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BEDFORDSHIRE COUNTY COUNCIL

ANNUAL REPORT

of the

MEDICAL OFFICER OF HEALTH

for

1957


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CONTENTS

TO THE CHAIRMAN AND MEMBERS OF THE
BEDFORDSHIRE COUNTY COUNCIL

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour to submit the Report on the Health Services for the year 1957. It is in a new form which I trust the Council will find acceptable. The change has been brought about by the greatly increased cost of printing. The Report contains many tables, some of which at first glance may appear formidable. The justification for their presence is that they constitute a record of what has been done and they contain information which enables the Authority to determine future action.

At the time of writing, nearly ten years have passed since the National Health Service Act, 1946, came into operation on the 5th July, 1948. Since that date much has happened in Bedfordshire. The population has increased by about 40,000, partly by natural increase and partly by immigration. Moreover, there are proposals for another substantial increase in the south of the County. New industries have been established and old ones considerably extended. Large housing and water and sewerage schemes have been undertaken and new schools have been built. In addition, new measures in preventive medicine have become available and have been used. All these things have meant a great increase of work and interest for Public Health departments, both County Council and Local Sanitary Authority. It is tempting to elaborate this theme, but it can more properly be done, so far as the National Health Service Act, 1946, is concerned, this time next year, when it will be possible to make valid comparisons between the year 1949, the first full year of operation of the Act, and the year 1958.

Reference has been made in earlier reports to the tripartite system of administration established by the 1946 Act. It becomes clear as the years pass, that while by law there is a separation of powers and duties, the essential operational feature is that of a triple alliance, which is maintained in large measure by the co-operation of the three Authorities concerned, viz., Hospital, Executive Council and Local Health, and by the officers of those authorities. There are several points at which the services of one body come in contact with those provided by another, and there would be actual overlap unless steps were taken to prevent it. In its more obvious form preventive medicine is mainly a matter for the Local Health Authority, but there are aspects of it which are also the concern of the other administrative bodies, and gradually more

and more preventive work is being undertaken by them.

Preventive medicine does not stand still, nor can it. Fresh problems, demanding solution, are constantly arising. At the present time, radio-activity, to name only one matter, presents a challenge. In this connection it has been well said, "Yet what we are witnessing is perhaps the greatest ecological change since the recession of the polar ice-cap at the end of the last Ice Age ..... We are standing on yet another fringe of the unknown, not as Man alone, but with the whole range of living things grouped around us as a symbolic question mark. It is against this enormous background that we have to examine our more local problems of radio-activity." (The Lancet). Already one large Local Authority has taken a step designed to ensure that the food, water, and air taken in by its population shall be safe from radiation hazards.

With regard to the contents of the Report itself, the services are set out in detail, but there are several matters to which it appears desirable to draw attention.

The Vital Statistics compare favourably with those for England and Wales, which are also given. The good fortune of Bedfordshire residents in comparison with those of some parts of the North-West and North of England is made even clearer by the Area Mortality volume of the Registrar General's Decennial Supplement, England and Wales, which has just been published. The greater risk of death from cancer of the lung, bronchitis, and coronary heart disease which exists in the North and North-West is adequately demonstrated.

The order of the main causes of death remains the same. Cancer still takes its toll, and reference is made to this fact in the text, where the relationship between smoking and cancer of the lung is emphasised. It seems likely that the greatest hope in this matter lies in the education of older schoolchildren and steps have been taken to this end. "Accidents" continue to replace Tuberculosis in the Table. Continuous efforts are being made by education to reduce Home Accidents. Tuberculosis as a killing disease has declined remarkably. The pulmonary tuberculosis death rate per 100,000 of the population was 5.7, the lowest ever recorded. In 1938 the rate was 44. There are several factors accounting for this great improvement, an important one being the arrangements made by this Authority some ten years ago. The two Chest Physicians, Dr. J.B. Shaw and Dr. N.R. Wynn-Williams, who were originally appointed by the County Council, have continued in office. A valuable contribution by them, entitled "The Development of the Chest Clinic Services in Bedfordshire, 1948 to 1957", appears as an appendix to this Report.

The Services functioned satisfactorily in the main but at times there were difficulties in deploying staff to meet emergencies and increased demand. There is pressure at several points, but particularly in the Nursing and Home Help Services, where a large amount of assistance is required by persons who are 65 years of age and over. Thus, the home nurses attended 7,544 patients of whom 3,077 were 65 years of age and over, while of the 1,833 persons assisted by the home helps, 1,035 were of a chronic type, mainly aged and infirm. The Ambulance Service too was pressed at times and it must be said again that while emergencies can be dealt with promptly, there may be occasional delay in dealing with cases of a non-urgent character. The position is made much easier when hospitals and general medical practitioners give adequate notice of their requirements. During the year a new Luton Ambulance Depot, which is a source of pride to all members of the Service, was declared open by the Chairman of the County Council.

