to arrange transport to and from school for crippled children, and the photograph opposite page 136, shows one of the very early 'cripple carts'.

Today the school bus service uses 56 vehicles, all of the 22 seater pattern, on this work, and the average daily number carried by each bus is 19 children. Each bus covers on an average 15 miles in the course of a school round, and the weekly mileage is well over 8,000 miles. Usually the first child is collected between 8.10 and 8.20 a.m., and the time of arrival at the school is some time between 9.15 and 9.30 a.m. Thus the first child on the round may spend just over an hour on the journey to school, but the trip is varied and interesting as friends are collected at different points *en route*. The last child to board may have as little as five minutes on the bus. The route is arranged so that the child with the longest journey in the morning has the shortest journey at night.

Some children require special attention and have to be lifted bodily into their seats, or to travel in wheel chairs. At the present there are 20 such cases distributed over eight schools; 14 of these children travel in wheel chairs which have to be pushed up a ramp into the vehicle, as is shown in the photograph opposite page 136. The other six children are lifted out of their wheel chairs, carried into their seats in the bus, and the wheel chairs are folded up and accompany the children to school.

It is hoped that a start can be made in 1958 towards discontinuing the use of ramps, by introducing vehicles which are to be modified by fitting a 'Burtonwood Lift'. This apparatus resembles a mechanically operated tailboard which lowers to the ground and on which the wheel chair, containing the patient, can be raised from ground level to the floor level of the bus.

The Council has accepted the principle that a physically handicapped but academically brilliant pupil should not be ascertained and sent to a special school merely because transport is available to such a school, and thus be denied the advantages of education in, say, a grammar school, because transport to the latter is not practicable under the normal school bus arrangements.

During 1957, under special routing arrangements, 26 pupils were carried by the school bus service to their ordinary schools; one of these pupils has been conveyed to ordinary school since June, 1951. Sometimes it is not practicable to fit a child's journey into any of the school bus routes, and in such cases taxis or cars are hired. Five pupils are currently being conveyed to and from school by hired car. Two cerebral palsied children are taken to and from a boarding special school as day pupils, nearly 95 per cent. of the cost of their transport being offset by the saving of boarder's fees, and, in any case, it is obviously in the children's own best interests to be able to live at home.

New day school for the physically-handicapped

The Franklin Delano Roosevelt School, opened in January, 1957, was designed to accommodate 160 physically-handicapped children of both sexes and all ages from 5 to 15 years.

To enable the children to move about with ease, the whole building has one floor level only throughout, including the external paved areas which are directly accessible

from all classrooms. From the moment they are delivered by school bus at the entrance, the children have no steps or ramps to negotiate. As the photograph in the inset shows, circulation spaces have been made as wide as possible and doors are wider than normal to allow easy passage for wheel-chairs. A proportion of the lavatory basins are set at a lower level than usual for use by children in wheelchairs.

Out of doors the original ground levels have been generally retained, giving undulating grassed areas round the two tar-paved play pitches for primary and secondary children. A sand pit is provided for the younger children.

Boarding schools for the physically handicapped

In 1930 defective children in Poor Law institutions became the responsibility of the Council under the Local Government Act, 1929. Many of these children went to day special schools from their residential establishments. At the outbreak of the war, day special school children were evacuated in special parties to country houses, and thus was developed the pattern of the modern boarding special school.

Boarding special schools for the physically handicapped are intended primarily for those children whose handicap is so severe that they should live and be taught on the same premises. In addition these schools are used to accommodate less severely handicapped children whose homes are unsuitable.

Staplefield Place, near Haywards Heath, has been adapted for 49 physically handicapped girls, Hatchford Park, near Cobham, has been adapted for 74 physically handicapped boys and Penbury Grove, Bucks, has been adapted for 38 boys and girls with dual defects. The photograph in the inset, taken at Penbury Grove, shows the lift which is essential for the more severely handicapped children.

School activities and amenities

All handicapped pupils, as far as possible, receive a basic education similar to that given in ordinary schools. Since the children are encouraged to disregard their handicap as far as they can, they go on school journeys and educational visits, and join in concerts and the other cultural activities common to the whole education service.

It will be appreciated that the school bus transport system, described above, is essential for the purposes of these out of school activities. The following paragraphs briefly summarise the 1957 'activities' of the London schools for the physically handicapped :

School journeys—three parties, from three schools, totalling 100 pupils, stayed at hotels at Broadstairs, St. Mary's Bay and Sandown, I.O.W.

Swimming—thirteen parties, from ten schools, totalling 250 pupils, went to swimming baths each week during the summer term. Two photographs shown in the inset are of a swimming party from the Caldwell school.

Educational visits—50 parties, totalling 1,570 pupils, went on special visits to places of historical interest, art galleries and museums, factories, exhibitions, concerts and recitals, dramatic performances, airports, the zoological gardens, etc.

Special equipment

Arrangements for the supply of educational furniture and equipment of all kinds are made by the Education Officer's school equipment division.

An advisory committee on school equipment has been set up which has delegated to a panel consideration of the needs of handicapped children. The majority of children are able to use normal class room tables and chairs but special needs are met by the designing of particular items of furniture and equipment and this is done after discussion between the Council's medical consultant, a technical officer of the Supplies Department and a representative of the Education Officer.

Among the special items approved in recent years on the recommendation of the panel, the following may be mentioned :

The Amesbury adjustable chair, which holds the child firmly so that the working surface which is an attachment to the chair can be used conveniently. In addition, it can be tilted so that the child can relax comfortably.

Tricycle for spastic children.—The pedal mechanism and seat of an ordinary tricycle have been adapted to meet the needs of certain spastic children.

Pneumatic suction table clamp.—This is a special suction device which enables crockery to be held firmly in position on the table. It is obviously of value mainly to spastic children whose powers of co-ordination and control are limited.

To meet some of the more common needs, a loan collection of wheel-chairs, folding adjustable chairs and walking aids of various types is maintained and these are lent to schools as and when required.

Provision has recently been made for mechanical hoists with harness to facilitate movement of some older children who are very heavy and, by reason of their disability, incapable of giving much assistance to those helping them. A good proportion of physically handicapped children are able to take advantage of normal items of large play apparatus such as swings, see-saws, slides, etc., and these are provided at boarding special schools where they offer an out-of-school amenity and a valuable source of physical activity. The 'Essex' agility apparatus designed for normal school children has been of the greatest use in developing the abilities of the physically handicapped. In addition, special physiotherapy equipment, such as the Guthrie Smith apparatus and the Balkan beam, are supplied where recommended by the school medical officer.

The needs of children who receive home tuition often necessitate the provision of purpose-made devices for use in conjunction with domestic furniture.

School leavers

Physically handicapped school leavers, like all boys and girls who are about to leave school, are helped with advice and assistance about employment by the Youth Employment Service which is part of the Education Officer's Department and comprises 19 local Youth Employment Bureaux. In its headquarters unit there is a Handicapped Young Persons Section with four specialist officers who co-ordinate the advice and placing in employment of all handicapped young workers throughout the County of London.

In schools for physically handicapped pupils, potential leavers are individually interviewed by youth employment officers during the last but one term. Confidential school reports, medical reports and reports by the Care Committee are supplied to the Service, and in the light of them and of the expressed wishes of the child and his parents advice about suitable work is given by the youth employment officer. Pupils receiving home tuition are interviewed at home.

Where considered advisable, youth employment officers, working closely with the disablement section of the Ministry of Labour, arrange for registration under the Disabled Persons (Employment) Act, for vocational training, sheltered employment, or for courses at Industrial Rehabilitation Units. An increasing number of physically handicapped young people are being received in these Units for vocational assessment or for the building-up of working fitness. Courses of further education and training may be arranged also through the Education Committee.

Most physically handicapped boys and girls obtain employment through the Service and successfully settle in a wide range of jobs suited to their health and ability. Employers are generally very helpful. Time and perseverance is required to place satisfactorily any who are chairbound, unable to travel, or who suffer with two or more disabilities. Chronically sick young people, unfit for work, are referred to the Council's Welfare Department which arranges, where necessary, for their entry into voluntary homes.

Youth Employment Committees endeavour to keep in touch with all young workers up to the age of 18 years, and as necessary to give any further advice and help which may be required. This is done by sub-committees who periodically review the progress of physically handicapped and other disabled young workers in their areas.

Conclusion

The preceding pages give a picture of the changes that have taken place, and are still taking place, in the special educational treatment of the physically handicapped child. Comprehensive surveys of this kind need to be undertaken periodically in an attempt to answer the simple questions : ' what are we doing ? ' ' why are we doing it ? ' and ' what is still to be done ? '. The questions are simple indeed but finding the answers is a much more formidable undertaking.

Where the handicapped child is concerned, there is no doubt about what we are trying to do. It is, quite simply, to prepare the child to take a place in the normal everyday world at as early an age as possible and we are doing it because this is clearly in the best interests of the child and of the community. How this is done, in any particular case, depends upon an intricate combination of factors of which the nature of the disability is not always the most important. The choice of the most suitable form of education for a child with any handicap is an individual matter dependent on that child's social, educational and medical needs.

The fall in the numbers of children in special schools is not simply a decline in the incidence of certain disease-groups. In some cases it has reflected a change in the climate of opinion and a better appreciation of the resistance of a damaged body. Ordinary schools nowadays feel able to take certain handicapped children and the special school in its turn absorbs children with more severe handicaps than formerly. This trend will undoubtedly be followed for some time to come. As for the future, it is reasonable to anticipate a substantial reduction in the numbers of children crippled by poliomyelitis, but the prevention of cerebral palsy still seems far away.

Quantitatively the schools for the physically handicapped may have a less important rôle to play, but qualitatively their task is becoming more difficult because of the reduction in the number of children requiring specialised treatment. In the circumstances it is fortunate that London has so large a concentration of population as to make it possible for the Council to provide so comprehensive a service.

DENTAL SERVICES

The Chief Dental Officer and Principal School Dental Officer reports as follows :

The slight progress in the dental service made and reported on for 1956 was unfortunately not maintained throughout 1957. Staff/patient ratio deteriorated and for still another year it was impossible either to give in every instance the desired standard of dental treatment, or to introduce organised revisional treatment for patients rendered dentally fit.

In Division 4 staff/patient ratio was 1:4,000 while health division No. 6 was worst with 1:12,200. The average ratio for the county was 1:6,800. For still another year pressure was alleviated by many patients who preferred to make private arrangements for treatment. It is doubtful if treatment required was in fact obtained in all such cases.

In an attempt to obtain more sessions for treatment the experiment was tried of curtailing sessions devoted by dental officers to dental inspections in schools and relying on references of cases for treatment from other sources. This experiment confirmed that dental inspections by dental officers were necessary to ensure that children who needed dental care were discovered and to keep the supply of patients at a level high enough to ensure full occupation of the dental officers in the surgeries. The effect on number of sessions of this experiment is shown in the graphs on page 146. In October, 1957, normal inspection sessions by dental officers were re-introduced.

The statistical tables showing preceding years are brought up to date and again published for comparison. Table (i) shows the faltering staff position. The decline in number of full-time officers is ominous and is not replaced by the equivalent in part-time staff. Without healthy recruitment it is doubtful if a sound dental service can be established.

TABLE (i)

Year	Estab- lishment approved tempor- arily (full- time posi- tions)	Dental Officers			Equivalent in Full-time staff		Sessions a week				Total	
		Total Number em- ployed	Full- time	Part- time	School service	MCW service	School Service		MCW Service			
							Full- time	Part- time	Full- time	Part- time	School service	MCW service
(Dec.) 1954	93	114	54	60	68	6 $\frac{2}{11}$	569	179	41	27	748	68
(Dec.) 1955	93	116	49	67	67 $\frac{1}{11}$	5 $\frac{2}{11}$	527 $\frac{1}{2}$	220	33 $\frac{1}{2}$	24	747 $\frac{1}{2}$	57 $\frac{1}{2}$
(Dec.) 1956	95	122	52	70	73 $\frac{4}{11}$	6 $\frac{4}{11}$	561 $\frac{1}{2}$	246	42 $\frac{1}{2}$	27 $\frac{1}{2}$	807 $\frac{1}{2}$	70
(Dec.) 1957	95	118	44	74	65 $\frac{8}{11}$	6 $\frac{9}{11}$	460	263	46	29 $\frac{1}{2}$	723	75 $\frac{1}{2}$

The modernisation of surgeries programme was almost completed in 1957 and only a few surgeries—unsuitable on grounds of size, shape, tenancy, etc.—remain at a relatively low standard. It is encouraging that many dental surgeons comment on the satisfactory equipment supplied.

Difficulty in recruiting sufficient dental chairside assistants continued throughout the year and untrained girls were frequently employed after necessarily brief in-service training. I would again register my appreciation of the excellent and valuable assistance given by chairside assistants and of the patience and forbearance of most dental officers when sometimes forced by circumstances to forgo such assistance in busy sessions.

The comparative figures in Table (ii) reflect, in 1957, the impact of the inspection-experiment commented upon above when, for a period, the supply of new patients faltered very seriously.

School dental service

The percentage of children found to require treatment remained almost static at 76.3 per cent. and gives cause for concern as does (in Table (iii)) the repeated low ratio of permanent teeth conserved to permanent teeth extracted.

TABLE (ii)

	1955	1956	1957
Number of inspection sessions held at schools	2,008	2,111	1,354
Number of children inspected at schools by dental officers	202,242	213,957	120,440
Number found to require treatment ..	151,326	163,414	91,868
Percentage requiring treatment	74.8%	76.4%	76.3%
Additional number inspected at centres ..	50,887	44,078	56,598
Total number found to require treatment ..	202,213	207,492	148,466
Total cases treated	121,362	115,587	102,568
Attendances	317,684	332,785	308,862
Ordinary treatment sessions	29,698	31,257	31,841
General anaesthetic sessions	1,578	1,708	1,594
Temporary teeth extracted	83,539	83,341	69,247
Permanent teeth extracted	16,527	19,992	18,273
Temporary teeth restored by fillings ..	45,256	43,474	45,509
Permanent teeth restored by fillings ..	122,097	129,931	117,148
Fillings in temporary teeth	48,075	46,088	48,477
Fillings in permanent teeth	135,384	144,746	131,071
Other operations :—			
temporary teeth	62,496	58,808	58,021
permanent teeth	65,811	68,972	64,675
Local anaesthetics for extraction	17,341	16,195	14,404
Local anaesthetics for conservative treatment	7,130	9,494	10,718
General anaesthetics	36,099	38,740	34,019
Cases for whom immediate treatment was completed	13,744	11,614	10,415
Cases discharged as dentally fit	80,964	79,994	71,260

TABLE (iii)

Ratio of permanent teeth restored to permanent teeth extracted in school children

1948	4.58 to 1
1949	3.72 to 1
1950	3.29 to 1
1951	3.43 to 1
1952	3.86 to 1
1953	4.69 to 1
1954	5.32 to 1
1955	7.39 to 1
1956	6.50 to 1
1957	6.41 to 1

Orthodontics

Orthodontic treatment figures (Table (iv)) for 1957 show that fewer cases were taken on at special orthodontic sessions ; this is explicable as due to curtailment of reference of new cases to allow accumulation of patients on treatment to be cleared. Considerable headway was made, however, in furthering tentative arrangements with certain hospital authorities to increase assistance with orthodontic demand and it was anticipated that definite improvement would result in 1958.

TABLE (iv)

	1955	1956	1957
Number of special orthodontic sessions	185	290	321
Number accepted at special orthodontic sessions ..	195	252	108
Number accepted at routine sessions	432	427	403
Number referred to hospitals	59	182	158
Total number of patients accepted	686	861	669

Maternity and child welfare dental service

For still another year, no effort was made to determine the need for dental treatment in mothers and pre-school children coming under the survey of Council officers and such effort as was made in this sphere was directed to meeting demand for treatment. The demand was confined to the treatment potential of about 10 per cent. of the total dental staff as any addition meant a corresponding decrease in school dental work.

Table (v) gives some figures for comparison with former years.

TABLE (v)

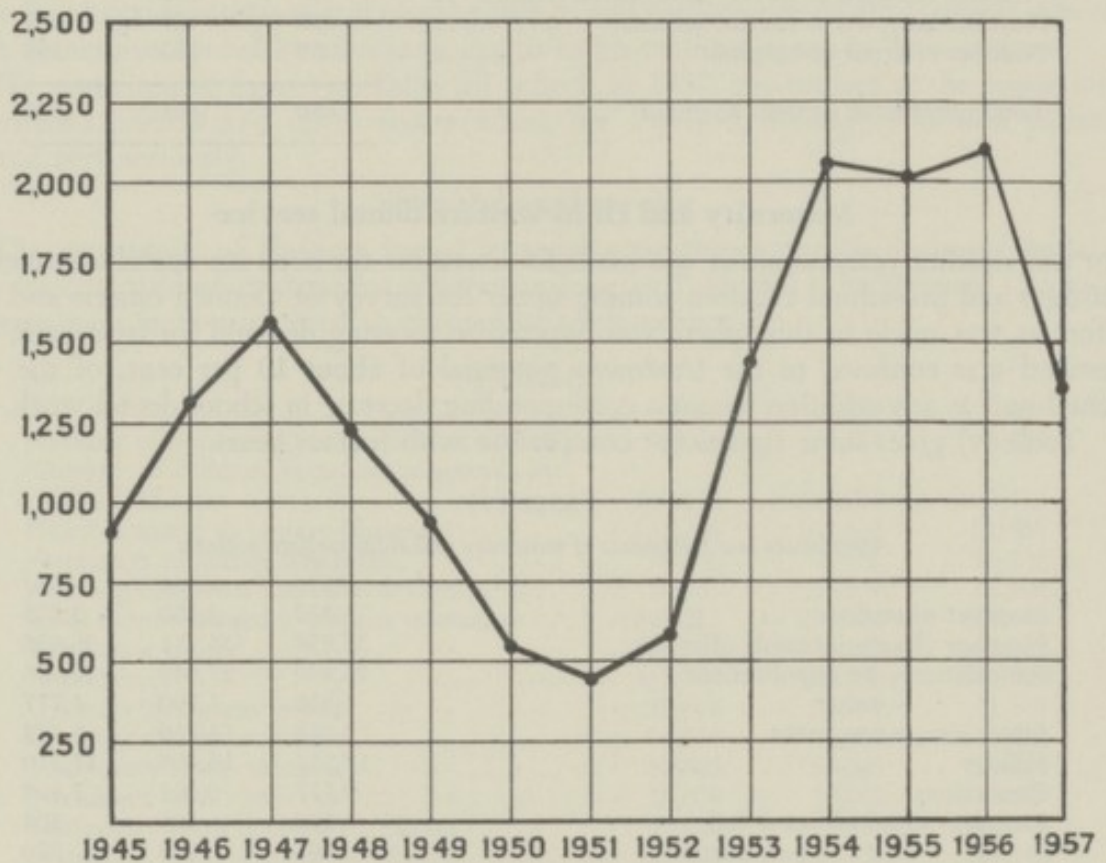
Attendances and treatments of maternity and child welfare patients

	1955	1956	1957
Number of sessions	3,220	3,169	3,293
Number of appointments offered	35,854	36,711	36,636
Attendances—by appointment	26,430	27,640	26,006
—other	1,526	1,799	1,717
Silver nitrate treatment	5,058	4,716	5,423
Fillings	13,212	13,465	11,310
Extractions	9,177	9,561	7,809
Dentures supplied—new full	572	538	508
—new partial	686	778	820
Number made dentally fit	7,117	7,492	6,010

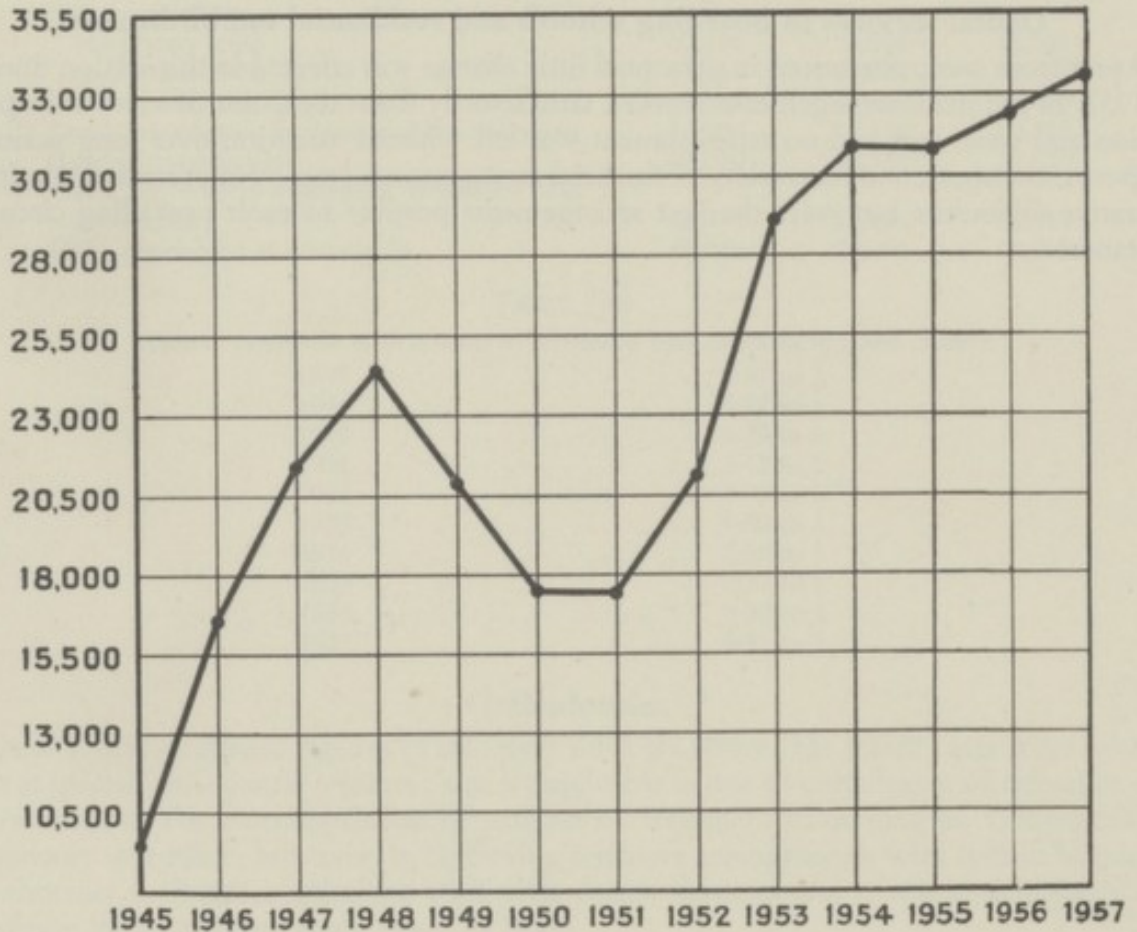
Dental services in boarding schools and residential establishments

Apart from some alterations in personnel little change was effected in this section during 1957. In the main arrangements worked satisfactorily from the point of view of inspection and treatment and no establishment was left without attention over long periods. Escort, transport, and the variety of financial arrangements employed presented administrative difficulties but were the best arrangements possible to meet prevailing circumstances.