The Mental Health Service continued its good work, both in the sphere of mental illness and mental deficiency. A detailed account of this important service is given in the body of the Report. It was clear during the year that additional professional staff were required and the Council gave the necessary sanction. The Service received tremendous encouragement during the year from the publication of the Report of the Royal Commission on the Law relating to Mental Illness and Mental Deficiency, and by the completion of an up-to-date Occupation Centre in Kempston, which was opened by the Chairman of the County Council. The Report of the Royal Commission, in respect of which legislation is now being drafted, is important in two main ways :- (a) it suggests that the present rigid law relating to admission and discharge from mental hospitals is outmoded, and save in exceptional circumstances should be replaced by the informality which obtains in general hospitals; (b) it recommends "a general re-orientation away from institutional care in its present form and towards community care", and the assumption by Local Health Authorities of full responsibility for the preventive and after-care work of the Mental Health Service. This, if undertaken, will add considerably to the work of Local Health Authorities.

The techniques employed to protect children and certain others who are exposed to special risk of contracting dangerous infectious disease were continued. The improvement in the figures for vaccination against smallpox is encouraging, but the position is not yet satisfactory. Nor are the figures for diphtheria immunisation. A current outbreak of smallpox elsewhere and the death from diphtheria of a young non-immunised Italian child in Bedford constitute yet

another warning against relaxation of effort. Vaccination against poliomyelitis has greatly added to the work of the department, not only in actual performance but also in preparation for it. About 80,000 persons were eligible for vaccination and at the 30th April this year some 49,000 had registered. Adequate supplies of vaccine are now being received and it seems likely that all those who have registered will soon have been vaccinated.

This introduction would be sadly incomplete without reference to the Maternity and Child Welfare Service. There was nothing spectacular during the year, but this important Service was well maintained and following the appointment of an ad hoc social worker, it was possible to give additional assistance to problem families.

I am very conscious of the vast amount of help I receive in the administration of the Services. It comes from many, both within and without the departments of the County Council. It is continuous, but it is in the nature of things that at one time assistance is most needed from one body, and at another time from one quite different. I gratefully acknowledge all the help I have received, but especially that extended during the year by general medical practitioners and the Medical Directors of the Public Health Laboratory Service. To the staff of the Health Department, professional and lay, central and divisional, I tender my thanks. They applied themselves assiduously during the year to work which at times was very pressing. I am particularly grateful to Dr. C.A. Harvey, the Deputy County Medical Officer, to Mr. S.P. Marriott, the Chief Clerk, and Mr. C.J. Guy, the Health Education and Statistics Officer, who has been mainly responsible for the compilation of the Report. Finally, I would like to express my thanks to the Chairman and members of the Health Committee for their continued encouragement.

I have the honour to be
Your obedient servant,

W. V. Bothwood.

County Medical Officer of Health.

Phoenix Chambers,
High Street,
Bedford.

May, 1958.

HEALTH COMMITTEE 1957-58

Chairman: Alderman H.R. Waller, M.B.E., D.L., J.P.

Vice-Chairman: Alderman T.E.S. Lloyd, M.A., M.B., B.Chir.

Ex-Officio: Alderman Sir Frederick Mander, J.P.
Alderman E.K. Martell

Aldermen

W.G. Braybrooks (died 17.11.57)
L. Chambers, J.P.
Mrs. A.T. Dawson (res. 4.7.57)
C.H. Inskip
Miss D.M. Mann
P.R. Smith, J.P.
Mrs. A. Urwin

Councillors

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W. Blackburn (died 18.5.57)
S.A. Butcher
Mrs. E.M. Chapman (apptd. 25.10.57)
Mrs. D. Clarke
T.B. Compton
G.W. Cooper
Mrs. W. England
J. Isaac
F.A. Jarvis
B. Leach
R. Lester
F.C. Lines
C. Sheffield
J. Simpson
Mrs. E. Smith
A.J. Woodward (apptd. 9.7.57)
F.S.R. Wright

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J.G.R. Clarke, M.B., B.S., M.R.C.S., L.R.C.P.
Brig. J.N. Hildick-Smith, M.C., D.L.
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R.C. Oakley (apptd. 8.7.57)
B. Owens
A.E. Sharman
H.J. Weller, J.P.
H.W.S. Wynter
(1 vacancy)

Divisional Committee Chairmen

Northern: Alderman P.R. Smith, J.P.
Eastern: Alderman C.H. Inskip
Southern: Councillor Mrs. W. England
Luton: Miss M.E. Redman, M.B.E.

STAFF 1957

County Medical Officer of Health

W.C.V. BROTHWOOD, M.A., M.D., D.P.H.

Deputy County Medical Officer of Health

C.A. HARVEY, M.B., Ch.B., D.P.H.

Divisional Medical Officers

H.S. BURY, M.R.C.S., L.R.C.P., D.P.H.
R.M. DYKES, M.A., M.D., D.P.H.
C.A. HARVEY, M.B., Ch.B., D.P.H.
C.L. SHARP, M.R.C.S., L.R.C.P., D.P.H.

Senior Assistant County Medical Officer for Maternity and Child Welfare

ELIZABETH E. BROWN, M.B., Ch.B., B.Hy., D.P.H.

Assistant County Medical Officers and School Medical Officers

BRENDA N. AKEROYD, M.R.C.S., L.R.C.P.
DORA S. JAMES, M.B., B.S., D.Obst.R.C.O.G.
IRENE E. SANDFORD, M.R.C.S., L.R.C.P., D.P.H.
CICELY STEER, M.B., B.S., D.C.H.
FRANCES A. WILLIAMS, M.B., B.S., M.R.C.S., L.R.C.P., D.P.H.

Chest Physicians (part-time)

J.B. SHAW, M.D., B.A.O., D.P.H.
N.R. WYNN-WILLIAMS, M.B., B.S., M.R.C.P.

Senior Dental Surgeon

R.B.T. DINSDALE, L.D.S.

Dental Surgeons

A.P. ATKINS, L.D.S.
F. BRABINGTON-PERRY, L.D.S.R.C.S. (part-time)
A.A. GARDNER, B.Dent.Sc.
P.A. McGUCKIN, L.D.S. (part-time)
LILY T. MILNES, L.D.S. (resigned 30.6.57)
H.H. REVILL, L.D.S.R.C.S.

Chief Nursing Officer

FLORENCE M. TOMBS, S.R.N., S.C.M., H.V.'s Cert.

STAFF (continued)

Deputy Superintendent Health Visitor

ELIZABETH L. HUNTER, S.R.N., H.V.'s Cert.

Assistant Non-Medical Supervisor of Midwives and Home Nurses

WINNIE FROST, S.R.N., S.C.M., H.V.'s Cert.

Divisional Nursing Officer

EDNA M. LEE, S.R.N., S.C.M., H.V.'s Cert.

County Health Inspector

R.E.N. THOMAS, T.D., F.R.S.H., M.A.P.H.I., M.R.I.P.H.H.

County Analyst

A. LICKORISH, F.I.C. (died 5.9.57)

Health Education and Statistics Officer

C.J. GUY, D.P.A., F.S.S.

Senior Mental Health Worker

C.W. FRENCH (Psychiatric Social Worker)

Occupational Therapists

MARY H. GRIFFITH, M.A.O.T.
DAPHNE SMITH, M.A.O.T.

County Ambulance Superintendent

J.P. WILLEY, M.B.E.

Chief Clerk

S.P. MARRIOTT

SECTION I

STATISTICS

GENERAL INFORMATION

The area of the geographical and administrative County at the end of 1957 was approximately 302,940 acres (474 square miles). Its greatest length is from North to South and is 36½ miles; its greatest breadth is 22½ miles from East to West. The County contains no County Boroughs but includes the three Non-County Boroughs of Bedford, Dunstable and Luton. There are, in addition, five Urban Districts and four Rural Districts.

At the 1st April, 1957, the rateable value was £4,104,777. The product of a penny rate for 1956-57 was, for general County purposes, £17,392. The estimated figure for 1957-58 is £16,765.

POPULATION

NOTE:- The statistical information contained in the remainder of this Section is based on figures supplied by the Registrar General.

The statistics issued by the Registrar General for 1957 comprise figures relating to resident civilians and members of the armed forces stationed in the area. The population figures thus obtained are referred to as "home populations". The estimated home populations of the County Districts at the 30th June, 1957, were as follows :-

Administrative County ...	335,500
Urban Districts	228,000
Ampthill	3,210
Bedford M.B.	57,580
Biggleswade	7,770
Dunstable M.B.	20,150
Kempston	9,420
Leighton Buzzard	10,110
Luton M.B.	115,900
Sandy	3,860
Rural Districts	107,500
Ampthill	24,110
Bedford	32,970
Biggleswade	26,920
Luton	23,500

There is reason to believe that the number of Service personnel stationed in the County fluctuates considerably. Their inclusion makes useful comment on the population figures difficult. However, it may be stated that, except for Sandy U.D. where the estimate showed a decrease of 10, some increase was recorded throughout the County. The net increase in the population of the County was 5,600.

Recent years have seen a considerable influx of population from abroad, particularly in the Bedford area. This was largely brought about in the first place by the acute shortage of labour in the brickfields. Men were recruited in Italy by the Brick Companies and housed in hostels near the brickworks. Gradually their families joined them and they moved into Bedford where, for a time, their overcrowding caused the local authority much concern. In addition, there

are a number of other Europeans of other nationalities in Bedford. According to the 1951 Census there were 364 aliens in Bedford. By the 31st March, 1957, this figure had increased to well over 3,000. Then, in the last year or so, about 300 Jamaicans are believed to have moved into Bedford, as well as some Pakistanis.

As to the future, plans have been approved by the Minister of Housing and Local Government for development in the south of the County which will eventually provide accommodation for between 20,000 and 25,000 people, the majority of them from London. Thus a new town is planned at Houghton Regis to accommodate nearly 5,000 "overspill" Londoners. When that is completed, a further area in Luton Rural District will be developed to house about 6,500 Londoners. The Lewsey Farm area of Luton will, it is expected, absorb 7,000 Londoners, and plans for two other areas on the outskirts of Luton envisage accommodation for a further 4,200 people.

EXTRACTS FROM VITAL STATISTICS FOR 1957

	Total	M.	F.		
LIVE BIRTHS:					
Legitimate	5,594	2,912	2,682	Crude Birth Rate per 1,000 estimated home population	17.5
Illegitimate	281	138	143		
STILLBIRTHS:					
Legitimate	119	51	68	Rate per 1,000 total (live and still) births	21.5
Illegitimate	10	4	6		
DEATHS: ...	3,422	1,788	1,634	Crude Death Rate per 1,000 estimated home population	10.2
MATERNAL DEATHS:	3			Death Rate per 1,000 total (live and still) births	0.50

DEATH RATES OF INFANTS UNDER ONE YEAR OF AGE:

All infants per 1,000 live births	23.0
Legitimate infants per 1,000 legitimate live births ...	22.5
Illegitimate infants per 1,000 illegitimate live births	32.0

BIRTHS

5,875 live births attributable to Bedfordshire residents were registered during 1957. The distribution of these births amongst the County Districts is shown in Table I.