SCHOOL DENTAL SERVICE
NUMBER OF INSPECTION SESSIONS AT SCHOOLS



NUMBER OF TREATMENT SESSIONS



STAFF

THE STAFF employed in the public health department is set out in Appendix D on page 202.

Training of staff by attendance at conferences and courses held by organisations outside the Council's service and in-service training provided by the Council, on occasions with the assistance of other bodies, has continued along the lines described in the report of 1956.

The London University Institute of Education in the main and, to a lesser extent, the Battersea College of Technology and the Royal College of Nursing continue to provide theoretical training for the student health visitors (normally 50) appointed each year by the Council. These students receive their practical instruction in the department's divisional establishments. Of the 48 students completing the course in 1957, 47 passed and one resigned from the service before doing so. Of those who passed, one was released from her undertaking to take up employment with the Council for a minimum of six months after qualification.

Numbers of staff medically examined for various purposes, with the result of the examination, follow :

	1956	1957		1956	1957	Medical examinations
Candidates fit for appointment	6,408	6,286	Eligibility for Spouse Pensions	21	26	
Candidates unfit for permanent appointment ..	297	285	Staff casualties seen by a medical officer	231	240	
Referrals (ill-health) ..	7,207	7,268	Candidates for out-county authorities	76	65	
Permanently unfit to carry out their ordinary duties ..	302	245	Candidates examined for the Council by out-county medical officers of health	69	77	
Advice given (without examination)	1,434	1,378				

Bacteriological examination of specimens from staff employed as food-handlers were arranged as follows :

	1956	1957	Food Hygiene Regulations
Ill	307	270	
Contact	139	107	
Allowed to resume work after examination	430	360	
Excluded from work and referred to own doctor for treatment	16	17	

In November, 1957, Dr. M. C. Polhill, M.R.C.S., L.R.C.P., D.P.H., who had been Deputy Divisional Medical Officer of Division 3 since 1948, retired after 37 years in the Council's service. Dr. Polhill had spent the greater part of his official career in the school health service and his predominant interest had been the health and welfare of the school-child. His competence and never failing courtesy in dealing with children and their parents have been most marked and he has made a valuable contribution towards the efficient running of the health services for which the Council is responsible.

In December, Dr. N. C. Walsh was appointed to be Deputy Divisional Medical Officer in Dr. Polhill's place.

In March, 1957, Dr. H. D. Chalke, O.B.E., T.D., M.A., M.R.C.P., M.R.C.S., D.P.H., who had been Divisional Medical Officer for Division 7 since 1948, combining with the appointment that of Medical Officer of Health for the Metropolitan Borough of Camberwell, resigned from the Council's service to undertake the borough appointment in a full-time capacity. He has had a long and distinguished career in the public health services in London and has shown special interest in tuberculosis and in health education. He has shown distinguished administrative capacity and has made a major contribution to the divisional health organisation. It is a satisfaction to reflect that his qualities are still at the service of public health in London. Dr. E. A. Mower-White

was appointed Divisional Medical Officer from the position of Deputy Divisional Medical Officer and Dr. A. L. Thrower, was appointed to the deputy position.

Mr. W. H. C. Bishop, Divisional Administrative Officer of Division 8, having completed 46 years' service, retired in April, 1957. He joined the service of the Alverstoke Board of Guardians from which he moved to the service of the Bermondsey Board of Guardians in 1912. He was transferred to the Council's service in 1930 when he served in the Welfare Department. He was transferred in 1948 to the Public Health Department to fill the position of Divisional Administrative Officer. His administrative experience and personal qualities played an invaluable part in the planning and construction of the new service. Mr. D. E. Armstrong, Divisional Administrative Officer of Division 6, was transferred to Division 8 to take his place and Mr. T. Stone was appointed Divisional Administrative Officer of Division 6.

Dr. A. Garland, Deputy Divisional Medical Officer of Health for Division 9, transferred from his position of Deputy Medical Officer of Health for the Metropolitan Borough of Battersea to a similar position in Wandsworth. Dr. D. M. O. Lowry was appointed Deputy Medical Officer of Health for Battersea in his place and Deputy Divisional Medical Officer for Division 9.

FINANCE

THE TOTAL capital expenditure on the health services of the Council in the year ended Capital 31st March, 1957, was £50,165, details of which are as follows :

Ambulance service :	£
Acquisition, erection and adaptation	3,505
Brook—reinstatement after war damage	460
Day nurseries—erection, acquisition, extension ..	3,761
Health centres—erection, acquisition, adaptation ..	23,618
Maternity and child welfare centres—acquisition, erection, equipment, adaptation	12,226
Mental Deficiency Acts :	
Occupation centres—adaptation and equipment ..	6,348
Dover Lodge—adaptation, equipment	247
	£50,165

The gross cost of the various services in 1956-57—including central administrative Maintenance and debt charges—and the contributions recovered from recipients of the services were :

Service	Cost £	Amount recovered in charges £
Ambulance service	1,074,503	—
Day nurseries	1,051,868	201,885
Domiciliary midwifery service	204,020	—
General health services (including £192,973 contribution to Metropolitan Borough Councils for salaries of sanitary officers)	229,878	—
Health centres	30,796	—
Health visiting	356,909	—
Maternity and child welfare	687,133	53,307
Mental health	251,325	—
Prevention of illness—		
Home nursing	458,220	—
Domestic help	971,714	49,906
Other preventive services	501,011	29,178
School health	921,528	6,120
	£6,738,905	£340,396

The net cost of the services after allowing for Government grant, expressed in terms of rate in the £ was 7·67d., divided as follows :

	d.
Ambulance service	1·21
Day nurseries	·93
Domestic help service	1·08
Domiciliary midwifery service	·22
General health services	·51
Health centres	·01
Health visiting	·42
Home nursing	·54
Maternity and child welfare	·74
Mental health	·29
Prevention of illness (care and after-care ; chest clinics, foot clinics, etc.)	·47
Vaccination and immunisation	·08
School health	1·17
	7·67

VISITORS TO THE DEPARTMENT

THE NUMBER OF visitors received in the department during the year was less than in the previous year although the number of foreign countries and British Commonwealth countries from which they came remained unaltered at 57. 210 visitors were received through the central office, the majority of them medical officers wishing to study the Council's health services, and a number of visitors were received at the nine divisional health offices. Programmes were arranged lasting from a single day to four weeks.

During the year 214 British and 146 foreign visitors, and 1,121 British and 41 foreign students totalling 1,522 visitors were received at Woodberry Down Health Centre.

In addition 650 foreign and British visitors were received at occupation centres for the mentally defective and 125 at the headquarters of the London ambulance service. The laboratories of the scientific branch had many visitors from this country and abroad, among them parties of senior boys from grammar schools.

Facilities were afforded medical, nursing and social science students for close study of the services by the arrangement of talks, single visits or short periods of attachment, as seemed most suitable. Provision was made for 64 post-graduate students studying for the Diploma in Child Health who require to make a total of 20 visits to maternity and child welfare and school health service premises. By arrangement with the Royal Institute of Public Health and Hygiene, 29 students studying for the Diploma in Public Health were conducted on a number of visits to school health service clinics and special schools. Special talks on the health services were given for students from teacher training colleges. Students were received from the following training centres :

Health Visitor Students

Battersea College of Technology
Royal College of Nursing
South East Essex Technical College
Surrey County Council

Other Students (medical, nursing and social studies)

Battersea Training College of Domestic Science
Bedford College
Institute of Chest Diseases
King Edward Hospital Fund for London
London School of Economics and Political Science
London School of Hygiene and Tropical Medicine
Ministry of Labour and National Service
Royal College of Nursing
University House
University of London

During the year 4,410 hospital student nurses were received in the department for talks and practical experience.

REPORTS BY THE DIVISIONAL MEDICAL OFFICERS

DIVISION 1—Comprising the boroughs of Chelsea, Fulham, Hammersmith and Kensington

Dr. B. E. A. Sharpe reports :

The increase in the birth rate reported in 1956 was not maintained. Total births numbered 7,231, almost 5 per cent. less than the previous year, and domiciliary confinements were 10 per cent. lower. Deaths of infants under five years of age numbered 196, an increase of 19 on the previous year.

Vital statistics

Despite the fall in the birth rate, attendances at ante-natal sessions increased by 1,203 to 15,973, and attendances at child welfare sessions increased by 2,933 to 89,330. Health visitors made 94,837 visits, an increase of 3,842.

Welfare of mothers and children

The mothercraft and home-making courses for selected mothers arranged by the Florence Gladstone and the Hammersmith Home Advice Groups were continued, the Council paying the fees of the instructors and also agreeing to make a small contribution towards incidental expenses, such as demonstration material, stationery and postage.

Home advice groups

An active part was taken by health visitors, midwives, district nurses, general practitioners, hospitals, old people's welfare associations and metropolitan boroughs, in the Council's Home Safety Campaign in November.

Health education

Early in the year a review of day nursery accommodation, admissions, attendance and waiting lists was undertaken. It was decided to reduce accommodation, mainly in the 2-5 age group, at Cheyne Hospital, Dalling Road, Eridge House and Grove House day nurseries, and to adjust accommodation at several other nurseries to provide more places for babies. Greater flexibility between the age groups was also introduced. The average daily attendance improved to a considerable extent during the latter part of the year except for certain periods at some day nurseries where there were outbreaks of Sonne dysentery.

Day Nurseries

The number of approved places at the end of the year was 673 compared with 728 in the previous year.

The number of statutorily registered child-minders was unchanged, but the number of children minded dropped to 132, a decrease of 36. The number of voluntarily registered child-minders fell by 6 to 173, and the number of children minded by 5 to 208. One additional private day nursery was registered and the number of children provided for in private day nurseries rose by 45 to 455.

Child-minders and private day nurseries

There was an increase in the number of children protected against smallpox and diphtheria.

Vaccination and immunisation

Inoculation against poliomyelitis for children born in the years 1947 to 1956, inclusive, continued and 231 sessions were held for this purpose. In all, 10,438 children were inoculated, of whom 1,461 were inoculated by their private doctors.

4,609 households were attended during the year and in spite of staff sickness and difficulties in recruitment, all essential needs were met, although in some cases, the hours of service were less than would normally have been given.

Home help service

Home helps specially trained to instruct the mother in all aspects of home management and child care were supplied to eight families. Early morning and evening home help was provided on 22 occasions and a night help in five cases.

During the last quarter of the year, as a result of the recommendation of a working party on the home help service, a revised records procedure designed to provide accurate detailed statistics and to reduce the amount of clerical work performed by organisers so as to free them for more home visiting, was introduced into the division as an experiment.

242,214 visits were made by district nurses, 3,731 more than in 1956.

Home nursing
Chiropody

The four foot clinics continued to provide a valuable and popular service, particularly among the aged. Total attendances numbered 19,353.

Fulham chest clinic	In association with the local evening institute, pottery classes for tuberculous patients were commenced at Fulham chest clinic in October, and have proved successful.
Hurlingham Lodge	The hostel for tuberculous men was fully occupied during the year. More residents who are not fit for normal employment have joined the divisional therapy class.
Influenza	Vaccination against the Asian type of influenza was offered to doctors, district nurses, health visitors, midwives, home helps, local ambulance personnel, etc., deemed to be specially exposed to infection and on whom an influenza epidemic places an exceptionally heavy burden. 308 persons received a complete course of injections.
School health	During the year the Regional Hospital Board agreed to an increase in the number of vision sessions at Chelsea and St. Dunstan's school treatment centres. The number of minor ailment sessions attended by a doctor in the Hammersmith and Kensington areas was reduced because of a fall in demand. The number of special investigation clinics was increased, and at the end of the year such clinics were being held at Chelsea, Fulham, North Kensington, Notting Dale and St. Dunstan's Road school treatment centres.
Neglect and ill-treatment of children	The scope of the divisional co-ordinating committee was widened to embrace, <i>inter alia</i>, case work relating to the more difficult families. Regular monthly meetings have been held to which the various social and other workers interested in the particular families under discussion have been invited. A small number of lettings of the older type was allocated for offer by the divisional co-ordinating committee to problem families living in intolerable housing conditions. This offer of accommodation was particularly welcome, as in so many cases, rehousing is the key to further opportunity to rehabilitate a problem family.
Liaison with other bodies	A quarterly meeting of hospital almoners, superintendents of district nursing associations, divisional directors of the Red Cross, health visitors, home help organisers and divisional staff, has been inaugurated with the object of improving liaison and to afford an opportunity for dissemination of information on the Council's services and discussion on any difficulties which may arise in connection with our day-to-day work. An informal meeting was held in July at the Raymede welfare centre to which general practitioners practising in Kensington and clinic medical officers and health visitors from Raymede and Lancaster Road welfare centres were invited. Professor McClure Browne continued to hold monthly perinatal mortality conferences at Hammersmith hospital. He also invited to the hospital the medical officers doing ante-natal work at the maternity and child welfare centres in the division with the object of improving and strengthening the link between the hospital and the divisional staff. Two meetings were held at Hammersmith hospital between representatives of the local medical committee, obstetric and gynaecological staff of Hammersmith hospital and of the local health authority, to consider the memorandum on ante-natal care related to toxæmia prepared by the Standing Maternity and Midwifery Advisory Committee.

DIVISION 2, comprising the boroughs of Hampstead, Paddington, St. Mary-lebone, St. Pancras and City of Westminster

Dr. H. L. Oldershaw reports :

Welfare centres and home visiting

In 1957, three maternity and child welfare centres (one full-time, two part-time), were closed, and two full-time ones opened, leaving a total of 25 Council centres and one voluntary aided centre in use at the end of the year. The two new additions were able to take over most of the work previously done at the three centres which were closed. The combined results of all the centres' work during the year may be summarised as follows :

1. A total of 5,570 expectant mothers attended ante-natal clinics and the final adjusted number of births, institutional and domiciliary, recorded in the Division was 8,265. Comparable figures for 1956 were 5,409 and 8,433 respectively.

2. 18,189 children under five were brought to clinics, of whom 7,281 were under one year at the time of their first attendance : these numbers represent a slight decrease as compared with the previous year when, of 18,415 children attending, 7,548 were under one year old.

3. Altogether 80,829 visits were made to a total of 24,574 children under five. 7,383 visits were made to expectant mothers during the year, as against 7,602 in 1956. The number of families visited amounted to 24,156 (27,510 in 1956), and a total of 12,929 visits were made to other cases (11,114 in 1956). 1,739 visits were made to tuberculous households during 1957, an increase of 39 over the number of visits made in the previous year.

4. The number of families needing home help fell by 43, service was provided in 4,416 cases : the decrease was felt in the maternity, tuberculosis and other cases ; on the other hand the number of chronic sick, aged and infirm families needing help, went up from 3,392 to 3,550 (i.e., from 76 per cent. to 80 per cent. of the total). Two patients were given help at night for three nights in all. Home help

5. One nursery (50 places) was closed as against four nurseries (186 places) which were closed in the previous year : the children so displaced were almost all absorbed into one or other of the remaining 18 Council, and one voluntary-aided, day nurseries. Day nurseries The number of children on the books at the end of the year showed a reduction as compared with 1956 : 433 were registered in the under 2 age-group (483 in 1956), and 693 in the 2-5 group (805 in 1956). It is interesting to note that only approximately 73 per cent. of the applicants for day nursery places accept after assessment.

6. The number of private day nurseries registered under the Nurseries and Child-Minders Regulation Act, 1948, totalled 21 (representing 507 places) at the end of 1957, an increase of two (18 places) over the previous year's figure. An accession of six (representing 18 places) to the number of child-minders statutorily registered under the same Act, brought their total registered at the end of the year to 19 (120 places).

7. A further increase is recorded in the number of children immunised against diphtheria. As against 5,355 primary courses completed in 1956, the corresponding figure for 1957 is 5,598, of which 56 per cent. were given to children born in 1956 and 18 per cent. to those born in 1957 ; of this year's figure 71 per cent. were given in the form of the combined diphtheria and whooping cough immunisation. This increase was not, however, maintained in the number of reinforcing injections given—5,707 compared with 7,400 in 1956 : the bulk of this year's total was made up from children of the 4-11 age-group, and 93 per cent. of the overall number received a reinforcing dose against diphtheria only. Immunisation

8. This increase in immunisation was reflected in the number of children under fifteen vaccinated for smallpox—5,388 (4,645 in 1956) of which 81 per cent. were under one year at the time of vaccination. 249 children under fifteen were re-vaccinated, which again is more than the number recorded for 1956 (117), and of those 76 per cent. were between the ages of 5 and 14 inclusive.

9. From the poliomyelitis inoculation scheme which started the previous year, the registrations of 12,519 children were carried forward into 1957 and these with some of the additional 7,062 registered in the latter year, provided most of the 10,950 children aged 1-10 who were inoculated in 1957 (1,799 in 1956). At the beginning of the year general practitioners were asked to take part in the scheme, and their contribution for the year past amounted to 1,416 children for whom completed records were received.

10. Tests for B.C.G. vaccination were made on 2,964 13-year old children out of a total of 3,057 (75 per cent. of those eligible) whose parents had agreed to their being tested : of this number, 2,513 showed a negative reaction and were given vaccination (2,440 in 1956) ; 450 responded positively and 364 of these were X-rayed (504 X-rayed in 1956) of whom only three were found to be tuberculous (an increase of one over the previous year). Of the children given vaccination in 1956, a group of 733 was selected for re-testing, to which the parents of 626 agreed, and 613 were actually tested again : none was seen to need further vaccination.

Home
nursing
equipment

11. As in past years, the demand for home nursing equipment continued to grow in 1957. Of 161 requests received, 101 patients were supplied with a total of 122 items of equipment, including commodes (most in demand), hospital beds, dunlopillo mattresses, wheelchairs, hoists, etc.

School
medical
treatment

12. There were no seriously long waiting lists at any of the treatment centres. In the past there has sometimes been a certain amount of anxiety over the delay for appointments at vision clinics, but additional sessions can now be held to supplement the regular sessions.

Dental
treatment

13. Dental inspections are held regularly throughout the division and children are inspected once a year. Evening dental sessions continue to be held where necessary for the older children and also for expectant and nursing mothers.

Special
investigation
clinics

14. The special investigation clinics held in every part of the division are proving of considerable value. The children who attend are able to have individual attention for their minor behaviour problems, as well as treatment for enuresis and inadequate physical progress, and the results are most encouraging. A new clinic was opened at Daleham Gardens welfare centre in November.

Audiology

15. Increasing attention is being given to the young deaf child as the importance of early diagnosis and treatment is fully recognised. Many enquiries are dealt with at the audiology unit, Grays Inn Road.

Problem
families

16. The divisional treatment organiser now acts as secretary to the divisional co-ordinating committee in connection with the prevention of neglect and ill-treatment of children. This Committee met 14 times during 1957 and 21 cases were discussed.