As the number of births in any area is largely governed by the number of married women of child-bearing age, it follows that crude birth rates, which are calculated as the number of births per 1,000 of the population, are not comparable unless the sex and age structure of the populations concerned is the same. To overcome this difficulty the Registrar General has calculated a birth comparability factor for each district. When the crude rate is multiplied by this factor, an adjusted birth rate is obtained which is comparable with the adjusted birth rate of any other area in the same year. The crude and adjusted birth rates based on the home populations for each of the county dis-

TABLE I -- NUMBER OF BIRTHS, INFANT DEATHS AND STILLBIRTHS REGISTERED DURING 1957 (SUBDIVIDED ACCORDING TO LEGITIMACY), TOGETHER WITH THE APPROPRIATE RATES FOR EACH OF THE COUNTY DISTRICTS

DISTRICTS	LIVE BIRTHS					DEATHS OF INFANTS UNDER 1 YEAR OF AGE				STILLBIRTHS			
	Legitimate	Illegitimate	Total	Crude Rate per 1,000 Home Pop.	Adjusted Rate	Legitimate	Illegitimate	Total	Rate per 1,000 live births	Legitimate	Illegitimate	Total	Rate per 1,000 total births (live and still)
URBAN:													
Ampthill	50	1	51	15.9	16.7	--	--	--	--	--	--	--	--
Bedford	1,084	67	1,151	20.0	19.4	20	2	22	19.1	27	1	28	23.7
Biggleswade ...	105	6	111	14.3	14.2	2	--	2	18.0	3	--	3	26.3
Dunstable	359	12	371	18.4	17.5	5	--	5	13.5	6	--	6	15.9
Kempston	138	3	141	15.0	16.0	4	--	4	28.4	2	--	2	14.0
Leighton Buzzard ...	184	8	192	19.0	18.0	4	--	4	20.8	4	--	4	20.4
Luton	1,847	90	1,937	16.7	16.7	48	3	51	26.3	31	8	39	19.7
Sandy	38	3	41	10.6	10.8	1	--	1	24.4	2	--	2	46.5
TOTALS ...	3,805	190	3,995	17.5	17.4	84	5	89	22.3	75	9	84	20.6
RURAL:													
Ampthill	348	14	362	15.0	15.2	9	3	12	33.2	8	--	8	21.6
Bedford	547	26	573	17.4	20.7	13	--	13	22.7	9	--	9	15.5
Biggleswade ...	428	22	450	16.7	18.2	10	--	10	22.2	19	--	19	40.5
Luton	466	29	495	21.1	20.6	10	1	11	22.2	8	1	9	17.9
TOTALS ...	1,789	91	1,880	17.5	18.9	42	4	46	24.5	44	1	45	23.4
GRAND TOTALS ...	5,594	281	5,875	17.5	17.7	126	9	135	23.0	119	10	129	21.5

TABLE II -- BIRTH, INFANT MORTALITY AND STILLBIRTH RATES FOR URBAN AND RURAL AREAS OF COUNTY, WHOLE COUNTY AND ENGLAND AND WALES 1944-57

YEAR	CRUDE BIRTH RATES PER 1,000 POPULATION /				INFANT MORTALITY RATES				STILLBIRTH RATES			
	Urban Districts	Rural Districts	Whole County	England & Wales ϕ	Urban Districts	Rural Districts	Whole County	England & Wales ¤	Urban Districts	Rural Districts	Whole County	England & Wales #
1944	21.8	18.9	20.9	19.9	34.3	37.8	35.2	45.4	27.9	30.6	28.7	27.7
1945	18.9	17.2	18.4	17.8	33.4	35.8	34.1	46.0	27.0	25.3	26.5	27.6
1946	19.3	18.3	19.0	20.2	35.2	32.7	34.5	42.9	31.6	24.3	29.6	27.2
1947	20.9	19.5	20.5	21.1	32.1	27.0	30.7	41.4	21.2	23.5	21.8	24.1
1948	17.6	17.4	17.5	18.1	29.2	31.4	29.8	33.9	20.3	18.2	19.7	23.2
1949	16.3	17.3	16.7	16.9	27.2	25.4	26.6	32.4	23.5	24.2	23.7	22.7
1950	15.6	15.4	15.5	15.9	24.0	28.2	25.3	29.6	26.9	24.9	26.3	22.6
1951	15.7	14.0	15.2	15.5	28.3	22.8	26.6	29.7	23.6	23.6	23.6	23.0
1952	14.9	14.2	14.6	15.3	23.2	26.1	24.1	27.6	23.0	24.2	23.3	22.7
1953	15.2	14.7	15.0	15.5	26.8	19.6	24.5	26.8	24.1	19.8	22.7	22.4
1954	15.3	15.4	15.3	15.2	26.7	26.1	26.5	25.4	26.6	20.0	24.4	23.5
1955	15.2	15.8	15.4	15.0	18.2	17.8	18.0	24.9	21.3	16.3	19.7	23.2
1956	17.0	15.4	16.5	15.7	22.1	22.6	22.2	23.8	21.3	26.1	22.8	23.0
1957	17.5	17.5	17.5	16.1	22.3	24.5	23.0	23.0	20.6	23.4	21.5	22.4

/ Civilian population to 1949; home population since.
ϕ Rate refers to births occurring during calendar year.
Rate refers to stillbirths occurring during calendar year.
¤ Rate per 1,000 related births.

tricts are shown in Table I.

Table II shows the crude birth rates for the Urban and Rural Areas of the County, for the County as a whole, and for England and Wales during the last fourteen years. These rates are based on civilian populations for the years 1944-49 and on home populations for the years since. The use of home populations gives a slightly lower figure for the County (e.g., in 1951 the birth rate per 1,000 home population was 15.2 and per 1,000 civilian population, 15.7) but a much lower figure for the Rural Areas (e.g., in 1951, 14.0 against 15.4).

The crude birth rate for the County in 1957 was 17.5, compared with 16.5 for 1956. Thus the upward trend since the low figure of 14.6 in 1952 continued. The national rate also increased, being 16.1 in 1957 compared with 15.7 in the previous year.

It should be noted that the rates for England Wales are calculated as the births occurring during the year per 1,000 of the population. As, however, most births are now registered soon after they occur, there is unlikely to be any appreciable difference between the number of births occurring and the number registered in a year.

ILLEGITIMATE BIRTHS

There were 281 illegitimate live births registered in 1957. These constituted 4.8 per cent of the total live births, compared with 5.4 per cent in 1956. Of the 129 stillbirths, 10 were illegitimate. During the year, nine illegitimate infants under one year of age died, giving an illegitimate infant mortality rate of 32.0 per 1,000 illegitimate live births. The figures are, however, so small that no great significance can be attached to them. The legitimate infant mortality rate was 22.5.

STILLBIRTHS

The term stillbirth refers to any child born after the 28th week of pregnancy which did not, at any time after being completely expelled from its mother, breathe or show any other sign of life. It will be seen in Table I that there were 129 stillbirths attributable to Bedfordshire residents during 1957, giving a stillbirth rate of 21.5 per 1,000 total births (live and still). Table II shows the stillbirth rates for the Urban and Rural Areas of the County, for the County as a whole, and for England and Wales during the past fourteen years. Illegitimate stillbirths constituted 7.7 per cent of the total in 1957, compared with 7.9 per cent in 1956.

DEATHS

As has already been stated, the figures of population include Service personnel stationed in the area. It follows, therefore, that the death of a Serviceman should be ascribed to the area in which he is stationed. Altogether, 3,422 deaths attributable to Bedfordshire were registered in 1957.

Table III shows the age distribution of the deaths registered in the years 1946 to 1957. An analysis of the sex distribution in these age groups reveals that in the eight years 1950-57, 58.6 per cent of deaths in the group 15-44 were males whilst for the group 45-64, the figure was 62.0. In the former group the excess of male deaths was largely attributable to accidents (all forms), coronary disease and angina, suicide and ulcer of the stomach and duodenum. In the older group, heart disease, cancer (all forms), respiratory diseases, stomach ulcers, accidents and suicide were responsible.

TABLE III -- AGE DISTRIBUTION OF DEATHS IN BEDFORDSHIRE, 1946-57

Year	Deaths in age groups						Total
	0-	1-	5-	15-	45-	65-	
1946	187	29	27	267	666	1,965	3,141
1947	184	37	39	269	618	2,061	3,208
1948	156	22	28	239	675	1,854	2,974
1949	134	39	23	245	726	2,108	3,275
1950	123	24	26	196	711	2,129	3,209
1951	129	27	16	195	748	2,231	3,346
1952	113	28	20	199	702	2,166	3,228
1953	118	14	11	178	671	2,094	3,086
1954	130	6	17	181	730	2,145	3,209
1955	90	18	11	163	800	2,340	3,422
1956	121	11	20	178	738	2,405	3,473
1957	135	19	14	161	801	2,292	3,422

DEATH RATES

The death rate is calculated as the number of deaths per 1,000 of the home population. The rate for Bedfordshire in 1957 was 10.2, compared with 10.5 in 1956. Comparison of death rates of different districts is not valid unless the population structure of each is similar. For example, a district with a small population but containing a residential institution for old people will have an unduly high proportion of deaths and consequently a high crude death rate. To overcome this difficulty and to enable local death rates to be compared, the Registrar General has supplied an Area Comparability Factor for each district. When the crude death rate is multiplied by this factor, an adjusted death rate is obtained which is comparable with the adjusted death rate of any other area or with the crude death rate of England and Wales in the same year. The crude death rates, area comparability factors and adjusted death rates of the sanitary districts and of England and Wales for 1957 are shown in Table IV.