These families continue to receive close supervision. Frequent discussions with field workers and at divisional co-ordinating committees have reduced the number of overlapping visits. Reviews by the committee and interim assessments by the divisional nursing staff show that constructive work is being done. This has been helped by the training of additional special home helps and the allocation of housing accommodation.

DIVISION 3, comprising the boroughs of Finsbury, Holborn and Islington.

Dr. W. G. Harding reports :

Medical
officers

My first duty in this, my first annual report is to pay tribute to Dr. M. C. Polhill who retired from the Council's service on 29 November, 1957. Dr. N. C. Walsh was appointed on 6 December, 1957 to be deputy divisional medical officer in his place.

Smallpox

On 28 June, 1957, smallpox was diagnosed in an unvaccinated child aged six in a hospital in Tottenham.

The Medical Officers of Health of Finsbury, Holborn and Islington were notified by their colleague in Tottenham of a number of contacts, and, in consultation with them it was decided to carry out vaccination of these contacts and their families as far as possible in the homes of those concerned as call-up to local centres might well have produced a large number of panic demands for vaccination from others. Dr. E. Simpson, a medical officer at the Province of Natal Centre was relieved of some of her clinic duties in order to act as visiting vaccination officer. In an area such as this in which many wage earners are occupied in the catering trade, many weekend and late evening visits

proved necessary. Had many more cases developed it would no longer have been possible to proceed with this home vaccination policy and plans were made to deal with this contingency but no further cases of smallpox occurred and the demand for vaccination from non-contacts, although significantly higher than usual for a short period, was within the capacity of the routine vaccination sessions at welfare centres.

In view of the approach of 'Asiatic influenza' first from the Continent and then from the North of England, heads of all schools in the division were asked on 23 August, 1957, to report as soon as they noticed any unusual number of absences amongst children. Influenza

The schools reopened after the summer holidays on 2 September, 1957, and first reports of significant absences were received from two infants schools on 9 September, 1957. Enquiry by school nursing sisters showed that an influenzal condition was in fact developing throughout the division and the spread was rapid. During the week ended 14 October, 1957, 51 departments reported total absences of 7,099 children out of a roll of 40,037, with 124 teachers absent out of a complement of 1,466.

When the schools resumed in January, absences had reverted to levels normal at that time of the year. Influenza vaccine was issued by the Ministry of Health in October, November and December and made available to doctors and other health personnel concerned with the visiting of homes. Immunisation

Efforts have been continued to maintain the immunisation state of school children by conducting diphtheria immunisation sessions in the schools. The response has been gratifying but the poliomyelitis and B.C.G. programmes constituted further complicating factors. There was a possibility that children might inadvertently receive injections against several conditions without appropriate intervals and it was decided as a precaution to inform all parents in writing one week before children were to be immunised at school. Parents were asked to state whether their children had received any other injection, or had suffered from any illness within the four preceding weeks, and, if so, they were invited preferably to call and see the doctor undertaking the immunisation or alternatively to send information in writing. Diphtheria immunisation

The results of these letters received during one week were analysed and it was found that 8.1 per cent. of the children called up for diphtheria immunisation at school had to have their injections cancelled for the reasons stated.

At the end of the year, out of the 6,000 children for whom consent forms had been received, 392 had completed primary courses of injections, and 4,857 had received booster doses. The remaining consents were withdrawn or immunisation postponed. This completed the intensive immunisation programme for 62 schools, leaving 20 more schools to be approached for the circulation of consent forms in the beginning of the next year.

Early in 1956 case conference groups had been arranged to provide intensive training for a limited number of medical officers and health visitors, so that individual mental health education casework could be undertaken at maternity and child welfare clinics. The work of this group was interrupted largely owing to ill-health and to transfer of some members and by the beginning of 1957 the scheme had fallen into abeyance. Mental health education

Previous experience showed that important for the success of such a group was that it should be conducted at a place and time fully convenient and acceptable to all members and that the group should be based on the staff of one child welfare centre. Fortunately Dr. Kenneth Soddy agreed to lead a group and it commenced weekly lunch time meetings in November, 1957. The group consisted of the centre doctor, centre superintendent and health visitors. Colleagues of Dr. Soddy from the Child Guidance Training Centre often attend with him.

In order to allocate foot clinic sessions more evenly, two chiropodist sessions a week were transferred from the main foot-clinic at Finsbury health centre to the Province of Natal centre, Holborn. The service is now available at three centres in the Division: Finsbury health centre, Finsbury; East Islington welfare centre; and the Province of Natal centre, Holborn. In a very small number of extremely handicapped Foot clinics

cases, it was possible to arrange for domiciliary treatment out of funds provided by a local charity and administered by the North London District Nursing Association.

The war-time day nurseries at Banner Street, Finsbury, (50 places), and at Windsor Street, Islington (68 places), were closed in December.

In order to ensure that all children in the first priority groups could be accommodated, children in the third priority groups were discharged during the three months prior to the closures, and new admissions to day nurseries in the division were restricted for three months to cases of extreme urgency. In fact, during this period the numbers of new applications in the first and second priority groups did not keep pace with the withdrawals and at the end of the year, instead of the remaining five nurseries being filled to capacity there were some 80 vacancies; it was not necessary to discharge any children in the second priority groups and normal admission procedure was resumed.

At the end of the year there were 295 approved places in five day-nurseries compared with 406 approved places in seven nurseries at the beginning of the year. In addition the voluntary grant-aided day-nursery, The Kingsway Creche, continued to provide 50 approved places.

In July, 1957, it was decided to make co-ordinating procedure rather more elastic by instituting 'field' and 'intermediate' case conferences at somewhat lower levels than that of the divisional co-ordinating committee, leaving the latter to meet approximately monthly to review particularly difficult cases, receive progress reports and to co-ordinate policy and services within the division.

In October the Co-ordinating Committee was charged with the allocation of a small number of houses to problem families whose adverse housing conditions were considered to constitute a major factor. The risk inherent in the transfer of a 'socially vulnerable' family into a strange environment and possibly out of reach of a case worker who had established a link of confidence, enforced a very cautious approach and called for the closest possible contact between the old and the new case worker.

During the year we gladly provided, with the support of headmasters and day nursery matrons facilities for Dr. Mary Sheridan, of the Ministry of Health, to try out some of her screening tests for assessing hearing and vision defects in young children. Dr. Steel tested 100 children aged five with the vision chart recently devised by Dr. Piguire and Dr. Sheridan* and found that it produced most useful information.

DIVISION 4, comprising the boroughs of Hackney, Shoreditch and Stoke Newington.

Dr. S. King reports :

The services provided at the health centre have been maintained during the year and in certain cases increases have been possible :

General medical— 5 additional weekly sessions.

General dental —11 additional weekly sessions.

Child Guidance— 4 additional weekly sessions.

Speech therapy — 2 additional weekly sessions.

The increase in dental sessions arises from the appointment of a second dental officer in May, 1957, while the appointment in September, 1957, of an additional psychiatrist doubled the number of child guidance sessions held. The pathological service is now available to general practitioners within a two mile radius from the health centre instead of the one mile radius hitherto.

A regular weekly session for inoculation against poliomyelitis was established during the year.

The total number of sessions held each week had increased to 241 by the end of the year with an average weekly attendance of 2,138 persons. Of these 52 were general medical sessions (average attendance 532) and 22 were general dental sessions (average attendance 152).

* 'Medical Officer' 98, 53-55, 1957.

The occasional creche was opened for nine sessions a week and was much used by mothers attending activities at the centre as well as those attending hospital, shopping, etc.

Medical staff committee meetings have continued to be held regularly and serve a useful purpose.

Health education work at the centre during the year culminated in December in a combined display by the Gas Board, Electricity Authority and the Stoke Newington Borough Council with special publicity on the use of smokeless fuel.

There were 6,442 ante-natal and 219 post-natal attendances and 3,793 first attendances of infants under one year of age (equal to 87 per cent. of children born during 1957) at the Council's clinics. Maternity and child welfare

During the year two of the Council's day nurseries (Fernhurst and Brunswick) were closed and variations in the numbers accommodated at other nurseries resulted in the total authorised accommodation at the end of 1957 being 439 compared with 553 in the previous year. Day nurseries and child-minders

Five private day nurseries provided accommodation for 175 children and six statutorily registered child-minders cared for 26 children. In addition there were at the end of the year 39 daily child-minders approved under the arrangements for voluntary registration.

Health education has been continued in accordance with the planned programme and a committee of officers in the various grades concerned with these activities met in alternate months to plan and co-ordinate the work and to suggest ways and means for further development. Educational work in the welfare centres is continuing steadily as the following figures show : Health education

	<i>Sessions</i>	<i>Attendances</i>
1953	288	5,421
1954	414	6,494
1955	564	5,775
1956	698	6,402
1957	624	6,629

Holidays were provided for 872 patients comprising 75 children under school age, 374 school children, 11 expectant and nursing mothers and 412 other adults. The latter figure includes seven cases in which the holidays were arranged to prevent physical or mental breakdown. Recuperative holidays

Help was given by this service up to the limit of available workers. Efforts to obtain more home helps continued throughout the year and the organisers are all continually faced with the problem of selecting the applicants in most urgent need of help and spreading the help as widely as possible. There is constant need for more workers suitable and willing to attend tuberculous households. During the year help was given to 4,105 cases. Home help service

The divisional co-ordinating committee concerned with the special needs of problem families has continued to meet at intervals as necessary and considered 14 new cases and reviewed 60 cases. Problem families and help for children

A third course was held at Woodberry Down Health Centre in October for the special training of selected home helps to assist in the rehabilitation of problem families. The trained home helps are continuing to make a valuable contribution to the work of holding together families in danger of breaking up.

In October one full-time and one part-time social case worker were appointed for intensive work with problem families. It is early as yet to assess the full contribution which these workers will be able to make, but this promises to be an important and worthwhile development in the service.

The physiotherapist from the London Hospital continued to attend daily to tend the physically handicapped children attending the Geffrye Primary School. Handicapped children

Chiropody

77 chiropody sessions are held in the division each week and a satisfactory level of attendance is maintained. A chiropody session for elderly persons run by the Stoke Newington Old People's Welfare Committee was held at Woodberry Down health centre on Saturday mornings.

Prophylaxis

During the year 3,583 children completed a primary course of immunisation against diphtheria and 4,625 received reinforcing injections, while 2,979 children were immunised against whooping cough. The number of persons vaccinated against smallpox was 5,252 as compared with 2,433 in 1956. This considerable increase in the number of vaccinations was due to the large number carried out in July when a case of smallpox was notified in an adjoining area. The scheme for immunisation against poliomyelitis developed rapidly during 1957 and inoculations were carried out throughout the year, 6,142 receiving the full course of two injections and 1,145 the first injection only during the year.

During 1956 all thirteen year old school children in the division were offered B.C.G. vaccination and positive reactors to the skin test (304) were given appointments for a chest X-ray.

Diversional therapy for the tuberculous

The scheme for providing diversional therapy for homebound tuberculous patients continued and early indications that this was a welcome and useful addition to the tuberculosis service have been confirmed.

DIVISION 5, comprising the boroughs of Bethnal Green, Poplar, Stepney and the City of London.

Dr. G. D. Mitchell reports :

Premises

Responsibility for the Dame Colet welfare centre, Duckett Street, Stepney, the only maternity and child welfare centre in the division which was administered by a voluntary committee, was taken over by the Council during the year. It is intended ultimately to transfer the sessions from Duckett Street to premises at 35, Stepney Green. The High Mistress, staff, pupils and former pupils of St. Paul's Girls School have maintained an active interest in the social work of this locality for half a century, and their association with this work will be continued from their new centre in Ben Jonson Road. Although relinquishing their maternity and child welfare activities, a Dame Colet Voluntary Committee will continue to administer the school treatment centre in Waley Street.

Sessions

During the year a relaxation class for expectant mothers was started at the Commercial Road centre, an extra infant welfare session was added at the Rochelle centre, and a toddlers' session was started at the Duckett Street centre. These were the only variations to arise from the periodic reviews of clinic activities.

Bathing centres

The appreciable fall in the number of children attending for treatment made it possible to close the bathing centre in Golden Lane in the City of London at the end of the summer term and to reduce slightly the hours of the bathing attendants and cleaners at two of the remaining three bathing centres in the division.

Immunisation

Although the number of vaccinations against smallpox showed a moderate increase in 1957, it is regrettable that vaccination figures continue to remain low in the division. In spite of the continued efforts of the health visitors, clinic doctors and general practitioners, nothing short of a threatened outbreak of smallpox seems to be really effective, and even this results only in a temporary increase in the number of vaccinations during the period of public apprehension. Owing to the comparatively light incidence of poliomyelitis in the division during the year it was not found necessary to curtail the routine work of immunisation against diphtheria and whooping cough.

Inoculation against poliomyelitis continued so far as the short supply of vaccine allowed, and during the year 11,496 injections were given to registered children of the appropriate age groups.

Towards the end of the year, a small supply of vaccine against Asian 'flu became available, and volunteers from priority groups of staff (health visitors, clinic nurses, home helps, district nurses and ambulance staff) were accordingly vaccinated.

With the continued support of the head teachers, the vaccination of 13-year old school children with B.C.G. went on throughout the year, and 1,916 children were so vaccinated at school.

There was an increase in the number of health talks, particularly in the schools on "Parentcraft" and to Old People's Clubs on the "Prevention of Accidents", and the divisional working party on health education met monthly. In addition, help in the shape of lectures was given to two Old People's Welfare Committees for the purpose of training voluntary visitors. Health education

As in previous years, the number of visits per nurse remained generally higher than in other divisions. Early in the year, in pursuance of the Council's policy of the free letting of health service premises to district nursing associations for use as diabetic clinics, it was decided to make available for this purpose accommodation at the Rochelle welfare centre to the Shoreditch and Bethnal Green district nursing association. Home nursing

Although some expansion of this service occurred, the difficulty of recruitment in the Stepney area still continued, and the service in this part of the division still works under this handicap. An interesting experiment was tried during the year by the organiser in this area. A vacuum cleaner was obtained on trial from the manufacturers and taken by the home helps to selected homes in a wheeled shopping carrier. This lightened the work and enabled more families to be serviced. The purchase of this and a second vacuum cleaner for this division is under consideration. Home help service

DIVISION 6, comprising the boroughs of Deptford, Greenwich and Woolwich.

Dr. F. R. Waldron reports :

Sessions for prophylaxis only were conducted at eight centres ; in addition the service was available at some infant welfare clinics to ensure that all districts were covered ; an average of 15 sessions was held each week. ' Booster ' sessions were held at schools. Prophylaxis

During the year 3,788 children under 15 completed courses of immunisation against diphtheria and 2,423 received ' booster ' doses, compared with 3,992 and 3,549 in 1956. Smallpox vaccination was carried out successfully in 3,144 cases and there were 450 re-vaccinations. The corresponding figures for 1956 were 2,495 and 439. 3,413 children were inoculated against whooping cough and 339 received reinforcing injections.

The Council's central B.C.G. unit operating south of the Thames, successfully concluded their third visit to division 6 for the vaccination of 13-year old school-children. B.C.G. vaccination

There were 4,183 children in the age group (4,327 in 1956) and the parents of approximately 77.8 per cent. (77.4 per cent. in 1956) consented to their children taking part in the scheme.

15,992 children born 1947 to 1954 had been registered for inoculation by 15 April, 1956, and were offered inoculation by 31 December, 1957. A further 7,410 children were registered by the end of the year but inoculation could not be offered to the majority owing to shortage of vaccine. Poliomyelitis inoculations

Towards the end of the year the scheme was extended and tentative arrangements were made to deal with the increased number to be inoculated. Altogether, 13,319 completed courses of inoculation and rather more than 2,332 single inoculations were given during the year.

112 local general practitioners are co-operating in the scheme.

Ante-natal clinics were held at 19 centres with an average of 28 sessions a week. Relaxation, mothercraft and parentcraft classes were held at varying intervals at nine centres. Maternity and child welfare

Courses of parentcraft for husbands were held at three centres, one in each Borough.

The meetings were held in the evening during a period which coincided with the afternoon courses on mothercraft and relaxation for expectant mothers. Husbands and wives usually attended the first meeting but the men often attended the remainder of the course alone.

Practical demonstrations were given, and the psychological approach to wives and families as a whole discussed. The men were mostly those husbands who were concerned about a first child but a number were specially interested if several years had elapsed since the birth of a previous child.

The experiment has entered its third year and mothers have frequently said how much more helpful and understanding husbands have been as a result of parentcraft instruction.

Chest X-ray examinations were arranged during the year for about 1,000 expectant mothers.

On average, 50 separate or combined infant welfare and toddlers' sessions were held weekly, attendances totalled 84,490 ; the corresponding figure for 1956 was 85,651.

The total number of children born during 1957 to mothers resident in the area was 4,320 compared with 4,278 during 1956.

Child-minders The number of statutorily and voluntarily registered child-minders at 31 December, 1957, was 100, compared with 66 at 31 December, 1956. Approximately 220 children were minded each week-day.

Voluntary workers About ten voluntary workers assisted each week at various infant welfare sessions ; I am most pleased to acknowledge their generous service.

Backward children The special welfare clinic for mentally retarded children under five years of age, at which parents are able to discuss their special difficulties with a doctor experienced both in this field and that of maternity and child welfare, was continued. Mothers attended with their children by appointment.

District nursing Charlton and Blackheath district nursing association ; the Nursing Sisters of St. John the Divine ; Ranyard Nurses ; and Woolwich and Plumstead nursing association continued to render valuable service. The work of the last named association was particularly helpful in that part of the Division lying north of the river.

Welfare foods National welfare foods were distributed at 96 sessions every week at 29 establishments throughout the division. The Women's Voluntary Services conducted 18 sessions weekly at their own centres ; their assistance was greatly appreciated.

Of the remaining 78 sessions, 53 took place in association with infant welfare sessions and 25 at other times each week according to local need.

The distribution figures for the last three years were :

<i>Year ended</i>	<i>National Dried Milk (Tins)</i>	<i>Cod Liver Oil (Bottles)</i>	<i>Orange Juice (Bottles)</i>	<i>Vitamin A and D Tablets</i>
31 December, 1955 ..	111,996	30,662	231,682	12,643
31 December, 1956 ..	112,636	26,439	242,619	13,465
31 December, 1957 ..	84,773	21,609	244,834	12,746

Chiropody 150 sessions a week were provided at foot clinics and 59,405 treatments were given.

Home help service 303 part-time home helps, equivalent to 145.5 full-time helps, were employed at the end of the year. The demand for help increased in Deptford but diminished to some extent in Woolwich, Eltham and Greenwich. Seven home helps attended special courses of training to fit them to assist mothers with household management, cooking and budgeting. These helps and a number of others trained in 1956 were successfully employed in several households.

Problem families In the autumn two social case workers were allocated to the division to undertake intensive work with suitable families.

It is too soon to evaluate the results of the social workers' efforts or to know whether improvements are likely to be maintained. Despite long and difficult work a few cases have, for one reason or another, relapsed or have not so far shown any real response.

DIVISION 7, comprising the boroughs of Camberwell and Lewisham.

Dr. E. A. Mower-White reports :

For the first part of the period under report, the division was under the direction of my predecessor, Dr. H. D. Chalke who in April, 1957, took up the full-time appointment of Medical Officer of Health of the Metropolitan Borough of Camberwell.

On 1 August, 1957, Dr. A. L. Thrower was appointed as deputy divisional medical officer. Medical Staff

The Camberwell chest clinic moved into new accommodation at St. Giles Hospital. Premises

In May, an Open Day was held at the Central Lewisham welfare centre, 410 High Street, S.E.13, to commemorate the 21st Anniversary of the opening of the centre by H.R.H. the Duchess of Kent on 7 May, 1936. The Vice-Chairman of the Divisional Health Committee (Alderman Mrs. J. Burgess, J.P.) presided, supported by Alderman Mrs. M. Smith of the Lewisham Borough Council and Dr. Murdoch MacGregor, who represented the County Medical Officer of Health. Special tribute was paid to the voluntary work done by the Catford School for Mothers, who had started child welfare activities 37 years ago and had worked at the centre since it opened. About 100 guests attended. Anniversary

The chiropody service was extended to the Camberwell area. The service is given after consultation with the existing voluntary organisations providing foot clinics for the aged at centres, so sited as to provide as full a coverage as possible. Chiropody

The divisional co-ordinating committee meets regularly under my chairmanship, and is attended by my deputy, the divisional nursing officer and the divisional treatment organiser, the area children's officer, the district care organiser and the Family Welfare Association secretary. Representatives of the N.S.P.C.C. and other interested public bodies are invited as required, and the health visitor or other case worker who knows the family is also in attendance. Problem families

There has been no diminution in the provision of school medical treatment services and the maternity and child welfare service. Small adjustments in sessions have been made at some centres when justified by the increase or decrease of attendances. Further progress has been attained in integrating health-visiting and school nursing duties and the measures of co-operation with the general medical service, the hospital service and the district nursing service have been maintained, embracing the health of the community at every point in the lives of its members. Special attention has been given to health education in all its aspects, which is controlled by a divisional field-worker panel with a central health education room at the divisional office, where a variety of visual aids are prepared and stored for distribution to centres. General activities

Two special discussions were arranged for the field-workers in the division, introduced by specialists from the hospital service—Dr. William Dunham, the Council's consultant for cerebral palsy, gave a talk illustrated by a film on the early recognition of signs of cerebral palsy in a young child and Mrs. Collis showed a new film she had made on the method and results of treatment of spastic children. Dr. B. Gans, paediatrician of Lewisham hospital, opened a discussion on 'Methods of Infant Feeding'. Each meeting was very successful and well attended. Co-operation with hospitals

The care of the aged and chronic sick has been the subject of much consideration and detailed case-work. There is close association in this with the borough medical officers of health, the hospital geriatric services, family doctors and the nursing associations. The health visiting and home help services have a special part in the work that is done. I have been invited to serve on the Geriatric Sub-committee of the Lewisham Hospital Group Medical Advisory Committee. Care of Aged

The award of a Testimonial on Parchment by the Royal Humane Society was made to Mr. F. A. Hill, caretaker at Queen's Road Centre, for gallant conduct in saving a child from drowning in the swimming-bath at the centre. Gallant conduct

DIVISION 8, comprising the boroughs of Bermondsey, Lambeth and Southwark.

Dr. W. H. S. Wallace reports :

The statistical returns for the year on the whole show little change from those of 1956. Attendances at clinics have been well maintained and there has been some increase in the attendances at the Council's ante-natal clinics.

Immunisation

The statistics show a slight drop in the number of children immunised against diphtheria. On analysis this is accounted for by a drop in the number of school children immunised. This was mainly due to the widespread epidemic of influenza in the autumn term, which seriously hampered the work of diphtheria immunisation in the schools. The number of primary immunisations of children under one year was fully maintained. 3,645 were immunised in 1957, compared with 3,650 in 1956. The work of B.C.G. inoculation of 13-year-old school children continued during the year. As in previous years, about 70 per cent. of the parents of eligible children consented to B.C.G. inoculation. Inoculations against poliomyelitis continued throughout the year. 10,795 children had complete inoculation. The limiting factor was the amount of vaccine available. At the end of the year there were still 4,376 children registered for inoculation for whom vaccine was not available.

Day nurseries

The demand for day nursery accommodation fell considerably during the year. The average daily attendance at day nurseries in the Division was 699, compared with 814 in 1956. This decrease has not been balanced by any marked increase in the number of children in the care of child-minders. The number of children with child-minders was 117, compared with 97 in 1956. It would appear that fewer mothers now go out to work.

School health service

The widespread epidemic of influenza affected all the schools in the division. For several weeks during the autumn term 40 per cent. of the children in many schools were absent. Apart from this the health of the school children has been well maintained. At the special investigation sessions the number of new cases dropped from 79 cases in 1956 to 49 cases in 1957. The attendances at minor ailment clinics has continued to decline. The total attendances were 3,979 in 1957, compared with 5,102 in 1956. While this reflects a diminution in the number of minor ailments in school children, the fall may be partly due to their obtaining treatment elsewhere than at minor ailment clinics, e.g., to an increased extent from private doctors. One of the most interesting items is the virtual disappearance of chronic ear conditions, since these are now curable by the use of modern anti-biotics. The number of children referred for examination for glasses has also dropped—3,359 in 1957, compared with 4,383 in 1956. This is probably due to the fact that the 'bulge' in the school population has now gone into the secondary schools and practically all children who require glasses nowadays are supplied with them before they reach secondary school. Enuresis is still a matter of some concern among school children and there is still an increase in the number referred for treatment. The electric bell apparatus has so far proved the most successful treatment for enuresis but it is obviously not the whole answer to the problem, as it can only be used in selected cases.

Co-ordinating committees

The work of the co-ordinating committee on problem families has increased considerably and 41 case conferences have been called during the year. Work for the problem families is often difficult and disheartening, as so many of the parents are handicapped by low mentality and immaturity. The committee has proved its value in ensuring the most effective use of the various services available in helping those families whose need is greatest. The provision of housing accommodation for problem families in need of re-housing has, although the number has been small, been a most valuable aid to the families concerned.

DIVISION 9, comprising the boroughs of Wandsworth and Battersea.

Dr. J. T. R. Lewis reports :

Developments

The most significant addition to divisional premises was the Victoria Drive maternity Premises and child welfare and school treatment centre, provided at a cost of about £12,000, and opened in October, 1957. It serves an area in which five post war Council and Wandsworth Borough Council estates have been substantially completed, to bring an estimated increase of 8,800 (93 per cent.) over the population prior to development.

Victoria Drive centre was the first to be opened on the new housing estates in the Putney and Roehampton area in premises fashioned for the purpose.

After the opening the temporary centre at the Ackroydon Estate was closed in November.

In July, 1957, the new Alton welfare centre came into use to serve new estates in the vicinity of Putney Heath and Wimbledon common.

A scheme designed to improve liaison between the hospital and local health services Maternity and child welfare has been in operation for some years whereby, for one session a week, a medical registrar from St. James' Hospital takes an infant welfare session in a council welfare centre while a council medical officer assists in clinical work at the hospital. The arrangement has been most successful and still continues.

A medical officer, with health visitors from the division, attends a special clinic for backward children every week.

In furtherance of the scheme for mental health education in the maternity and child welfare service, two separate groups of health visitors have participated in intensive training under the guidance of a psychiatrist.

W.V.S. and other voluntary helpers, notably at Putney health centre, continued Welfare foods to be responsible for 20 per cent. of the issues of national welfare foods. Clapham W.V.S. were, however, compelled to give up this work in December, 1957, after many years of useful service, when the lease of their premises expired.

A special scheme was introduced whereby parents of children who had not commenced immunisation when about five months are sent a letter from Divisional Health Office, so as to supplement the personal approach made by doctors and health visitors. Diphtheria prophylaxis

The first chiropody service to be administered by this division started in January, Foot clinics 1957. Seven centres are used for a total of 17 weekly sessions. The service has proved of great value, especially to old people.

Those home helps who have received special training in housecraft have attended Prevention of break-up of families some of the 'problem family' households but this particular service has not been as successful as was at one time anticipated and hoped.

The home-making class for mothers of problem families continued at the Fairfield infant welfare centre for some time but has now been discontinued as the results did not justify the continuance of such a specialised class. Hence, it was decided to integrate this instruction with an ordinary mothercraft class at the Plough Road infant welfare centre. Students from Southlands Teachers Training College attend at the centre and help in looking after the children while the class is in progress. This arrangement is an advantage both to the students and the health visitors, who are thereby free to devote all their time to the mothers and their social and housekeeping problems. But perhaps the advance of greatest interest and probably also of importance during the year in this field was the appointment of the equivalent of 1½ social case workers to undertake intensive case work with problem families. A full report will be made in due course but at this stage one can say, without being unduly optimistic, that so far the service is proving its worth.

Attendance of children at the weekly occasional creche, Fairfield welfare centre, Occasional creche has varied little over the last year. One nurse is now in charge of the creche, with the assistance of students from Southlands College, who attend in order to gain experience and at the same time give practical help.

The Clapham group of health visitors have been especially prominent in this field and had a draft leaflet accepted by the Central Council for Health Education and published under the title 'Toys for Theresa and Timothy'.

Dr. A. Garland transferred from his position as Deputy Medical Officer of Health at Battersea to a similar position in Wandsworth while retaining his position as Deputy Divisional Medical Officer for the Division. In place of Dr. Garland, Dr. Lowry was appointed as Deputy Medical Officer of Health for Battersea and Deputy Divisional Medical Officer for the Division and took up his appointments in August.

Divisional services during 1957

(Corresponding figures for 1956 are shown in brackets)

Day nurseries

Total number of places 413 (439) Streatham Hill day nursery places reduced from 64 to 50, and Summerley day nursery from 52 to 40.

Number of nurseries 9, with 7 classified as training nurseries. (9, 7).

Child-minders

	Number	Total places authorised
Registered child-minders	17 (15)	122 (104)
Registered day nurseries	8 (10)	183 (230)

Recuperative holidays

473 (521) persons received recuperative holidays.

B.C.G. inoculation of school children carried out in autumn of 1956

(Corresponding figures for 1955 are shown in brackets)

1. Number of school children eligible for B.C.G. vaccination ..	5,125	(4,949)
2. Number tested	3,072	(3,596)
3. Number (of 2) from whom results read	3,061	(3,529)
4. Number given B.C.G. vaccination	2,502	(3,069)
5. Number of positive reactors	459	(459)
6. Number (of 5) given X-ray :		
(a) by private arrangement	15	(—)
(b) by L.C.C. or B.C.G. unit	414	(341)

Home help service

At the end of December, 1957, 2,240 (2,043) cases were being given service.

Diversional therapy for the tuberculous

30 patients are attended during eight weekly sessions ; a weekly handicraft class is also held.

Poliomyelitis inoculation

Number of courses completed :

1. By L.C.C.	13,125
2. By general practitioners	2,055

School Health Service

Special investigation clinics :

Total attendances	1,546	(1,455)
New cases	249	(262)
Total sessions	254	(205)

Influenza outbreak

The outbreak of influenza in the autumn of 1957 slowed up but did not seriously hamper divisional services. 532 members of the divisional staff considered to be at special risk volunteered for inoculation.

APPENDIX A

THE LONDON BILLS OF MORTALITY

Emergence of Bills

It is generally assumed that the Bills of Mortality for 'London' began in 1593—thus John Bell (1665), Clerk to the Company of Parish Clerks, says in his 'London Remembrancer', 'I shall begin with the year 1593, being the first year in which any Account of the *Christenings* and *Burials* was kept. I cannot find any Record of more antiquity than that of this Year in the Company of *Parish Clerks* Hall.' Evidence has since come to light, however, which shows that as early as 1535 a bill was compiled by the Lord Mayor for Thomas Cromwell in which it is stated that 152 persons had died in the previous eight days.* There is also a manuscript of a weekly bill, a copy of which is reproduced in Creighton (1891), p. 295, and Ogle (1892), which is thought to be dated 1532.

The foundation of regular record keeping in the field of vital statistics can also be attributed to Thomas Cromwell who in 1538 issued an order by an injunction of Henry VIII appointing the parson, vicar or curate of every parish in England and Wales to keep a true and exact register of all weddings, christenings and burials. These records were kept in Parish Registers and were not transmitted to any central office though as early as 1590 Lord Burghley wished to set up a General Register Office (Glass, (1952)).

The earliest bills of mortality for London were compiled under the stimulus of plague and contained, in addition to the total number of deaths, the numbers dying of plague and also the number of christenings. Since most of the early bills were confined to plague years an exaggerated picture of mortality in London in those times may be obtained, but there is an interesting series of bills for the years 1578–82 in the library of Hatfield House and these have been reproduced in Creighton (1891), p. 341, *et seq* which give the numbers dying in a year in which there was no plague epidemic; e.g., in 1580 there were 2,873 deaths, including only 128 of the plague, and 3,568 christenings. Since according to Creighton every child was christened in church in the time of Elizabeth I, it can be assumed that the births are fully recorded (with the doubtful exception of stillborns and 'Chrisoms').†

The bills were revived in 1592 and again in 1603—both plague years—and the first of a continuous series of weekly bills of mortality, issued by the Company of Parish Clerks, began on 29 December 1603, according to an anonymous work entitled 'A Collection of the Yearly Bills of Mortality' (1759), generally attributed to Dr. Heberden. The Bills continued to be issued by the Company, even after the Registrar General adopted the practice of issuing a weekly return of deaths in London in 1840; to this day this return is colloquially referred to as 'The Bill' in the General Register Office. Annex 'A' shows the number of burials noted in the *annual* bills from 1578 to 1837 and, for comparison, for the years 1838–40 the number of deaths registered in London from the annual reports of the Registrar General. During that period of 260 years parishes were added as 'London' spread (though not as many as should have been); and as early as 1629 both a list of causes of death and the differentiation by sex was introduced. (Details regarding the addition of parishes are given by Angus (1854) and Ogle (1892).) The tradition is carried on in the present Table III of the Registrar General's Weekly Return. Detailed causes of death have never been compiled continuously weekly for any other city in England and Wales (and it was not until the commencement of 1958 that the total weekly deaths for England and Wales were published and even then only nine causes were itemised).

* In the Record Office. State papers, Henry VIII, No. 4633.

† 'A child that dies within a month after its birth. So called from the *chrisom*-cloth, a cloth anointed with holy unguent, which the children anciently wore till they were christened'.

Johnson's Dictionary, ed. Todd, 1818.

Difficulties of interpretation

As over three and a half centuries have elapsed since the bills were first regularly produced, it is naturally difficult to make valid comparisons either with the present day or intervening years. Among the basic difficulties of interpretation are (1) the varying areas covered by the bills ; (2) their incompleteness ; (3) changing nomenclature and (4) changes in diagnostic fashions.

Area

During the 17th century outlying parishes were frequently added as London spread but from 1726 onwards no actual addition was made to the area which the parishes embraced. The increase in the number of parishes after 1726 was brought about by the division of single parishes into two, e.g., in 1729, St. George's, Hanover Square, appeared in the lists whereas formerly this district had been included as part of St. Martin-in-the-Fields. This process is fully described in the General Report on the Census (1861), p. 13, and by Angus and Ogle. A further change in the area covered by the bills was not made until 1840 when the Registrar General established his weekly tables of mortality. The Metropolis Local Management Act, 1855, defined the area of London for local government administration and this area has remained substantially the same ever since though there were minor changes when the metropolitan boroughs were formed under the Local Government Act, 1899.

Incompleteness

The Bills included details only of those belonging to the Church of England and christened or buried according to its rites. However (*vide* Anon, 1759) 'Some . . . papists and dissenters, who live at a distance from their respective burial grounds, and cannot bear the expence of being carried thither are buried according to the rites of the Church of England, and by that means have a place in the weekly Bills,' although the remainder were excluded. It is difficult to estimate the number of dissenters during the 18th century but this particular 'shortage' was of considerable importance. Ogle came to the conclusion that 20 per cent. should be added to the number of burials to cover this omission.

Although a tax on christenings, marriages and burials (3d. per entry) was instituted in 1783, it is doubtful if it had any substantial effect on the total number of death registrations. It was repealed in 1794. There is no evidence in the Parish Registers Abstract of the 1811 census of any trough in numbers after 1783 nor any peak after 1794. (In addition it was necessary to pay a shilling to the searchers whose duties are discussed later). It was also thought that the establishment of the Foundling Hospital in St. Pancras in 1741 might have had an effect on the number of recorded deaths (Anon, 1759). During a period of 46 months from 1756 when indiscriminate admissions were allowed it is recorded that 10,389 died out of a total of 14,934 admitted—Nichols and Wray (1935), p. 56. The bulk of the children thus admitted would probably have been born in London but, as the hospital was outside the area covered by the Bills, their deaths would not have been included.

By 1757, the fashion for country houses was increasing with the result that many persons were carried out of London to be buried in their country parishes. It is known that in ten years an average of 261 were carried out of one of the largest and most populous parishes of Westminster every year to be buried, while only 184 were brought in. Allowance can also be made for this sort of omission and Ogle puts it as high as an additional 20 per cent.

Thus a total of 40 per cent. might well be added on to the total number of deaths but there is yet a further omission, 'the neglect of parish clerks and their deputies in not making exact returns to the common-hall,' (Anon, 1759). Apparently weekly returns were not always made regularly and in some large parishes no returns were made for several weeks. When the return was made the number of deaths may have been stated as having occurred in one particular week. These omissions, although often ascribed to negligence, were sometimes due to disputes between the clerk in orders and the officiating clerk. During the early 19th century this type of omission became of

increasing importance—some parishes ceased to make any returns at all. In the appendix it will be seen that recorded deaths were declining after 1832 when the population was increasing. Ogle discusses this point and shows that only half the deaths were being recorded by 1839. In defence of the Parish Clerks it should be pointed out that the Company of Parish Clerks made several attempts during the mid-eighteenth century to persuade Parliament to let them register births and deaths rather than christenings and burials (Christie, 1893). The Company had been trying to arrange this as far back as 1661 and on 9 December, 1664, there was presented to the King a humble petition in which they stated that they had faithfully endeavoured to carry out their duties, but that they were conscious of the imperfection of their records (Brett-James, 1933).

Morris (1751) also criticised the lack of information in the Bills. He considered that the age groups were not sufficiently divided in infancy and pointed out that 'one month in the earliest infancy produces greater alterations, than several years in manhood.' The diseases were not connected with the several ages. It was known of what disease people died and it was known how old they were at death but it was not possible to determine the ages for any specific disease. 'Whereas, by annexing to every disease the number of persons of each age dying thereof, it would appear, from remarks upon a competent series of years, to what diseases persons of every age were particularly subject. From whence, if these bills were extended throughout the kingdom, the growth or declension of every particular disease would be clearly discovered. This would furnish a constant fund of instruction to the intelligent physician; and at particular critical junctures might suggest cautions, not unworthy the attention of the legislative body of the kingdom; at least, would make a faithful report to it of the state of the national health, and of the annual increase or diminution of the people.'

He also wanted to differentiate the numbers dying from smallpox as to whether they had been inoculated or not. He wanted to fine 'the master of the house when the patient sickened for neglect'. This he considered 'would furnish ample conviction, and remove female prejudices upon this subject'. Smallpox, which was the scourge of the 18th century, will be discussed later.

He thought dissenters should also keep bills but that the religion itself should not be noted. To substantiate his remarks and to show that his proposals were feasible he even went so far as to design a form which could be completed by the parish clerks—an early example of form design!

Many of the causes of death listed in the old Bills make strange reading today and an attempt has been made later, when deaths in certain selected years are compared, to equate the archaic but expressive causes of the past like 'gripping of the guts' and 'bloody flux' with the more pedestrian dysentery of today. Nomenclature

A less easily resolvable difficulty is the estimation of the accuracy of the classification which necessitates an explanation of how the cause of death was ascertained.

According to Graunt (1676) 'When any one dies, then either by tolling, or ringing of a bell, or by bespeaking of a grave of the sexton, the same is known to the searchers, corresponding with the said sexton. The searchers hereupon (who are antient matrons, sworn to their office) repair to the place where the dead corps lies, and by view of the same, and by other enquiries, they examine by what disease or casualty the corps died. Hereupon they make their report to the parish clerk, and he, every Tuesday night, carries in an account of all the burials and christenings happening that week, to the clerk of the hall. On Wednesday the general account is made up and printed, and on Thursday published and dispensed to the several families, who will pay four shillings per annum for them'. A general account for the whole year was issued on the Thursday before Christmas Day. The Searchers

An opinion of the searchers in 1759 was that though they were often of low capacity and this has resulted in 'objections to the truth and justness of the bills', nevertheless, 'even the wisest person in the parish would be unable to determine the distempers from

a bare inspection' and hence 'there seems no other capacity in these searchers than that of relating what they hear', (Anon, 1759). Ogle quotes a writer of the article 'Bills of Mortality' in the 'Penny Cyclopaedia' (1835), in which it is shown that the searchers demanded a fee of one shilling—sometimes they asked for more, and generally got it—and sometimes even claimed as a perquisite the articles of dress of the deceased. The writer concludes 'Such are the means at present employed in collecting medical and political statistics in the Metropolis of England'. Charges had frequently been levelled at the searchers and as early as 1665 John Bell came to their defence by pointing out that they were selected by 'some of the eminent men of the parish' and sworn to their offices by a Justice of the Peace.

When the General Register Office was set up in 1837, steps were taken to revise the system of registration of births, marriages and deaths which had remained the same for the previous three hundred years. Lister, the first Registrar General, wrote in his first Annual Report 'Long before the commencement of Registration, my attention was turned towards an object admitted to be of great importance to the improvement of Medical Science, namely,—to obtain a faithful statement of the *cause of Death* in the column of the Register set apart for that purpose. It is obvious that such statements, in order to obtain due credit, ought to be derived, whenever it is possible, from the Medical Attendant of the deceased person'.

Although the searchers had disappeared it is of interest to note that it was not until the Registration of Births and Deaths Act, 1874, that it became compulsory for all death certificates to be signed by a medical practitioner.

Diagnostic
fashions

Graunt noticed that there were variations in the 'popularity' of the various causes of death from one year to another. For instance he commented on the fact that, in 1629, 2,596 deaths were classed as 'Chrisoms and infants' and only 52 as 'convulsions'. In 1636 the number of deaths attributable to 'convulsions' had risen to 709 and the number of 'chrisoms and infants' dying had fallen to 1,895—as the difference between the totals for the two years, 2,648 and 2,604 was so slight he concluded 'that this difference is likely to be only a confusion in the accounts'.