CAUSES OF DEATH

The causes of death in the Sanitary Districts and the County as a whole are shown in Table VI. Table VII shows the age and sex distribution of the deaths from the various causes in the Urban and Rural Areas of the County. In order to bring out the relative importance of the principal diseases from a mortality point of view, Table V has been prepared, showing the actual number of deaths from these diseases and from accidents of all kinds in 1957, together with the percentages of the total number of deaths attributable to them. The corresponding

percentages for 1955 and 1956 are also shown.

TABLE IV -- CRUDE DEATH RATES, AREA COMPARABILITY FACTORS, AND ADJUSTED DEATH RATES OF THE SANITARY DISTRICTS AND ENGLAND AND WALES, 1957

	Crude Death Rate per 1,000 Home Population	Area Comparability Factor	Adjusted Death Rate
Urban Districts ...	10.0	1.10	11.0
Ampthill	13.4	0.68	9.1
Bedford M.B. ...	9.4	0.99	9.3
Biggleswade ...	17.9	0.51	9.1
Dunstable	8.5	1.22	10.4
Kempston	8.8	1.07	9.4
Leighton Buzzard ...	9.7	1.12	10.9
Luton M.B.	9.9	1.21	12.0
Sandy	13.2	0.99	13.1
Rural Districts ...	10.7	0.91	9.7
Ampthill	11.4	0.97	11.0
Bedford	10.0	0.87	8.7
Biggleswade	12.5	0.75	9.4
Luton	8.9	1.13	10.1
Admin. County ...	10.2	1.05	10.7
England and Wales ...	11.5	1.00	11.5

TABLE V -- NUMBER OF DEATHS FROM PRINCIPAL FATAL DISEASES AND ACCIDENTS IN 1957, TOGETHER WITH PERCENTAGES OF THE TOTAL NUMBER OF DEATHS ATTRIBUTABLE TO THESE CAUSES IN 1955-57

	No. of deaths in 1957	Percentage of total deaths in 1957	Corresponding percentage in	
			1956	1955
Heart Disease	1,023	29.9	33.6	30.2
Cancer (including Leukaemia)	629	18.4	17.7	19.9
Cerebral Haemorrhage, etc.	519	15.2	14.5	15.0
Pneumonia	181	5.3	4.7	3.7
Bronchitis	145	4.2	4.6	5.2
Other Circulatory Diseases	138	4.0	4.0	4.0
Accidents (all forms) ...	123	3.6	3.6	3.7

These seven causes account for four-fifths of the deaths in the County. It will be seen that the order remains the same as in 1956. Heart Disease again heads the list, being responsible for nearly one-third of all deaths.

Although there was an epidemic of Influenza in the second half of the year, the illness was unexpectedly mild. The total number of deaths from this disease was 57 for the year.

TABLE VI-CAUSES OF DEATH IN THE SANITARY DISTRICTS OF BEDFORDSHIRE. 1957.

CAUSE OF DEATH	Administrative County	URBAN DISTRICTS									RURAL DISTRICTS				
		Ampthill	Bedford	Biggleswade	Dunstable	Kempston	Leighton Buzzard	Luton	Sandy	TOTAL	Ampthill	Bedford	Biggleswade	Luton	TOTAL
1. Tuberculosis, Respiratory ...	19	-	2	-	1	-	-	9	-	12	1	2	1	3	7
2. Tuberculosis, Other	3	-	-	1	1	-	-	-	-	2	-	-	-	1	1
3. Syphilitic Disease	9	1	2	-	-	-	-	1	-	4	-	4	1	-	5
4. Diphtheria	1	-	1	-	-	-	-	-	-	1	-	-	-	-	-
5. Whooping Cough	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-
6. Meningococcal Infections ...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Acute Poliomyelitis	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-
8. Measles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Other Infective and Parasitic Diseases	11	-	2	-	-	1	-	3	-	6	1	1	3	-	5
Malignant Neoplasm-															
10. Stomach	74	-	14	2	5	2	-	22	-	45	10	9	5	5	29
11. Lung, Bronchus...	136	4	26	7	7	1	2	54	-	101	7	11	10	7	35
12. Breast	67	-	12	-	5	-	1	27	2	47	6	3	2	9	20
13. Uterus	32	-	9	1	2	-	2	12	-	26	2	1	2	1	6
14. Other Malignant and Lymphatic Neoplasms	308	6	44	13	17	8	10	100	7	205	28	33	23	19	103
15. Leukaemia, Aleukaemia	12	-	2	-	1	-	-	4	-	7	-	2	3	-	5
16. Diabetes	27	-	2	1	3	-	1	8	-	15	1	6	5	-	12
17. Vascular Lesions of Nervous System	519	11	79	22	28	13	12	201	1	367	31	51	34	36	152
18. Coronary Disease, Angina ...	462	7	83	17	20	9	18	154	9	317	35	38	49	23	145
19. Hypertension with Heart Disease	68	-	15	-	2	3	1	21	1	43	5	5	12	3	25
20. Other Heart Disease	493	7	51	25	28	16	14	152	12	305	54	34	74	26	188
21. Other Circulatory Disease ...	138	-	26	4	5	3	6	45	6	95	11	22	6	4	43
22. Influenza	57	-	7	5	1	1	-	27	1	42	5	5	4	1	15
23. Pneumonia	181	-	31	5	12	5	10	65	1	129	7	15	16	14	52
24. Bronchitis	145	-	30	6	8	2	1	51	1	99	12	14	12	8	46
25. Other Diseases of Respiratory System	32	-	6	-	1	-	1	11	2	21	2	3	2	4	11
26. Ulcer of Stomach and Duodenum...	33	-	3	2	4	1	1	8	-	19	4	6	2	2	14
27. Gastritis, Enteritis and Diarrhoea	16	-	8	3	-	-	-	1	-	12	1	-	1	2	4
28. Nephritis and Neophrosis ...	32	1	3	-	2	-	2	8	1	17	4	4	5	2	15
29. Hyperplasia of Prostate ...	25	-	4	3	-	-	1	5	-	13	2	4	3	3	12
30. Pregnancy, Childbirth, Abortion	3	-	-	-	-	-	-	1	-	1	1	1	-	-	2
31. Congenital Malformations ...	37	-	5	1	3	1	-	10	-	20	3	6	4	4	17
32. Other Defined and Ill-defined Diseases	300	5	42	14	9	11	10	95	3	189	21	32	40	18	111
33. Motor Vehicle Accidents ...	35	-	7	-	1	-	2	11	1	22	4	2	4	3	13
34. All Other Accidents	88	-	13	5	1	3	1	20	2	45	14	15	9	5	43
35. Suicide	56	1	10	2	2	3	2	22	1	43	2	2	4	5	13
36. Homicide and Operations of War	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1
TOTALS: ALL CAUSES ...	3.422	43	539	139	171	83	98	1.148	51	2.272	274	331	336	209	1.150