He also wrote 'the tisick seems quite worn away; but it is probable the same is entred (sic) as cough or consumption' and commented at length on the rising importance of a new disease 'called by our bills, the stopping of the stomach' first mentioned in 1636, and on the fact that rickets was not mentioned until 1634, about which he posed the question 'Whether that disease did first appear about that time or whether a disease, which had been long before, did the first receive its name', (p. 14). However, at the end of a long disquisition he concluded by saying 'But of this let the learned physicians consider, as I presume they have'.

From this account it is clear that even Graunt, writing contemporaneously, had considerable difficulty in interpreting the Bills.

Calculation
of rates

Any comparison with the past, whether of mortality from all causes, or, if the difficulties outlined earlier can be overcome, for specific diseases, can only be valid if made in terms of rates and not absolute numbers. It is necessary therefore to ascertain what population estimates are available for the varying areas covered by the Bills and their reliability.

Population

Estimates

Graunt made a number of estimates of population, being prompted so to do when finding it difficult to reconcile the numbers of deaths in the Bills with the assertion of 'one of eminent reputation' that there were 'in 1661 two millions of people more than in 1625 before the great plague'. As he was hampered by not knowing the age structure of the numbers dying he made his first estimate on the basis that the number of child-bearing women might be double the births, 'since such women have scarce more than one child in two years'. He found that the number of births was a little less than the burials in those parishes where records were well kept and since there was on

average 13,000 burials a year he concluded there were about 12,000 christenings—'I therefore esteemed the number of teeming-women to be 24,000 : then I imagined, that there might be twice as many families, as of such women ; for that there might be twice as many women aged between 16 and 76 as between 16 and 40 . . . and that there were about eight persons in a family, one with another, viz., the man and his wife, three children and three servants or lodgers : now eight times 48,000 makes 384,000 '.

His second estimate was done on a sampling basis. He found that, 'in some parishes within the walls, that three out of eleven families per annum have died : wherefore 13,000 having died on the whole, it should follow there were 48,000 families '.

Lastly he took a map and guessed that in 100 yards square there might be about 54 families. On this basis there would be 11,880 families within the walls ' But forasmuch as there die within the walls about 3,200 per annum, and in the whole 13,000 ; it follows, that the housing within the walls is $\frac{1}{4}$ part of the whole, and consequently, that there are 47,520 families in and about London '.

He summarised the situation as follows : ' We have (though perhaps too much at random) determined the number of the inhabitants of London to be about 384,000 ; the which being granted we assert that 199,112 are males and 184,886 females '. (The assertion was based on the observation of the sex differential in both deaths and christenings.)

In an appendix to his observations, Graunt refers to the problem once again as he had by then procured an account of the number of men, women and children in several wards and liberties of London taken in August 1631, by special command from the Right Honourable the Lords of His Majesty's Privy Council. The figure amounted to 130,178. There was thus a census in ' London ' much earlier than 1801—the date usually associated in the minds of most people with the first census. (Ogle also gives details of a census taken in the parish of St. Thomas the Apostle on Lady Day, 1733.)

Not content with this cross check, Graunt compared the number of deaths per week in Dublin and in London. On the basis of the ratio of the estimated population of London to its deaths, he concluded that the population of Dublin at that time would have been about 30,000 and this agreed with the numbers actually ascertained for the purposes of raising poll money.

Despite the care and comparative success of Graunt's researches doubts have been cast on the accuracy of this estimate by later workers in this field such as Rickman. The latter showed that it would be easy and useful to take a census of the population, as a result he became secretary to Lord Colchester and together they prepared the first Census Act in 1801. Rickman was the man mainly responsible for the early censuses and he prepared the reports for the first four. He was also particularly interested in making calculations of the population during the 18th century.

It has always been difficult to estimate the population of London for, even in the Middle Ages, London had spread out beyond the City walls and across the river to Southwark, so that by the 18th century the population was spread between the Counties of Middlesex and Surrey. As in the 20th century the County of London only represents a fraction of the metropolis so the Bills of mortality of the 18th century only dealt with a portion of the whole. In the Parish Register Abstract of the Census (1811), p. 199, Rickman explains how he estimated the population. In essence he applied the ratio of population to baptisms known to exist in 1801 to the figures of baptisms in earlier years—in fact the baptism figures were averaged over the five years preceding the year for which the population was estimated.

So far as London was concerned Rickman applied the same technique though difficulties arose because some of the parishes which formed part of the ' City of London without the walls ' extended beyond this area and hence it was necessary to apportion the estimated increase in population.

In the event he concluded that the London population in 1700 was 663,200 and, in 1750, 653,900. These figures suggest that Graunt's estimate for 1661 was too low since the population of London would seem to have risen by some 263,000 in 40 years and then declined slightly during the next 50.

Rickman's 1750 estimate however appears inconsistent with other population figures he produced by a similar form of calculation in 1841 for the Counties of Middlesex and Surrey. These showed that, whereas in 1700 and 1800, 80 per cent. of the inhabitants of Middlesex and Surrey were concentrated in the Metropolis, the percentage in 1750 was 97. The discrepancy lies in his Middlesex figures which show a marked fall in 1750, but there is reason to believe firstly, that the Middlesex population was higher than estimated because prior to the Marriage Act of 1753 (which forbade the solemnization of marriage without banns or licence), there were a large number of clandestine marriages, especially in Middlesex, which would not have been registered; secondly, it seems to be generally agreed that the burials did in fact outnumber the baptisms in the early 18th century and that there was a real fall in the total population of Great Britain—hence Rickman's calculation, based almost wholly on baptisms of the London population was too high. This was attributed in the Census report (1851) (p. li *et seq*) to the manners and customs of the times—'under the loose, corrupt form of state lower than polygamy that we here witness, the children are neglected, and perish' (p. liv) and again when commenting on the great increase in population between 1751 and 1851 'the time, the energies, and the earnings of the people, which had in 1651–1751 been wasted in intrigues, in riotous assemblies, on gin and in gambling, were devoted in the next century, to the establishment and support of quiet industrious families,' (p. lii).

It would seem, therefore, that there was a steady increase in the population of London during the 17th century—then a stationary period for about 50 years from 1700–1750. The steady increase was resumed until the beginning of the 20th century when it became difficult to estimate the population owing to the spreading of the Metropolis beyond the administrative county.

Enough has been said to indicate that, prior to the setting up of the General Register Office, estimating populations on the numbers of registered births and deaths was somewhat hazardous. It is likely that Rickman's estimate of the 1700 population of London was nearer the truth than Graunt's estimate of 1661 but, although Graunt's estimate was probably too low, the number of deaths he took into account was probably too low as well. Thus the net result is that Graunt's general line of argument is valid because both his sets of figures were biased in the same direction.

Glass also discusses the difficulties of estimating populations and the controversies that raged in the 18th century. Since 1801 there has been a national census every ten years, with the exception of 1941. Thus a more exact estimate of the population is available for the whole of the 19th century.

Migration

So far the question of migration and its effect on the population have not been mentioned—the lure of the large city, and the effects of the industrial revolution encouraged, as they still encourage, migration to London and other large towns. It must not be overlooked however, first that emigration to Australia and the United States became more common during the 19th century and secondly, there was, at times, an outward migration from London, for example under the stimulus of plague or even as Short (1767) tells us because of 'a great Number of new Villas or Country-Seats within a moderate Day's Journey of London' and 'The late great Improvements of Roads, formerly unpassable . . . ' (p. 20).

Some idea of the migration into London may be gathered from the fact that in 1851, of 1,394,963 persons aged 20 years and upwards, no less than 759,853 were born outside London—88,542 in Ireland (Census, 1851, p. 31).

It is the migration factor that accounts for the population of London increasing despite the fact as observed by Graunt and Morris that in the Bills of Mortality the number of burials exceeded that of christenings which *prima facie* would imply that the population was decreasing. As Morris himself put it 'Multitudes of adult persons are continually called to London . . . by occasional business' and 'many of these persons are not married and the few of those who are (do not) bring their wives . . . upon these occasions. All these persons are therefore liable to die . . . (and) can add nothing to the christenings'.

After times of high death rate in London it was apparently the practice of country traders to come to London and take over the deserted shops of their predecessors: hence soon after a plague the population was thereby replenished. Morris gives instances of the rise in the number of christenings within two years of a plague year to justify this statement.

Estimated rates

From the population estimates made by the various earlier writers and, making due allowance for the fact that the proportion of deaths represented by burials was not static, it is possible to produce some estimated death rates. The years chosen, somewhat arbitrarily, are 1657, 1757, 1857 and 1957 and in the table below are set out the number of burials recorded or deaths registered in these years, the population estimates for these years (or the nearest available), and the death rates calculated solely on these figures.

Year			Deaths (burials or registrations)	Estimated population	Estimated death rate
1657	..	..	12,434	334,000 ¹	31
1757	..	..	21,313	653,900 ²	33
1857	..	..	59,103	2,668,000	22
1957	..	..	37,078	3,254,000	11

(1) Graunt (1676).

(2) Rickman (1811).

NOTE.—The death rate based on the actual number of burials recorded in 1757 is probably too low. If Ogle's estimated omissions are taken into account the rate would be as high as 46. Rickman's estimate was 48.

Discussion

We are now in a position to consider in a reasonably critical frame of mind the vital statistics since 1603, and, for this purpose, the 'Bills' of 1657, 1757, 1857 and 1957 have been reproduced in Annex B. The Bills for 1657 and 1757 are taken from the 'Collection of Yearly Bills' (1759). The figures for 1857 from the Registrar General's Annual Report for that year and the table for 1957 has been re-arranged to accord as far as possible with the lay-out for 1857. None of these years was characterised by an untoward epidemic—1657 precedes the Great Plague of London in 1665 and 1857 avoids any of the cholera epidemics. Although there was a smallpox epidemic in 1757 it was a typical year for the period.

A word or two of explanation of some of the causes listed in the first two years is probably needed. Calenture appears to refer to sunstroke (according to Dr. Johnson it was 'a distemper peculiar to sailors in hot climates wherein they imagine the sea to be green fields, and will throw themselves into it'); tisick was an old English word for tuberculosis; dysentery was not clearly diagnosed in those days and appears under various names as 'Bloody Flux and Gripping of the Guts'; head mould shot, horseshoe-head and water in the head refer to hydrocephalus; imposthume was an abscess; livergrowne probably rickets. King's Evil referred to scrofula (tuberculous glands of the neck) and was thought to be curable by the touch of the King's hand (the Stuarts touched thousands of persons but William III found it rather an unpleasant duty and gave up the practice); rising of the lights may well have been eclampsia.

The death rate for all causes has been worked out earlier and in the light of the foregoing explanation we can look at the different causes.

In 1657 the biggest killer was clearly tuberculosis (tisisick) followed by infant deaths (unspecified), ague and fever, teeth and worms, old age, flux and smallpox, convulsions and cramp, though the high number of abortive and still-born infants should not be overlooked.

In 1757 convulsions is the leading cause with consumption second, closely followed by smallpox, fever, with old age lagging far behind. Convulsions probably include both the 'convulsions' and the 'chrisoms and infants' of 1657 so that if these were separated, tuberculosis would again come first. It is interesting to note that about one-third of the deaths occurred to children under two years of age.

The Bill of Mortality for 1757 does not differ a great deal from that for 1657, but by 1857 there had been a radical change both in nomenclature and numbers. Tubercular diseases still remain the leading cause of death and children under two still account for about one-third of all deaths. The arrangement of the causes is on more modern lines. Infectious diseases were an important group and since 1757 the deaths from measles and whooping cough had risen considerably; scarlatina does not seem to have been recorded in 1757 whereas smallpox, which was so important in the 18th century, made an almost nominal appearance in 1857—in fact it was the lowest total since 1666.

A special chapter was devoted to Health in London in the Registrar General's Annual Reports of those days so that it is possible to learn a great deal about the state of health of the people, e.g., 'If we place together the deaths from smallpox, measles, scarlatina, whooping cough, diarrhoea, and typhus and divide by the corrected population, it is found that the mortality from these diseases was at the rate of about 41 to every 10,000 living in London'. 'Childbirth is much more fatal than it should be; but much less fatal than it was'. Deaths from childbirth and puerperal fever amounted to 365. It is recorded that only 11 women died in Lying-in Hospitals. Nearly a sixth of the deaths took place in public institutions of London, and about half of these in the workhouses. (It is also recorded that the wind passed over London at the rate of 81 miles a day. Abortions and Stillbirths were included in 1757 but later omitted and only the latter was put back in 1926.)

This was the period when the importance of vital statistics really began to be appreciated and, if reference is made to the weekly returns, some very curious facts can be ascertained. There were 60 cats-meat purveyors residing in London at the time, and one of them died during the year; out of 552 physicians 16 died, as did six medical students. Another detail was the fact that in the first week of the year 'a man who had been a butler, was the oldest, and died at the age of 94 years'. Deaths from all causes have been recorded on every day of the week with the mean temperature. The Victorians appear to have considered that weather was an important factor in the number of deaths—perhaps they were right! It is recorded that Christmas Day 1857 was 'particularly cloudy till evening, clear afterwards—a remarkably fine day—with a maximum temperature of 53 degrees'.

The reports had claims to literary style and were not written in official jargonese. Below is a quotation from the third quarterly report for that year.

If the mortality in the towns had been at the same rate as the mortality in the other districts, the deaths, instead of amounting to 55,755, would have only amounted to 38,080.

Thus in 92 days 17,653 persons perished untimely in England. What was the cause of this great destruction of life? Evidently the violation of the plain natural laws of life. And the strict observance of these laws must be of the utmost importance to the welfare of the human race, otherwise their violation would not be so terribly punished by the Almighty. Indeed, if the English race could lose strength, beauty, health, and life in the impurities of its dwelling-places with impunity, the imagination of Swift alone could conceive—his pencil depict—the depth of degradation to which the nation might fall.

Although the death rate had fallen to 22 per 1,000 there was no complacency and Farr wrote 'It will be the office of the Board of Works to reduce this dreadful sacrifice of life to the lowest point, and thus to deserve well of their country'.

Although in 1857 there were only 156 deaths from smallpox there were further outbreaks, notably in 1871, 1877, 1881 and 1902.

Very little will be said about the 1957 table as much is written elsewhere in this Annual Report. As stated earlier this table has been drawn up to make comparisons with 1857 but it would be unwise for too much to be read into these comparisons. Medical nomenclature has changed over the years and there is much more precision in diagnosis than there was a hundred years ago.

In 1957 heart diseases, cancer and respiratory diseases were the most important causes of death and infant mortality was the lowest on record. Probably the main reasons for the lower mortality were better water supplies and disposal of sewage. As Morris (1759) said, 'The unhealthiness of the air of London, though not greater than formerly, has been mentioned before, as one operating cause of the annual destruction of many people. This, indeed, is the least powerful weapon, in the hands of death ; yet, to obviate its force, as the preservation and health of the people in every instance is of great importance, it is proposed, that the cleansing of this city should be put under one uniform public management, and all the filth be carried into lighters, and conveyed by the Thames to proper distances in the country ; where it would be of great benefit to the lands, instead of being lodged on the outsides of this city ; a nauseous noxious spectacle '.

Morris's proposals about the management of sewage disposal were eventually put into effect in 1856 and the general framework of London's main drainage system which was completed in 1875 remains substantially the same to this day. The dramatic change in the health of London really stems from this action.

Births and christenings together are the other item in the Bills worthy of comment. Births and christenings
The London birth rate has always been low—not as a rate but in relation to the number of potential mothers ; whereas nowadays this can be deduced simply by a comparison of the age/sex structure of the London population with that of England and Wales, and in the application of the area comparability factor, in earlier times it was the subject of curious cogitation. As Graunt put it, and in so doing gave a vivid cameo of the mid-17th century with its reference to 'country' parishes : 'The proportion of those subject to die, unto those capable of breeding, is greater than in the country ; that is, let there be an hundred persons in London, and as many in the country ; we say, that if there be sixty of them breeders in London, there are more than sixty in the country, or else we must say, that London is more unhealthful, or that it inclines men and women more to barrenness, than in the country ; which by comparing the burials and christenings of Hackney, Newington and other country parishes, with the most smoky and stinking parts of the city, is scarce discernable in any considerable degree.

Now that the breeders in London are proportionably fewer than those in the country, arises from these reasons, viz. :

1. All that have business to the court of the King, or to the courts of justice, and all country-men coming up to bring provisions to the city, or to buy foreign commodities, manufactures, and rarities, do for the most part leave their wives in the country.

2. Persons coming to live in London out of curiosity and pleasure, as also such as would retire and live privately, do the same, if they have any.

3. Such as come up to be cured of diseases do scarce use their wives *pro tempore*.

4. That apprentices of London, who are bound seven or nine years from marriage, do often stay longer voluntarily.

5. That many sea-men of London leave their wives behind them, who are more subject to die in the absence of their husbands, than to breed either without them, or with the use of many promiscuously.

6. As for unhealthiness, it may be supposed, that although seasoned bodies may, and do live near as long in London, as elsewhere, yet new-comers and children do not : for the smoaks, stinks, and close air, are less healthful than that of the country. Otherwise why do sickly persons remove into the country-air ? And why are there more old men in countries than in London *per rata* ? And although the difference in Hackney and Newington above mentioned be not very notorious, yet the reason may be their vicinity to London, and that the inhabitants are most such, whose bodies have first been impaired with the London-air before they withdraw thither.

7. As to the causes of barrenness in London, I say, that although there should be none extraordinary in the native air of the place, yet the intemperance in feeding, and especially the adulteries and fornications, supposed more frequent in London than elsewhere, do certainly hinder breeding. For a woman, admitting ten men, in so far from having ten times as many children, that she hath none at all'.

Morris, too, writing of the mid-18th century primarily in connection with the excess of burials over christenings and the effect of migration on the growth and present state of the metropolis relates of 'the discouragement to matrimony in London . . . the unmarried ladies and gentlemen in this city, of moderate fortunes, which are the great bulk, are unable to support the expense of a family with any magnificence ; and cannot intermarry together, without retiring from high life, and submitting to relinquish those pleasures of the town, to which their appetites have long been raised ; and therefore acquiesce in celibacy ; each sex compensating itself, as it can, by other diversions. Persons also of inferior situation in London, have their taste for pleasures inflamed ; and avoid, with caution, the marriage state with their equals. And as to the vast body of common manufacturers, labourers, and porters, the expences in London of house-rent, including taxes, together with the high rate of milk, roots, and other provisions proper for children, are such that, undoubtedly such persons enter at the same time into matrimony, and poverty and distress. Hence therefore a great checque to the births in London, and a vast body of people furnishing to the amount of the burials and not at all to the christenings'. The reason for the excess of burials over christenings which Morris thought the most important was to be 'attributed to the enormous use of spirituous liquors'.

Summary

The picture presented in this historical review of mortality is the familiar one seen in the history of public health throughout the world. The appalling wastage of life in infancy and from the ravages of infectious disease during the 17th and 18th centuries was a condition that showed no real improvement until a precise medical assessment was possible. Although this was appreciated by enlightened thinkers, such as Morris, the quantitative facts about diseases did not become known until the Registrar General issued reports. By 1857 the statistics began to pay dividends by helping to stir the nation into taking further legislative action for sanitary reform.

One cannot fail to be impressed by the sense of familiarity with some of the demographic aspects of London which have been revealed by a study of its history. Six such aspects which have recurred during the period of over 350 years are :

- (i) The continuity of data, perfect and imperfect, about the health of the metropolis—from Weekly Bills to weekly tables of the General Register Office.
- (ii) The attractions of the metropolis which lead to persistent migration thereto of persons born elsewhere.
- (iii) The relatively low reproductive rate of the London population.
- (iv) The polluted atmosphere.
- (v) Changes of fashion in assigning causes of death.
- (vi) Inaccurate and/or late statistical returns.