TABLE VII-CAUSES OF DEATH IN URBAN AND RURAL AREAS OF BEDFORDSHIRE, 1957, DIVIDED ACCORDING TO SEX AND AGE

CAUSE OF DEATH	URBAN DISTRICTS																	RURAL DISTRICTS																
	MALES									FEMALES									MALES									FEMALES								
	0-	1-	5-	15-	25-	45-	65-	75-	Total	0-	1-	5-	15-	25-	45-	65-	75-	Total	0-	1-	5-	15-	25-	45-	65-	75-	Total	0-	1-	5-	15-	25-	45-	65-	75-	Total
1. Tuberculosis, Respiratory ...	-	-	-	-	1	4	2	1	8	-	-	-	-	1	2	1	-	4	-	-	-	-	1	3	3	-	7	-	-	-	-	-	-	-	-	-
2. Tuberculosis, Other	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
3. Syphilitic Disease	-	-	-	-	-	-	3	-	3	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	1	-	3	4
4. Diphtheria	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Whooping Cough	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Meningococcal Infections ...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Acute Poliomyelitis	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Measles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Other Infective and Parasitic Diseases	1	-	1	-	-	-	-	-	2	-	-	-	1	-	2	-	1	4	-	-	-	-	-	2	-	1	3	-	1	-	-	-	-	1	-	2
Malignant Neoplasm-																																				
10. Stomach	-	-	-	-	2	9	9	4	24	-	-	-	-	1	6	5	9	21	-	-	-	-	-	3	6	5	14	-	-	-	-	-	3	4	8	15
11. Lung, Bronchus	-	-	-	1	2	55	27	7	92	-	-	-	-	1	4	3	1	9	-	-	-	-	-	15	11	5	31	-	-	-	-	-	3	-	1	4
12. Breast	-	-	-	-	-	-	-	-	-	-	-	-	-	4	26	6	11	47	-	-	-	-	-	-	-	-	-	-	-	-	-	1	13	3	3	20
13. Uterus	-	-	-	-	-	-	-	-	-	-	-	-	-	3	9	8	6	26	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	1	6
14. Other Malignant and Lymphatic Neoplasms	-	-	1	1	5	34	34	34	109	-	-	1	1	5	29	24	36	96	-	-	-	1	4	20	11	19	55	1	-	-	1	4	19	14	9	48
15. Leukaemia, Aleukaemia	-	1	-	-	-	4	-	-	5	-	-	-	-	1	-	1	-	2	-	-	1	-	1	-	-	1	3	1	-	-	-	-	-	1	-	2
16. Diabetes	-	-	-	-	-	1	3	-	4	-	-	-	-	-	2	7	2	11	-	-	-	-	-	2	-	-	2	-	-	-	-	-	2	3	5	10
17. Vascular Lesions of Nervous System	-	-	-	-	-	28	33	71	132	-	-	-	-	4	28	68	135	235	-	-	-	-	1	11	34	39	85	-	-	-	-	-	12	18	37	67
18. Coronary Disease, Angina ...	-	-	-	-	8	73	68	59	208	-	-	-	-	1	19	32	57	109	-	-	-	-	2	31	30	31	94	-	-	-	-	-	11	19	21	51
19. Hypertension with Heart Disease	-	-	-	-	-	8	5	12	25	-	-	-	-	-	2	6	10	18	-	-	-	-	1	3	6	3	13	-	-	-	-	-	-	7	5	12
20. Other Heart Disease	-	-	-	-	6	19	40	68	133	-	-	-	-	6	16	31	119	172	-	-	-	-	2	4	23	50	79	-	-	-	-	-	6	27	76	109
21. Other Circulatory Disease ...	-	-	-	-	1	16	5	26	48	-	-	-	-	-	7	9	31	47	-	-	-	-	-	6	12	9	27	-	-	-	-	-	2	6	8	16
22. Influenza	1	-	-	-	2	11	7	3	24	-	-	1	1	1	7	4	4	18	1	-	-	-	-	2	3	3	9	-	-	-	1	-	1	1	3	6
23. Pneumonia	2	-	-	-	1	13	19	25	60	9	1	1	-	-	5	10	43	69	3	-	-	-	-	4	10	9	26	1	-	-	-	1	2	6	16	26
24. Bronchitis	1	-	-	-	-	28	26	19	74	-	-	-	-	-	3	5	17	25	-	-	-	-	1	8	11	12	32	-	-	1	-	-	1	5	7	14
25. Other Diseases of Respiratory System	1	-	-	-	1	7	6	-	15	-	-	-	-	-	2	2	2	6	-	-	-	-	-	1	1	1	3	1	-	-	-	-	2	1	4	8
26. Ulcer of Stomach and Duodenum	-	-	-	-	2	3	3	6	14	-	-	-	-	-	1	2	2	5	-	-	-	-	-	5	3	4	12	-	-	-	-	-	-	1	1	2
27. Gastritis, Enteritis and Diarrhoea	-	-	-	-	-	1	2	1	4	1	1	-	1	-	1	1	3	8	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	2	3
28. Nephritis and Nephrosis ...	-	-	-	-	1	3	2	-	6	-	-	-	-	-	5	1	5	11	-	-	-	1	-	4	3	3	11	-	-	-	-	-	2	1	1	4
29. Hyperplasia of Prostate.. ...	-	-	-	-	-	-	3	10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	6	12	-	-	-	-	-	-	-	-	-
30. Pregnancy, Childbirth, Abortion	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
31. Congenital Malformations ...	6	1	2	1	-	-	-	-	10	7	1	-	1	-	1	-	-	10	7	2	-	-	1	-	-	-	10	5	-	-	-	-	2	-	-	7
32. Other Defined and Ill-defined Diseases	26	1	-	3	3	14	18	15	80	29	1	-	-	4	17	15	43	109	11	1	-	-	-	11	8	16	47	14	1	-	-	6	9	9	25	64
33. Motor Vehicle Accidents .	-	1	1	2	4	6	-	4	18	-	-	-	-	1	1	1	1	4	-	-	-	2	4	5	1	1	13	-	-	-	-	-	-	-	-	-
34. All Other Accidents	2	1	2	5	5	2	1	3	21	2	-	-	-	2	1	2	17	24	1	1	2	2	4	8	2	5	25	-	2	-	-	-	2	1	13	18
35. Suicide	-	-	-	2	6	11	6	-	25	-	-	-	1	4	7	2	4	18	-	-	-	-	3	4	3	1	11	-	-	-	-	1	1	-	-	2
36. Homicide and Operations of War	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
TOTALS: ALL CAUSES	40	6	7	15	51	350	323	369	1161	49	4	3	6	40	203	247	559	1111	23	4	3	6	25	154	188	224	627	23	5	1	2	16	94	133	249	523