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Annual Bills of Mortality

<i>Year</i>	<i>Number of Deaths</i>	<i>Source</i>	<i>Remarks</i>
1578	7,830	Creighton	The original figures are reproduced by Creighton (p. 341) from the Cecil House M.S.S. at Hatfield House. In 1580 only 128 died of the plague.
1579	3,406	"	
1580	2,873	"	
1581	3,931	"	
	(only 45 weeks available)		
1582	{ 6,762 6,930	"	From a manuscript in the Guildhall Library. The area covered 109 parishes.
		Guildhall Library (referred to hereafter as G.L.)	
1583–1591			So far as is known no records were kept or preserved.
1592	{ 26,490 25,886	Graunt and Bell Windet	According to Graunt the figure of 25,886 covers the period March to December (11,503 died of plague). In a Bill published in 1603 by John Windet the 25,886 is attributed to the whole of the year 1593 with an additional note that 2,000 died the year before. (Confusion may have arisen because in those days the new year began on 25 March and the year covering the Bills began on 1 January, 1592, and ended 31 December, 1593.)
1593	17,844	Graunt, Bell and Maitland	Graunt said that 10,662 died of the plague whereas Maitland gave a figure of 15,093.
1594	3,929	Creighton	Population was estimated to be 152,000 (p. 473).
1595	3,507	"	
1596–1602			No information.
1603	38,244	Graunt	This figure was for the year (23 December, 1602—22 December, 1603). This figure is also given in a report published by the Company of Parish Clerks and printed by William Stansby. (In the Guildhall Library there is a report published by the Company of Parish Clerks entitled 'A true report of all the Burials and Christenings within the Citie of London and the Liberties thereof, from the 23 of December 1602 to the 22 of December 1603. Whereunto is added the number of every severall Parish, from the 14 of July to the 22 of December as well within the Citie of London and the Liberties thereof, as in other Parishes in the skirts of the Citie and out of the Freedome adioyning to the Citie: According to the Report made to the KING'S most Excellent Maiestie by the Company of Parish Clerkes of the same Citie' printed by William Stansby (1604?)).
1603	42,042	Maitland	He stated that 36,269 died of the plague. The figures quoted by Maitland and Creighton probably included 3,354 deaths recorded in the following seven parishes: Hackney, Lambeth, St. Mary Newington, St. Mary Islington, Rotherhithe, Stepney and St. Margaret Westminster. In another document printed by John Windet, deaths in these parishes are recorded. It is also recorded that 4,314 died from 17 December, 1602—14 July, 1603. Details of deaths in the seven parishes mentioned above were added below the general Bill in the early Bills of Mortality. This fact may account for some of the big differences in the total deaths for certain years.
(cont.)	42,940	Creighton (p. 660)	
	42,945	Creighton (p. 474)	
1604	5,219	Bell	
1605	6,392	Graunt	
1606	7,920	Bell	
1607	8,022	"	
1608	9,020	"	
1609	11,785	"	4,240 died of the plague.
1610	9,087	"	

<i>Year</i>	<i>Number of Deaths</i>	<i>Source</i>	<i>Remarks</i>
1611	7,343	Graunt	
1612	7,842	"	
1613	7,519	"	
1614	7,389	"	
1615	7,887	"	
1616	8,072	"	
1617	8,286	"	
1618	9,614	"	
1619	8,008	"	The sum of the three sub-totals given by Graunt is 8,009. There are several instances where Graunt's sub-totals do not add up to his grand total. For the years 1604-1656 Bell's figures have been quoted wherever possible for this reason. Unfortunately Bell only gave figures for 18 selected years. Maitland's figures for 1604-1656 are obtained by adding up Graunt's sub-totals.
1620	9,712	"	
1621	8,123	"	
1622	{ 8,959	"	
	{ 9,436	"	Obtained by summing Graunt's sub-totals.
1623	11,112	"	
1624	12,210	Bell	
1625	54,265	"	It is recorded that 35,417 died of the plague—20,455 in August. This plague was second to the Great Plague of 1665. The Company of Parish Clerks set up their own printing press.
1626	7,534	Graunt	} Obtained by summing Graunt's sub-totals.
1627	7,717	"	
1628	7,743	"	
1629	8,771	G.L.	Causes of all deaths were listed.
1630	10,554	"	
1631	8,562	"	
1632	9,535	"	
1633	8,392	"	} Graunt's totals for 1633 and 1634 do not agree with these originals.
1634	10,900	"	
1635	10,651	Graunt	
1636	23,359	G.L.	10,400 died of plague.
1637	11,763	Bell	
1638	13,624	Graunt	
1639	9,862	"	
1640	12,771	Bell	
1641	{ 13,142	Graunt	
	{ 18,291	Bell	
	{ 18,295	G.L.	
1642	12,167	Bell	
1643	13,202	"	
1644	10,933	"	
1645	11,479	"	
1646	13,532	"	
1647	14,059	"	
1648	9,894	Graunt	
1649	10,566	G.L.	
1650	8,764	Graunt	
1651	10,827	G.L.	
1652	12,569	"	
1653	10,087	Graunt	
1654	13,247	"	
1655	11,357	G.L.	
1656	13,921	Graunt	
1657	12,434	Anon (1759)	
1658	14,993	"	
1659	14,756	"	

<i>Year</i>	<i>Number of Deaths</i>	<i>Source</i>	<i>Remarks</i>
1660	15,118	G.L.	The Bills were remodelled in this year.
1661	19,771	"	
1662	16,554	Anon (1759)	
1663	15,356	G.L.	68,596 died of plague—7,165 in week 13th–19th September.
1664	18,297	"	
1665	97,306	"	
1666	12,738	"	
1667	15,842	"	
1668	17,278	"	
1669	19,432	"	
1670	20,198	"	
1671	15,729	"	
1672	18,230	"	
1673	17,504	"	Last case of plague in London.
1674	21,201	"	
1675	17,244	"	
1676	18,732	"	
1677	19,067	"	
1678	20,678	"	
1679	21,730	"	
1680	21,053	"	
1681	23,971	"	
1682	20,691	"	
1683	20,587	"	
1684	23,202	"	
1685	23,222	"	
1686	22,609	"	
1687	21,460	"	
1688	22,921	"	
1689	23,502	"	
1690	21,461	"	
1691	22,691	"	
1692	20,874	"	
1693	20,959	"	
1694	24,100	"	
1695	19,047	"	
1696	18,638	"	
1697	20,970	"	
1698	20,183	"	
1699	20,795	"	
1700	19,443	"	
1701	24,071	"	
1702	19,481	"	
1703	20,720	"	
1704	22,684	"	
1705	22,097	"	
1706	19,847	"	
1707	21,600	"	
1708	21,291	"	
1709	21,800	"	
1710	24,620	"	
1711	19,833	"	
1712	21,198	"	
1713	21,057	"	
1714	26,569	"	
1715	22,232	"	
1716	24,436	"	
1717	23,446	"	
1718	26,523	"	
1719	28,347	"	
1720	25,454	"	

<i>Year</i>	<i>Number of Deaths</i>	<i>Source</i>	<i>Remarks</i>
1721	26,142	Anon (1759), Maitland and Morris	
1722	25,750	"	
1723	29,197	"	
1724	25,952	"	
1725	25,523	"	
1726	29,647	"	
1727	28,418	"	
1728	27,810	"	The Bills were remodelled again and the deaths broken down into age groups. The area covered by the Bills remained unchanged till 1840.
1729	29,722	"	
1730	26,761	"	
1731	25,262	"	
1732	23,358	"	
1733	29,233	"	
1734	26,062	"	
1735	23,538	"	
1736	27,581	"	
1737	27,823	"	
1738	25,825	Anon (1759), and Morris	
1739	25,432	"	
1740	30,811	"	
1741	32,169	"	A footnote to this Bill states that 245 were omitted by neglect of the Parish Clerk of St. George, Hanover Square.
1742	27,483	"	
1743	25,200	"	
1744	20,606	"	
1745	21,296	"	
1746	28,157	"	
1747	25,494	"	
1748	23,869	"	
1749	25,516	"	
1750	23,727	"	
1751	21,028	"	
1752	20,485	"	
1753	19,276	"	
1754	22,696	"	
1755	21,917	"	
1756	20,872	"	
1757	21,313	"	
1758	17,576	"	
1759	19,604	Gentleman's Magazine (hereinafter referred to as G.M.)	
1760	19,830	"	
1761	21,063	"	
1762	26,326	"	
1763	26,143	G.L.	
1764	23,202	G.M.	
1765	23,230	"	
1766	23,911	"	
1767	22,612	"	
1768	23,639	"	
1769	21,847	"	
1770	22,434	"	
1771	21,780	"	
1772	26,053	"	

<i>Year</i>	<i>Number of Deaths</i>	<i>Source</i>	<i>Remarks</i>
1773	21,656	G.M.	
1774	20,884	"	
1775	20,514	"	
1776	19,048	"	
1777	23,334	"	
1778	20,399	"	
1779	20,420	"	
1780	20,517	"	
1781	{ 20,709 20,719	Creighton	The original for this year is not in the collection at Guildhall Library but there is a complete set from 1680 at the British Museum. (These have not been examined).
1782	17,918	G.M.	
1783	19,029	G.L.	The figure of 19,020 in the Gentleman's Magazine for this year appears to be a misprint.
1784	17,828	G.M.	
1785	18,919	"	
1786	20,454	"	
1787	19,349	"	
1788	19,697	"	
1789	20,749	"	
1790	18,038	"	
1791	18,760	"	
1792	20,213	"	
1793	21,749	"	
1794	19,241	"	
1795	21,179	"	
1796	19,288	Creighton	The Annual Bill was not printed in the Gentleman's Magazine for this year and there is no Bill in the collection at the Guildhall Library.
1797	17,014	G.M.	
1798	18,155	"	
1799	18,134	"	
1800	23,068	"	
1801	19,374	"	
1802	19,379	"	
1803	19,582	"	
1804	{ 17,034 17,038	Creighton G.M.	
1805	17,565	"	
1806	17,938	"	
1807	18,334	"	
1808	19,954	"	
1809	16,680	"	
1810	{ 19,893 19,983	Creighton	
1811	17,043	G.M.	
1812	18,295	"	
1813	17,322	"	
1814	{ 19,283 19,783	Creighton G.M.	
1815	19,560	"	
1816	20,316	"	
1817	19,968	"	
1818	19,705	"	
1819	19,228	G.L.	
1820	19,348	G.M.	
1821	18,451	"	
1822	18,865	"	
1823	20,587	G.L.	
1824	20,237	G.M.	
1825	21,026	"	
1826	20,758	"	
1827	22,292	"	
1828	21,709	"	

<i>Year</i>	<i>Number of Deaths</i>	<i>Source</i>	<i>Remarks</i>
1829	23,524	G.M.	
1830	21,645	"	
1831	25,337	"	
1832	28,606	"	
1833	26,577	G.L.	
1834	21,679	Creighton	
1835	21,415	"	
1836	18,229	"	
1837	21,063	"	
1838	52,698	General Register Office	Consumption 7,687 ; Old age 4,111 ; Typhus 4,078 ; Smallpox 3,817.
1839	45,411	"	
1840	46,281	"	

ANNEX B

Pages 183 to 186, which follow, form part of Appendix B. They are pages from the General Bills and accounts of Diseases and Casualties for the years 1657 and 1757 from 'A Collection of the Yearly Bills of Mortality from 1657 to 1758 inclusive' compiled, it is thought, by Dr. W. Heberden and published in 1759. The actual pages in the original volumes were photographed to make printing blocks.

1657.

A General BILL for this present Year,

Ending the 15th of December 1657.

According to the Report made to the Right Hon. the Lord Mayor of the City of LONDON,
By the Company of Parish Clerks of London.

	Bur. Pl.		Bur. Pl.		Bur. Pl.
A LBANS Wood-street	35	George Botolph-lane	7	Martins Ludgate	50
Alhallows Barking	95	Gregories	89	Martins Orgars	26
Alhallows Bread-street	21	Hellens	45	Martins Outwich	14
Alhallows Great	91	James Dukes-place	26	Martins Vintrey	59
Alhallows Honi-lane	5	James Garlickhith	32	Matthew Friday-street	12
Alhallows Leffe	43	John Baptist	19	Maudlins Milk-street	11
Alhallows Lombard-street	20	John Evangelist	6	Maudlins Old Fish-street	38
Alhallows Staining	38	John Zacharie	28	Michael Bassishaw	35
Alhallows the Wall	44	Katherine Coleman	49	Michael Cornhill	30
Alphage	30	Katherine Cree-church	58	Michael Crooked-lane	44
Andrew Hubbard	23	Lawrence Jewrie	48	Michael Queenhith	37
Andrew Undershaft	61	Lawrence Pountney	31	Michael Querne	16
Andrew Wardrobe	76	Leonard Eastcheap	9	Michael Royal	15
Anne Aldersgate	34	Leonard Foster-lane	41	Michael Wood-street	17
Anne Black Fryers	79	Magnus	25	Mildred Bread-street	26
Antholins	15	Margaret Lothbury	25	Mildred Poultre	21
Austins	16	Margaret Moses	9	Nicholas Acons	10
Barthol. Exchange	15	Margaret New Fish-street	23	Nicholas Coleabby	19
Bennets Fynck	27	Margaret Pattons	20	Nicholas Olaves	19
Bennets Grace-church	15	Mary Abchurch	21	Olaves Hart-street	48
Bennets Pauls Wharf	62	Mary Aldermanbury	33	Olaves Jewry	17
Bennets Sherehog	7	Mary Aldermay	35	Olaves Silver-street	35
Botolph Billingsgate	25	Mary le Bow	22	Pancras Soper-lane	5
Christ-church	114	Mary Bothaw	17	Peters Cheap	17
Christophers	16	Mary Cole-church	17	Peters Cornhill	22
Clements Eastcheap	12	Mary Hill	35	Peters Pauls Wharfe	29
Dionis Back-church	31	Mary Mounthaw	12	Peters Poor	24
Dunstons East	82	Mary Summerset	60	Stevens Coleman-street	100
Edmunds Lombard-street	20	Mary Stainings	6	Stevens Walbrook	15
Ethelborough	16	Mary Wool-church	25	Swithins	29
Faiths	17	Mary Woolnoth	22	Thomas Apostle	21
Fosters	28	Martins Iremonger	5	Trinity	24
Gabriel Fen-church	15				

In the ninety-seven Parishes within 3014 Of the Plague 0

Andrew Holborne	631	Botolph Algate	686	Saviours	466
Bartholomew Great	75	Botolph Bishopsgate	484	Sepulcres	617
Bartholomew Leffe	56	Dunstons West	194	Thomas Southwark	61
Brides	302	Georges Southwark	283	Trinity Minories	0
Bridewell	26	Giles Cripplegate	899	Pest-house	0
Botolph Aldersgate	161	Olaves Southwark	691		

In the sixteen Parishes without 5648 Of the Plague 2

1657.

Clements Danes ————417	Katherines Tower———142	Mary Whitechappel ———692 2
Covent Garden ————117	Leonards Shoreditch -——284	Magdalens Bermond. ———302
Giles in the Fields ———613	Martins in the Fields ———808	Savoy ————60
James Clarkenwell ———333		

In the Ten Out Parishes 3772 Of the Plague 2

Total of the	{ Burials ——— 12434
	{ Plague ——— 4
	{ Christenings — 6685

DISEASES and CASUALTIES.

A Bortive and Stillborne 463	Flox and Small Pox ——— 835	Murthered ——— 5
Aged ——— 869	Found dead in the Streets, &c. 9	Overlaid and Starv'd at } 44
Ague and Feaver ——— 997	French Pox ——— 25	Nurse ——— }
Apoplexy and Suddenly — 113	Gout ——— 8	Palsie ——— 20
Blasted and Planet ——— 5	Griefe ——— 10	Plague ——— 4
Bleeding ——— 5	Griping and Plague in } 446	Plurisie ——— 17
Bloudy Flux, Scowring, } 362	the Guts ——— }	Quinsie ——— 7
and Flux ——— }	Hang'd and made away } 24	Rickets ——— 317
Burnt and Scalded ——— 7	'emselves ——— }	Rising of the Lights — 203
Calenture ——— 3	Head-ach and Head- } 4	Rupture ——— 19
Cancer and Wolfe ——— 24	mouldshot ——— }	Scurvy ——— 71
Childbed ——— 236	Jaundies ——— 46	Sores, Ulcers, &c. ——— 40
Chrisomes and Infants — 1162	Jawfalne ——— 3	Spleen ——— 2
Cold and Cough ——— 30	Impoftume ——— 80	Spotted Feaver and Purples 56
Collick and Wind ——— 113	Kill'd by Accidents ——— 52	Starved ——— 3
Consumption and Tiffick 2757	King's Evil ——— 23	Stone and Strangury ——— 73
Convulsion and Cramp — 807	Leprosie ——— 0	Stopping of the Stomach 129
Cut of the Stone ——— 3	Lethargy ——— 6	Surfet ——— 137
Dropfie and Tympany — 631	Livergrowne ——— 38	Swine Pox ——— 1
Drowned ——— 63	Lunatick and Frenzy — 13	Teeth and Worms ——— 878
Executed ——— 20	Meagrome ——— 7	Thrush ——— 57
Falling Sicknefs ——— 1	Measles ——— 15	Vomiting ——— 16
Fiftula and Gangrene — 19	Mother ——— 0	Wen ——— 1

CHRISTENED { Males — 3396
Females 3289
In all — 6685

BURIED { Males — 6578
Females 5856
In all — 12434

Decreased in the Burials in the 123 Parishes, and at the Pest-house this Year 1487

Margaret { Christened 473	Stepney { Christened 876	Hackney { Christened 42
Westm. { Buried — 705	{ Buried — 1213	{ Buried — 96
Islington { Christened 67	Newington { Christened 123	Redriff { Christened 31
{ Buried — 112	{ Buried — 204	{ Buried — 51
Lambeth { Christened 137		
{ Buried — 231		

Total of { Burials in the above seven Parishes 2612
Christenings ——— 1749

A General

A General BILL of all the Christenings and Burials,

From the 14th of December 1756, to the 13th of December 1757.

According to the Report made to the King's most excellent Majesty,

By the Company of Parish Clerks of LONDON, &c.

Bur.		Bur.		Bur.	
St ALBAN in Wood-street	23	St Gregory by St Paul's	72	St Mary Mounthaw	23
Alhallows Barkin	65	St Helen near Bishopsgate	18	St Mary Somersfet	17
Alhallows in Bread-street	10	St James in Duke's Place	20	St Mary Staining	11
Alhallows the Great	22	St James at Garlickhithe	24	St Mary Woolchurch	0
Alhallows in Honey-lane	0	St John Baptist by Dowgate	28	St Mary Woolnoth	15
Alhallows the Lefs	17	St John the Evangelist	4	St Matthew in Friday-street	4
Alhallows in Lombard-street	14	St John Zachary	7	St Michael Baffishaw	23
Alhallows Staining	13	St Katherine Coleman	22	St Michael in Cornhill	7
Alhallows on London Wall	38	St Katherine Creechurch	31	St Michael in Crooked-lane	15
St Alphage near Sion College	32	St Laurence Jewry	17	St Michael at Queenhithe	14
St Andrew Hubbard	6	St Laurence Pountney	17	St Michael le Quern	10
St Andrew Undershaft	30	St Leonard in Eastcheap	9	St Michael Royal	10
St Andrew Wardrobe	42	St Leonard in Foster-lane	25	St Michael in Wood-street--	2
St Ann within Aldersgate	24	St Magnus by London Bridge	14	St Mildred in Bread-street--	7
St Ann in Black Friars	99	St Margaret in Lothbury	17	St Mildred in the Poultry	8
St Anthony, vulg. Antholin	2	St Margaret Moses	3	St Nicholas Acons	9
St Augustin, vulg. Austin	1	St Margaret in New Fish-str.	1	St Nicholas Coleabby	5
St Bartholomew by Exchange	12	St Margaret Pattens	9	St Nicholas Olave	5
St Benedict, v. Bennet Fink	14	St Martin Ironmonger-lane	5	St Olave in Hart-street	36
St Bennet Gracechurch -	0	St Martin at Ludgate	12	St Olave in the Old Jewry	11
St Bennet at Paul's Wharf	23	St Martin Orgars	12	St Olave in Silver-street	29
St Bennet Sherehog	0	St Martin Outwich	9	St Pancras in Pancras-lane	3
St Botolph at Billingsgate	10	St Martin Vintrey	24	St Peter in Cheapside	3
Christ Church Parish	75	St Mary Abchurch	9	St Peter in Cornhill	12
St Christopher's Parish -	11	St Mary in Aldermanbury--	14	St Peter near Paul's Wharf	13
St Clement near Eastcheap	8	St Mary Aldermay	13	St Peter Poor in Broad-str.	12
St Dionis Backchurch	22	St Mary le Bow in Cheapside	13	St Stephen in Coleman-street	47
St Dunstan in the East -	59	St Mary Bothaw at Dowgate	11	St Stephen in Walbrook	5
St Edmund the King	10	St Mary Colechurch	0	St Swithin at London-stone	9
St Ethelburga's Parish	25	St Mary Hill by Billingsgate	27	St Thomas the Apostle	6
St Faith under St Paul's	38	St Mary Magd. in Milk-str.	0	Trinity Parish	12
St Gabriel in Fenchurch-str.	8	St Mary Magd. Old Fish-str.	18	St Vedast, alias Foster	20
St George in Botolph-lane	12				

Christened in the ninety-seven Parishes within the Walls 1086

Buried 1673

St Andrew in Holborn — 864	Bridewell Precinct — 0	St Olave in Southwark — 255
St Bartholomew the Great -- 33	St Bridget, vulg. St Bride's 157	St Saviour in Southwark — 567
St Bartholomew the Lefs — 15	St Dunstan in the West — 198	St Sepulchre's Parish — 468
St Botolph by Aldersgate — 197	St George in Southwark — 272	St Thomas in Southwark — 256
St Botolph by Aldgate — 672	St Giles by Cripplegate — 404	Trinity in the Minories — 31
St Botolph by Bishopsgate — 432	St John in Southwark — 311	

Christened in the seventeen Parishes without the Walls 3665

Buried 5132

St Ann in Middlesex — 210	St James at Clerkenwell — 565	St Mary at Lambeth — 414
Christ Church in Surrey — 190	St John at Clerkenwell — 153	St Mary Magd. Bermondsey — 424
Christ Church in Middlesex — 546	St John at Hackney — 198	St Mary at Newington — 283
St Dunstan at Stepney — 496	St John at Wapping — 299	St Mary at Rotherhith — 236
St George in Bloomsbury — 351	St Katherine near the Tower — 185	St Mary in Whitechapel — 980
St George in Middlesex — 439	St Leonard in Shoreditch — 828	St Matthew at Bethnal Green — 465
St George by Queen's Square — 337	St Luke in Middlesex — 946	St Paul at Shadwell — 415
St Giles in the Fields — 959	St Mary at Islington — 194	

Christened in the twenty-three Out Parishes in Middlesex and Surrey 5782 Buried 10113

St Ann in Westminster — 263	St John the Evangelist — 102	St Mary le Strand — 58
St Clement Danes — 325	St Margaret in Westminster — 850	The Precinct of the Savoy — 135
St George by Hanover-sq. — 717	St Martin in the Fields — 875	St Paul in Covent Garden — 172
St James in Westminster — 898		

Christened in the ten Parishes in the City and Liberties of Westminster 3520 Buried 4395

DISEASES and CASUALTIES.

A Bortive and Stillborn 569	Fever, Malignant Fe-	Mortification — 222	B Broken Limbs — 4
Aged — 1545	ver, Scarlet Fever. } 2564	Palsy — 55	Bruised — 9
Ague — 4	Spotted Fever, and	Pleurisy — 13	Burnt — 9
Apoplexy and Suddenly 205	Purples —	Quinzy — 14	Drowned — 132
Asthma and Tiflick — 401	French Pox — 53	Rash — 1	Excessive Drinking — 7
Bedridden — 7	Gout — 58	Rheumatism — 8	Executed — 6
Bleeding — 5	Gravel, Stone, and	Rickets — 16	Found dead — 9
Bloody Flux — 6	Strangury — } 21	Rising of the Lights — 2	Killed by Falls and
Bursten and Rupture — 12	Grief —	Scald Head — 1	several other Acci-
Cancer — 58	Head-ach —	Sciatica — 1	dents — } 64
Canker — 10	Headmoldshot, Hor-	Scurvy — 3	Killed themselves — 40
Childbed — 175	shoehead, and Wa-	Small Pox — 3296	Licked by a mad Dog — 2
Colick, Gripes, and	ter in the Head } 42	Sores and Ulcers — 16	Murdered — 3
Twisting of the } 64	Jaundies — 98	Sore Throat — 22	Overlaid — 22
Guts —	Imposthume — 13	St Anthony's Fire — 3	Poisoned — 1
Cold — 1	Inflammation — 76	Stoppage in the Stomach — 16	Scalded — 2
Consumption — 3973	Itch — 3	Surfeit — 2	Smothered — 1
Convulsion — 5211	Leptosy — 1	Swelling — 5	Starved — 2
Cough and Hooping } 239	Lethargy — 7	Swine Pox — 1	Suffocated — 5
Cough —	Livergrown — 2	Teeth — 766	
Drooly — 864	Lunatick — 77	Thrush — 78	
Evil — 14	Measles — 24	Vomiting and Loofness — 11	
Fistula — 11	Miscarriage — 6	Worms — 11	
Flux — 6			
			Total 318

CHRISTENED { Males — 7195	BURIED { Males — 10821
{ Females 6858	{ Females 10492
{ In all 14053	{ In all — 21313

Whereof have died,

Under Two Years of Age 7095	Thirty and Forty — 1906	Seventy and Eighty 1024	A Hundred and One — 2
Between Two and Five — 2411	Forty and Fifty — 1906	Eighty and Ninety — 431	A Hundred and Two — 1
Five and Ten — 948	Fifty and Sixty — 1710	Ninety and a Hundred 74	A Hundred and Three — 1
Ten and Twenty — 687	Sixty and Seventy — 1418	A Hundred — 2	A Hundred and Five — 2
Twenty and Thirty — 1695			

Increased in the Burials this Year 441

H h

A General

Causes of Death—London 1857

Smallpox	156		Hernia	152	
Measles	1,341		Ileus	162	
Scarlatina	1,599		Intussusception	54	
Whooping Cough	2,527		Stricture of the intestinal canal	48	
Croup	501		Disease of Stomach, etc. .. .	255	
Thrush	153		Disease of Pancreas	3	
Diarrhoea	3,115		Hepatitis	152	
Dysentery	183		Jaundice	201	
Cholera	214		Disease of liver	648	
Influenza	132		Disease of spleen	17	
Purpura and Scurvy	36		<i>Digestive diseases</i>	3,307	
Ague	19		Nephritis	27	
Remittent Fever	85		Nephria (or Bright's disease) ..	263	
Infantile Fever	38		Ischuria	9	
Typhus	2,096		Diabetes	53	
Metria (or Puerperal Fever) ..	118		Stone	27	
Rheumatic Fever	94		Cystitis	35	
Erysipelas	294		Stricture of the Urethra	43	
Syphilis	227		Disease of Kidneys, etc.	320	
Noma (or Canker)	37		<i>Urinary Diseases</i>	777	
<i>Zymotic diseases</i>	12,965		Paramenia	12	
Haemorrhage	172		Ovarian Dropsy	50	
Dropsy	699		Childbirth (see Metria)	247	
Abscess	126		Disease of Uterus and Organs		
Ulcer	54		of Generation	145	
Fistula	23		<i>Childbirth and Dis-</i>		
Mortification	179		<i>eases of the Organs</i>		
Cancer	1,142		of Generation	454	
Gout	54		Arthritis	9	
<i>Diseases of uncertain</i>			Rheumatism	184	
<i>or variable sect</i>	2,449		Disease of Joints	193	
Scrofula	337		<i>Diseases of Organs of</i>		
Tabes mesenterica	920		<i>locomotion</i>	386	
Phthisis (or Consumption) ..	7,369		Carbuncle	64	
Hydrocephalus	1,494		Phlegmon	29	
<i>Tubercular diseases</i>	10,120		Disease of skin	54	
Cephalitis	564		<i>Diseases of Integum-</i>		
Apoplexy	1,361		<i>entary system</i>	147	
Paralysis	1,123		Cyanosis	74	
Delirium tremens	138		Spina Bifida	39	
Chorea	3		Other malformations	74	
Epilepsy	367		<i>Malformations</i>	187	
Tetanus	17		<i>Premature Birth and</i>		
Insanity	77		<i>Debility</i>	1,704	
Convulsions	1,954		<i>Atrophy</i>	1,895	
Disease of Brain, etc.	672		<i>Age</i>	2,338	
<i>Diseases of the nervous</i>			<i>Sudden Deaths (causes</i>		
<i>system</i>	6,276		<i>unascertained)</i>	448	
Pericarditis	101		Intemperance	99	
Aneurism	68		Privation of Food	32	
Disease of Heart	2,092		Want of Breast-milk	470	
<i>Circulatory diseases</i>	2,261		Neglect	11	
Laryngitis	288		Cold	4	
Bronchitis	5,710		Poison	99	
Pleurisy	129		Burns and Scalds	266	
Pneumonia	3,853		Hanging and suffocation	315	
Asthma	626		Drowning	340	
Disease of Lungs	277		Fractures and contusions	661	
<i>Respiratory diseases</i>	10,883		Wounds	107	
Teething	633		Other violence	64	
Quinsy	79			2,333	
Gastritis	83		<i>Causes not specified</i>	173	
Enteritis	290				
Peritonitis	233				
Ascites	155				
Ulceration of Intestines	142				
			TOTAL	59,103	

By age

Under 1 year ..	13,931
1 year and under 2 ..	5,899
2—4 years	5,682
5—9 "	2,113
10—14 "	850
15—24 "	2,934
25—34 "	3,879
35—44 "	4,638
45—54 "	4,563
55—64 "	5,059
65—74 "	5,186
75—84 "	3,455
85—94 "	860
95 years and upwards	54

59,103

Births	89,577	{	Males ..	45,885
			Females ..	43,692
Deaths	59,103	{	Males ..	29,769
			Females ..	29,334
Population (estimated) ..	2,636,174	{	Males ..	1,229,512
			Females ..	1,406,662

Birth rate = 34 per 1,000 population.

Death rate = 22 per 1,000 population.

Causes of Death—Administrative County of London, 1957

(Deaths of infants under one year shown separately towards the end).

Syphilis and its sequelae	146
Typhoid and paratyphoid fever	2
Cholera	—
Dysentery	3
Scarlet fever and streptococcal sore throat	1
Erysipelas	—
Diphtheria	1
Whooping cough	—
Meningococcal infections	6
Tetanus	—
Acute poliomyelitis	12
Measles	11
Acute infectious encephalitis	4
Smallpox	—
Typhus	—
Infectious hepatitis (hepatitis, jaundice)	35
Other infective and parasitic diseases	30
<i>Total infective and parasitic diseases, excluding tuberculosis (Zymotic diseases)</i>	
Cancer of stomach	1,020
Cancer of lung, bronchus	1,990
Cancer of breast	705
Cancer of uterus	321
Cancer of other sites	3,730
Leukemia, aleukemia	185
Non-cancerous growths	126
<i>Total malignant and non-malignant growths</i>	
Tuberculosis of respiratory system (phthisis or consumption)	283
Tuberculosis of other forms (scrofula, tabes mesenterica, hydrocephalus)	95
<i>Total tubercular diseases</i>	
Diabetes mellitus	378
Anaemias	146
Vascular lesions of central nervous system	97
Non-meningococcal meningitis	3,886
	24

Rheumatic fever (rheumatic fever and pericarditis)	..	..	..	..	15	
Chronic rheumatic heart disease	..	..	..	..	707	
Coronary disease, angina	..	..	..	..	5,542	
Degenerative heart disease	..	..	..	..	3,580	
Other diseases of the heart	..	..	..	..	685	
Hypertension with heart disease	..	..	..	..	949	
Hypertension without heart disease	..	..	..	..	753	
Diseases of arteries	..	..	..	..	806	
Other diseases of circulatory system	..	..	..	..	270	
<i>Total diseases of the heart and circulatory system</i>	..	..	..	..		13,307
Influenza	..	..	..	..	384	
Pneumonia	..	..	..	..	1,998	
Bronchitis	..	..	..	..	2,673	
Pleurisy	..	..	..	..	4	
Pneumoconiosis	..	..	..	..	6	
Bronchiectasis	..	..	..	..	119	
Other diseases of respiratory system	..	..	..	..	192	
<i>Total respiratory diseases</i>	..	..	..	..		5,376
Ulcer of stomach and duodenum	..	..	..	..	499	
Appendicitis	..	..	..	..	73	
Intestinal obstruction and hernia	..	..	..	..	252	
Gastritis, enteritis and diarrhoea	..	..	..	..	173	
Cirrhosis of liver	..	..	..	..	103	
Other diseases of digestive system	..	..	..	..	257	
<i>Total diseases of digestive system</i>	..	..	..	..		1,357
Nephritis and nephrosis	..	..	..	..	237	
Hyperplasia of prostate	..	..	..	..	248	
Other diseases of genito-urinary system	..	..	..	..	320	
<i>Total diseases of genito-urinary system</i>	..	..	..	..		805
Maternal deaths : Due to abortion	..	..	..	..	13	
Puerperal fever (metria)	..	..	..	..	—	
Other complications of childbirth	..	..	..	..	15	
<i>Total maternal deaths</i>	..	..	..	..		28
Diseases of skin and cellular tissue	..	..	..	..		29
Arthritis and rheumatism	..	..	..	..		64
Deaths of infants under one year of age—						
Whooping cough	..	..	..	..	1	
Meningococcal infections	..	..	..	..	5	
Other infective and parasitic diseases	..	..	..	..	7	
Non-meningococcal meningitis	..	..	..	..	7	
Pneumonia	..	..	..	..	117	
Bronchitis	..	..	..	..	35	
Other diseases of respiratory system	..	..	..	..	4	
Gastritis, enteritis and diarrhoea	..	..	..	..	22	
Congenital malformations	..	..	..	..	209	
Prematurity	..	..	..	..	225	
Injury at Birth	..	..	..	..	157	
Post-natal asphyxia and atelectasis	..	..	..	..	220	
Haemolytic diseases	..	..	..	..	27	
Accidental mechanical suffocation	..	..	..	..	12	
Other causes	..	..	..	..	112	
<i>Total deaths in early infancy</i>	..	..	..	..		1,160
Senility without psychosis (age)	..	..	..	..		330
Road traffic accidents	..	..	..	..	299	
Accidental poisoning by solids and liquids	..	..	..	..	32	
Accidental poisoning by gases	..	..	..	..	82	
Falls	..	..	..	..	316	
Burns and scalds	..	..	..	..	45	
Suicide	..	..	..	..	498	
Homicide	..	..	..	..	18	
Other violent causes	..	..	..	..	166	
<i>Total deaths from violent causes</i>	..	..	..	..		1,456
All other causes	..	..	..	..		307
TOTAL	..	..	..	..		37,078

By age

Under 1 year ..	1,160
1 year and under 2 ..	68
2—4 years	100
5—9 „	75
10—14 „	69
15—24 „	275
25—34 „	478
35—44 „	1,119
45—54 „	2,947
55—64 „	6,070
65—74 „	9,930
75—84 „	10,778
85 years and upwards	4,009
	37,078

Births	52,733	{ Males .. 27,214
		{ Females .. 25,519
Deaths	37,078	{ Males .. 19,142
		{ Females .. 17,936
Population (estimated) ..	3,254,000	{ Males .. 1,522,000
		{ Females .. 1,732,000

Birth rate = 16·2

Death rate = 11·4

APPENDIX B

SICKNESS IN RESIDENTIAL NURSERIES

It was decided in 1954 to make a pilot survey of sickness in residential nurseries with the object of trying to ascertain :

- (a) the amount of sickness in a nursery population ;
- (b) the causes of such sickness ;
- (c) how (a) and (b) varied according to
 - (i) the number of children exposed to risk
 - (ii) the turnover of children ;
- (d) how often, where physical separation between blocks or floors existed, there was evidence of spread of sickness from one part of the nursery to another ;
- (e) the proportion of introductions of infectious disease attributable to known outside sources, and
- (f) the extent of the spread of infectious disease.

Methods

For the purpose of this pilot survey St. Margaret's residential nursery in London and the Downs residential nursery at Sutton, Surrey (since closed) were used. Both establishments were in former hospital premises, the first being a single building near the centre of London in which the children were accommodated on two separate floors, and the second two separate blocks in an open situation. The age distribution of the children in the two nurseries was roughly comparable but there were proportionately more children aged under 1 year at St. Margaret's than the Downs (some 18 per cent. and 11 per cent. respectively at the end of 1956). Interchange of children between floors or blocks was not usual.

It is the practice for all nurseries to notify to the department cases of infectious disease and for this survey this practice was extended to cover all sickness.

This information was supplemented by a discharge report to indicate the date of recovery of the children from a spell of sickness (including discharge from hospital in cases of sickness requiring hospital treatment) and by a weekly strength return including details of admissions or discharges, so that the turnover and numbers exposed to risk could be calculated. It will be apparent that the two nurseries were not entirely closed communities partly because of the constant turnover of children and partly because there was contact with relatives through visits to the nursery and also through children, at times, going home 'on leave'.

Results

Table (i) shows the basic data relating to the two nurseries and Table (ii) the sickness experienced therein during the two years 1955 and 1956 by days of sickness, number of children sick, and the number of spells of sickness.

In Table (iii) the sickness experience shown in Table (ii) is related to the basic data in Table (i), and expressed as sickness rates having regard to the number of children at risk and the duration of exposure to risk of illness. For the purpose of these tabulations infective and non-infective illnesses were kept separate. The infective group included any disease of bacterial, virus or fungal origin and was not limited to the specific infectious diseases. All cases of tonsillitis, bronchitis and pneumonia were included in this group. It is at once apparent from the tables that this group includes most of the sickness occurring in the nurseries.

Amount of sickness

From column 2 of Table (iii) it is seen that over the two-year period about half the children at one time or another had an illness of some kind. Column 3 gives the information that in the nurseries there was an average of one spell of illness for each child in the two years. In general, therefore, a quarter of the children were ill each year; and the numbers of spells of illness each year was two for each ill child or half for each child in the nurseries.

In the Luton survey¹ the incidence of illness in children under one year of age, for the most part living at home, was 0.4 incidents a child per annum compared with 0.5 among the children aged 0-4 years in the present survey. In the Newcastle 'Thousand families'² survey there was an average incidence of two illnesses a child per annum in the first five years of life, over 80 per cent. of the Newcastle 'episodes' being of an infective nature.

Comparisons between the Luton and Newcastle surveys and the present survey are not strictly justified. The children differ in age constitution and it is well known that sickness rates differ at different ages. Moreover the conditions of life of the children differ; the present survey being limited to these two large residential groups and the Luton and Newcastle groups being almost entirely children living in their own homes. Also in making these comparisons no notice has been taken of possible differences in the definition of reportable illness. Nevertheless it can be said that there is in the figures from the Downs and St. Margaret's nurseries, no sign of a level of illness greatly in excess of expectation.

From columns 2 and 3 of Table (iii) an impression of similarity between the nurseries is obtained which is at once dispelled by reference to column 4 which discloses a considerable difference between the two nurseries in the average days of sickness for each sick person. Further details are provided by Table (iv) which gives the information set out for different causes of infective illness. One cause of the difference in days of sickness between the nurseries emerges from consideration of the figures for gastro-enteritis. At the Downs nursery the average duration of illness from this cause was 15.6 days, compared with 30.6 days in the St. Margaret's children. This is probably due, in large measure, to the fact that the Downs children did not receive routine bacteriological tests of freedom from *E.coli* serotypes during a large part of the survey. (It should be mentioned that for the purposes of this analysis symptomless excretors of *E.coli* have been regarded as cases of gastro-enteritis.) In contrast to the findings with gastro-enteritis is the fact that the duration of illness of Sonne dysentery was almost identical at each nursery. The three-week period of isolation, contrasted with the extremely short period of a day or two in which symptoms are present, demonstrates the price that must be paid for the attempt to control this disease by segregation of infected children.

Further consideration of Table (iv) shows that in both nurseries infective illness of one kind or another accounted for practically all the sickness encountered, a finding which in view of the age of the children was not unexpected.

Both nurseries had outbreaks of Sonne dysentery and measles. In view of the universality of these diseases during epidemics it would have been surprising if the nurseries had escaped.

Whereas St. Margaret's nursery had an excess of gastro-enteritis and chicken-pox, the Downs had a comparatively high incidence of tonsillitis and ringworm. The excess of gastro-enteritis at St. Margaret's was largely explained by the routine search for symptomless excretors of *E.coli* serotypes in that nursery and the somewhat higher proportion of infants under one at that nursery. The ringworm epidemic at the Downs appeared first of all as scaly patches on the hair margin with minimal involvement of the scalp and had spread within the nursery before its true nature was appreciated.

¹ *Illness in Infancy—A comparative study of infant sickness and infant mortality in Luton*—R. M. Dykes (1950), p.p. 9-12.

² *A Thousand Families in Newcastle-upon-Tyne*, by J. Spence, W. S. Walton, F. J. W. Miller and S. D. M. Court—p. 32.

Effect of nursery size and turnover

It was hoped that some information might be forthcoming on the manner in which the size of the nursery and the relative number of children admitted during the year per nursery place affected the amount of sickness in the nursery. In the event, as only two nurseries were included in the survey this proved impossible.

From Table (iii) it is seen that the incidence of sickness at the two nurseries judged by children sick and spells of sickness per 100 children was roughly equal. It is a common experience that the rate of sickness is greater in a large institution than a small one: moreover, one would expect the sickness rates to be higher in a place that had a high turnover per nursery place. Whether these factors operated during the survey period it is not possible to say because the roughly equal sick rates in the two nurseries may be the result of two opposing forces, viz., the increased size of the Downs nursery making for higher sickness rates, and the slower turnover at that nursery (see last column of Table (i)) producing lower sickness rates.

Spread from one unit to another

At St. Margaret's nursery the children were accommodated on two floors each of which was organised independently with separate staff. At the Downs nursery the children were housed in two separate blocks, each with its own staff, for the greater part of the time of the survey. Towards the end of the second year one of the blocks was closed, so there was no further opportunity of block to block spread.

It is the practice when infectious disease occurs to cease to admit or discharge children from the affected block or floor and to continue admission and discharges to the unaffected block or floor. The justification for limiting quarantine in this way rests upon the assumption that infection can be contained in the one block or floor. Considerable interest therefore attaches to the evidence on this subject in the present survey.

Secondary cases were defined as those cases of the same disease occurring in the period between the minimum and maximum serial interval after a primary case.

In Table (v) it is seen that, excluding in the case of the Downs nursery the period in which only one block was open, there were during the survey 105 outbreaks at St. Margaret's and 99 at the Downs. At each nursery about a third of the outbreaks gave rise to secondary cases. Only 5-6 per cent. of the outbreaks at either nursery spread between blocks or floors. The policy of stopping admissions and discharges to the affected unit appears to be abundantly justified by these figures. The diseases which did spread from floor to floor at St. Margaret's nursery were chicken-pox (a most infectious disease), gastro-enteritis on three occasions only out of 46 (this being quite a creditable result in view of the high infectivity of the *E. coli* serotypes) and tonsillitis once. At Downs nursery inter-block spread occurred with measles (another most infectious disease), tonsillitis, glandular fever, ringworm and common cold.

Sources of introduction of infection

Whenever a primary case of infectious disease was discovered in either nursery an attempt was made to find the source of the infection. Of 232 primary cases a source outside the nursery was discovered in 38 (16 per cent.). In 29 of these cases the source was in the child's home, and in 7 it was in a hospital from which the child was admitted to the nursery. The origin of the remaining 194 cases was never found. Sometimes it is suggested that children known to have been in contact with infection should be isolated in order to prevent the introduction of infection. It is obvious from the figures given above that only a very small part of the introduced infection is susceptible to prevention in this way. Unfortunately, it is not possible from the data in this survey to find out what proportion of the children known to be in contact with infectious

disease before admission to the nursery subsequently developed the disease. The experience of the unit for contacts of infectious diseases admitted to the Council's children's homes in 1937 was that only 10 per cent. of the contacts subsequently developed the disease*.

Primary and secondary cases

In order to achieve uniformity in the survey the decision as to whether a case of infectious disease was primary or secondary was made quite arbitrarily. For each infectious disease minimum and maximum serial intervals were estimated, these being the limits of time after a primary case during which secondary cases might be expected from a knowledge of the limits of the incubation period. Any case occurring within the period between the minimum and maximum serial intervals after another case was regarded as a secondary case ; all other cases were called primary cases. Possible errors in attribution arising from this method are fully realised.

The likelihood of spread of infection within the nursery

It will be seen from Table (v) that the likelihood of spread of infection was remarkably similar in the two nurseries. At St. Margaret's secondary cases followed 31 out of 105 primary cases (30 per cent.). At the Downs primary introductions produced secondary cases in 40 out of 124 cases (32 per cent.). At both nurseries Sonne dysentery cases gave rise to secondary spread in nearly two-thirds of the primary introductions, and in individual nurseries over the period the common cold, tonsillitis and gastro-enteritis showed a degree of dispersibility somewhat less than that of dysentery when measured in this way. As would be expected measles and chicken-pox on the few occasions on which they were introduced were seldom limited to one case.

Degree of spread as judged by secondary attack rates

It is customary to calculate secondary attack rates by using the number of secondary cases as the numerator and the number exposed to risk as the denominator. As the latter figure varied very considerably at different periods during the survey this method of calculation could not be used. The index of dispersal of infection used was obtained merely by dividing the number of secondary cases by the total number of primary cases. The results are seen in Table (vi) from which it is noted that the two diseases giving rise to the widest spread in the nurseries were measles and Sonne dysentery.

* Report for the year 1937 of the School Medical Officer (*Annual Report of the Council, 1937, Vol. III, Part II*).

TABLE (i)—Basic data—1st January, 1955 to 31st December, 1956.

Nursery	Block or floor	Capacity	Total days of residence in the two years (daily strength for 731 days) (a)	Number of children at 1.1.55	Admissions during 1955-56	Total children at risk during the two years (Cols. 3 and 4)	Turnover (admissions ÷ no. of children present on 1.1.55)
		(1)	(2)	(3)	(4)	(5)	(6)
Downs	Anne	70	45,716	55	215	270	3.91
	Charles	(b) 70 (—)	29,227	65	161	226	2.45
	Total	(b) 140 (70)	74,943	120	376	496	3.13
St. Margaret's	1st floor	40	27,164	40	195	235	4.88
	2nd floor	34	21,784	33	116	149	3.52
	Total	74	48,948	73	311	384	4.26

(a) Includes days sick in nursery but not days sick in hospital.

(b) Charles House closed on 28th May, 1956 ; all children transferred to Anne House and capacity reduced to figure in brackets.

TABLE (ii)—Sickness—1st January, 1955 to 31st December, 1956

Nursery	Block or floor	Total sickness			Infective sickness			Non-infective sickness		
		Child days (a) (1)	Children (b) (2)	Spells (c) (3)	Child days (a) (4)	Children (b) (5)	Spells (c) (6)	Child days (a) (7)	Children (b) (8)	Spells (c) (9)
Downs	Anne . .	5,277	172	337	5,006	158	307	271	28	30
	Charles . .	3,085	91	161	2,764	95	147	321	11	14
	Total . .	8,362	250 (d)	498	7,770	244 (d)	454	592	37 (d)	44
St. Margaret's . .	1st floor . .	4,831	112	233	4,661	108	211	170	19	22
	2nd floor . .	2,785	74	160	2,744	73	151	41	9	9
	Total . .	7,616	181 (d)	393	7,405	176 (d)	362	211	28	31

(a) Includes days sick in both nursery and hospital.

(b) Number of children sick at any time during the whole period of two years whilst in the same block or the same nursery.

(c) Total number of illnesses experienced during the two years, i.e., a child having two illnesses is counted twice in this column.

(d) If a child moved from one block or floor to the other part of the nursery he/she is treated as a 'new' person in that block but not in the overall figure for the establishment, hence the addition of the numbers of persons by separate blocks or floors exceeds the total for the nursery.

TABLE (iii)—Sickness related to size, number of children, spells of sickness and duration of sickness—1st January, 1955 to 31st December, 1956

Nursery	Block or floor	Total sickness				Infective sickness				Non-infective sickness			
		Days of sickness per 100 days exposed to risk (1)	Children sick per 100 children (2)	Spells per 100 children (3)	Average number of days sickness per child sick (4)	Days of sickness per 100 days exposed to risk (5)	Children sick per 100 children (6)	Spells per 100 children (7)	Average number of days sickness per child sick (8)	Days of sickness per 100 days exposed to risk (9)	Children sick per 100 children (10)	Spells per 100 children (11)	Average number of days sickness per child sick (12)
Downs	Anne . .	11.5	64	125	30.7	11.0	59	114	31.7	0.6	10	11	9.7
	Charles . .	10.6	40	71	33.9	9.5	42	65	29.1	1.1	5	6	29.2
	Total . .	11.2	50	100	33.4	10.4	49	92	31.8	0.8	7	9	16.0
St. Margaret's	1st floor	17.8	48	99	43.1	17.2	46	90	43.2	0.6	8	9	8.9
	2nd floor	12.8	50	107	37.6	12.6	49	101	37.6	0.2	6	6	4.6
	Total . .	15.6	47	102	42.1	15.1	46	94	42.1	0.4	7	7	7.5

TABLE (iv)—Causes of infective sickness in Downs and St. Margaret's Nurseries—1st January, 1955 to 31st December, 1956

Specific infectious disease	Downs Nursery							St. Margaret's Nursery						
	Child days sickness		Children		Spells		Days sickness per spell	Child days sickness		Children		Spells		Days sickness per spell
	Number (1)	Per cent. (2)	Number (3)	Per cent. (4)	Number (5)	Per cent. (6)		Number (1)	Per cent. (2)	Number (3)	Per cent. (4)	Number (5)	Per cent. (6)	
Chicken pox	6	0.1	1	0.3	1	0.2	6.0	659	8.9	61	19.6	61	16.9	10.8
Common cold	407	5.2	50	13.2	62	13.7	6.6	113	1.5	20	6.4	22	6.1	5.1
Conjunctivitis	3	0.0	1	0.3	1	0.2	3.0	28	0.4	4	1.3	4	1.1	7.0
Gastro-enteritis	203	2.6	12	3.2	13	2.9	15.6	2,418	32.6	65	20.9	79	21.8	30.6
Gingivitis	39	0.5	5	1.3	5	1.1	7.8	—	—	—	—	—	—	—
Glandular fever	359	4.6	11	2.9	11	2.4	32.6	53	0.7	1	0.3	1	0.3	53.0
Influenza	23	0.3	4	1.1	4	0.9	5.8	12	0.2	2	0.6	2	0.5	6.0
Jaundice	72	0.9	1	0.3	1	0.2	72.0	116	1.6	4	1.3	4	1.1	29.0
Measles	1,549	19.9	72	19.1	72	15.9	21.5	734	9.9	45	14.5	45	12.4	16.3
Mumps	—	—	—	—	—	—	—	45	0.6	7	2.3	7	1.9	6.4
Pneumonia	542	7.0	27	7.1	27	5.9	20.1	132	1.8	5	1.6	6	1.7	22.0
Poliomyelitis	28	0.4	1	0.3	1	0.2	28.0	—	—	—	—	—	—	—
Ringworm	1,823	23.5	21	5.6	26	5.7	70.1	—	—	—	—	—	—	—
Salmonella	48	0.6	1	0.3	1	0.2	48.0	283	3.8	4	1.3	6	1.7	47.2
Scabies	—	—	—	—	—	—	—	51	0.7	1	0.3	1	0.3	51.0
Sonne dysentery	683	8.8	24	6.3	27	5.9	25.3	2,621	35.4	77	24.8	108	29.8	24.3
Staphylococcal infection	—	—	—	—	—	—	—	4	0.1	1	0.3	1	0.3	4.0
Tonsillitis	936	12.1	78	20.7	92	20.3	10.2	13	0.2	2	0.6	2	0.5	6.5
Whooping cough	82	1.1	3	0.8	3	0.7	27.3	40	0.5	1	0.3	1	0.3	40.0
Total	6,803	87.6	312	82.8	347	76.4	19.6	7,322	98.9	300	96.4	350	96.7	20.9
Other non-specific infective sickness	967	12.4	65	17.2	107	23.6	9.0	83	1.1	11	3.6	12	3.3	6.9
TOTAL INFECTIVE SICKNESS	7,770	100.0	377 (a)	100.0	454	100.0	17.1	7,405	100.0	311 (a)	100.0	362	100.0	20.5
TOTAL OTHER SICKNESS ..	592	—	37	—	44	—	13.5	211	—	28	—	31	—	6.8

(a) This figure exceeds the number of children in Table (ii) because in this table a child is shown more than once if it had more than one disease.

TABLE (v)—*Spread of specific infective sickness*

<i>Disease with minimum and maximum serial interval for secondary cases</i>	<i>St. Margaret's (1.1.55—31.12.56)</i>			<i>Downs (1.1.55—28.5.56)</i>			<i>Downs* (29.5.56—31.12.56)</i>	
	<i>Outbreaks</i>	<i>Outbreaks producing secondary cases</i>	<i>Outbreaks which spread from one floor to the other</i>	<i>Outbreaks</i>	<i>Outbreaks producing secondary cases</i>	<i>Outbreaks which spread from one block to the other</i>	<i>Outbreaks</i>	<i>Outbreaks producing secondary cases</i>
Chicken pox (14–19 days) ..	2	2	2	1	—	—	—	—
Common cold (1–3 days) ..	15	4	—	30	11	1	2	—
Conjunctivitis (1–2 days) ..	1	1	—	1	—	—	—	—
Gastro-enteritis (1–7 days) ..	46	10	3	4	1	—	1	—
Gingivitis (1–2 days) ..	—	—	—	4	—	—	—	—
Glandular fever (5–15 days) ..	1	—	—	1	1	1	1	—
Influenza (1–3 days) ..	2	—	—	1	1	—	—	—
Jaundice (infective hepatitis) (25–35 days) ..	1	1	—	—	—	—	1	—
Measles (10–16 days) ..	5	2	—	3	2	1	—	—
Pneumonia (1–7 days) ..	5	—	—	12	1	—	3	1
Poliomyelitis (7–14 days) ..	—	—	—	1	—	—	—	—
Ringworm (7–21 days) ..	—	—	—	3	2	1	—	—
Salmonella ..	4	—	—	1	—	—	—	—
Scabies (1–3 days) ..	1	—	—	—	—	—	—	—
Sonne dysentery (1–7 days) ..	17	10	—	2	—	—	4	4
Staphylococcal infection ..	1	—	—	—	—	—	—	—
Tonsillitis (1–5 days) ..	3	1	1	32	12	1	13	4
Whooping cough (7–21 days)	1	—	—	3	—	—	—	—
ALL DISEASES ..	105	31	6	99	31	5	25	9

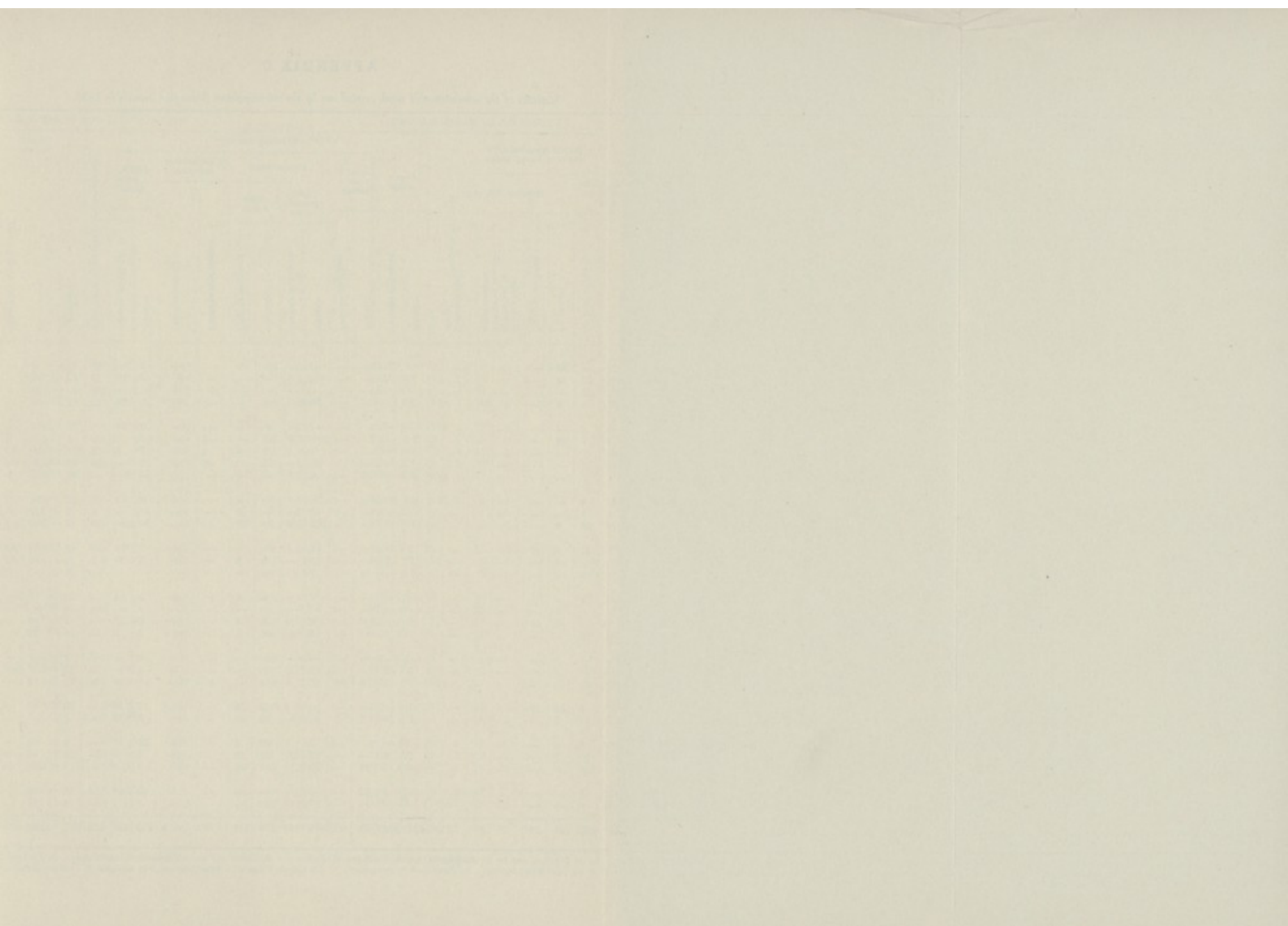
* Charles House closed 28th May, 1956, and, therefore, spread to the other block did not apply.

TABLE (vi)—*Spread of specific infection—Index of spread (both nurseries combined), 1st January, 1955, to 31st December, 1956*

<i>Disease</i>	<i>Total number of primary cases (a)</i> (1)	<i>Total number of secondary cases produced (b)</i> (2)	<i>Index of spread (Col. 2) (Col. 1)</i> (3)
Chicken pox	3	5	1.7
Common cold	48	19	0.4
Gastro-enteritis	57	27	0.5
Glandular fever	3	5	1.7
Influenza	3	4	1.3
Jaundice	2	1	0.5
Measles	8	30	3.8
Pneumonia	21	5	0.2
Sonne dysentery	24	56	2.3
Tonsillitis	51	32	0.6
	220	184	0.8

(a) Includes a score of one for unknown primary introductions from which secondary cases resulted and includes primary cases introduced during the course of an epidemic which in Table (v) have been counted as part of one outbreak, hence these figures exceed the numbers of 'outbreaks' by this amount.

(b) Refers only to those secondary cases which occurred within the period between the minimum and maximum serial interval after a known or unknown primary case.



Statistics of the administrative work carried out by the Metropolitan Borough Councils in 1957

† included in previous columns.
(N) Seasonal

(2) LACINOSA COMPLEX : Caswell-1.

APPENDIX D

STAFF OF THE PUBLIC HEALTH DEPARTMENT

Medical Officer of Health and Principal School Medical Officer	J. A. SCOTT
Deputy Medical Officer of Health and Deputy Principal School Medical Officer	A. B. STEWART
Senior Principal Medical Officer	M. MACGREGOR
Administrative Officer	C. R. GEERE
<i>Principal Medical Officers</i>	
Maternity and child welfare	DOROTHY F. EGAN
School health	G. D. PIRRIE
Epidemiology	I. TAYLOR
Tuberculosis	W. HARTSTON
Staff examinations and mental deficiency	C. W. J. INGHAM
Chief Dental Officer and Principal School Dental Officer ..	W. RITCHIE YOUNG
Chief Nursing Officer	EVELYN ROBINSON
Scientific Adviser	S. G. BURGESS
Establishment Officer	R. H. J. STRONGE
Principal Clerks	G. BERRIDGE
	D. J. B. COOPER
	W. H. JOYCE
Officer-in-Charge, London Ambulance Service	A. G. HELLMAN
Statistician	C. W. SHADDICK
Chief Inspector	J. C. CLANCEY
Principal Organiser of Children's Care Work	FRANCES C. K. GREGSON

Senior Officers of the Divisions

<i>Division</i>	<i>Divisional Medical Officer</i>	<i>Divisional Administrative Officer</i>	<i>Divisional Nursing Officer</i>
1.	BERTHA E. A. SHARPE	G. J. NEWTON	MARY SIDEBOTHAM
2.	H. L. OLDERSHAW	H. J. NORTON	EVELINE BEATTIE
3.	W. G. HARDING	N. B. CHAPMAN	CATHERINE WALSH (seconded to World Health Organisation.)
			MARGERY D. BUTLER (from 15/3/56.)
4.	S. KING	J. C. MINTER	ELLEN M. HAZELL
5.	G. O. MITCHELL	A. J. CRIDLAND	KATHERINE M. ROE
6.	F. R. WALDRON	T. A. STONE	LILIAN BERRY
7.	EVELYN A. MOWER-WHITE	F. L. CLARK	KATHLEEN L. SEWELL
8.	W. H. S. WALLACE	D. E. ARMSTRONG	BESSIE THOM
9.	J. T. R. LEWIS	R. E. HAYMES	WINIFRED M. WINCH

The following statement shows the number of staff employed in the Public Health Department at the end of the year (part-time staff being expressed as whole-time equivalents).

Type of staff	Location		Staff employed at other establishments (a)	Total
	Head office staff	Divisional staff		
Administrative and clerical (including ambulance control clerks)	219	621	75	915
Medical staff (b)	28	159	—	187
Dental staff (b)	2	70	—	72
Scientific staff	24	—	10	34
Inspectors	16	—	—	16
Nursing staff	12	1,959	93	2,064
Medical auxiliaries (c)	19	151	25	195
Social worker grades (including mental health)	34	171	127	332
Supervisory staff (ambulance service) ..	3	—	16	19
Ambulance driver/attendants	—	—	754	754
Manual workers, domestic grades, etc. ..	12	2,737	105	2,854
Totals	369	5,868	1,205	7,442

(a) These establishments include residential schools and nurseries, welfare establishments, ambulance stations, occupation centres for mentally defective children, main drainage outfall works, clinics and dispensaries, district offices (mental health), central dental laboratory, etc.

(b) There are 92 visiting medical officers and 9 visiting dental officers employed at residential establishments on a part-time basis whom it is not possible to compute in terms of whole-time units of staff. They have, therefore, been omitted from the table.

(c) Including physiotherapists, chiropodists, speech therapists, occupational therapists, psychotherapists, dental attendants, dental technicians and apprentices.

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