ACCIDENTS

On an average, during the past eight years just over one hundred Bedfordshire residents have died annually as the result of accidents, only two-fifths of the deaths being caused by motor vehicles. Whilst it is not possible to divide all the other accidents into groups according to place and cause, it may be assumed that the majority take place either at home or at work.

TABLE VIII -- SEX-AGE DISTRIBUTION OF DEATHS FROM MOTOR VEHICLE AND ALL OTHER ACCIDENTS, 1950-57

		0-	1-	5-	15-	25-	45-	65-	75-	Total
Motor Vehicle Accidents										
1950	M.	--	1	3	6	13	10	1	--	34
	F.	--	2	3	1	1	4	--	1	12
1951	M.	--	1	3	4	10	3	1	2	24
	F.	--	--	--	2	1	1	3	--	7
1952	M.	--	--	--	12	11	6	--	1	30
	F.	--	--	2	1	1	2	1	--	7
1953	M.	--	1	--	8	6	8	4	1	28
	F.	--	--	--	--	1	2	--	1	4
1954	M.	--	1	2	9	21	10	6	3	52
	F.	--	1	1	1	1	1	1	2	8
1955	M.	--	1	3	6	7	13	1	4	35
	F.	--	--	--	4	--	1	2	1	8
1956	M.	--	--	4	9	15	8	2	3	41
	F.	--	--	1	--	4	--	2	--	7
1957	M.	--	1	1	4	8	11	1	5	31
	F.	--	--	--	--	1	1	1	1	4
Totals	M.	--	6	16	58	91	69	16	19	275
	F.	--	3	7	9	10	12	10	6	57
All Other Accidents										
1950	M.	2	1	3	2	8	6	3	6	31
	F.	2	1	4	--	--	4	2	17	30
1951	M.	4	--	--	4	8	6	2	2	26
	F.	--	2	--	--	2	3	8	21	36
1952	M.	3	--	5	4	3	3	4	4	26
	F.	2	--	1	2	2	1	3	11	22
1953	M.	1	--	1	1	3	7	7	10	30
	F.	2	--	--	1	2	5	4	18	32
1954	M.	1	1	3	4	5	6	3	14	37
	F.	1	--	--	--	1	2	6	16	26
1955	M.	1	1	1	4	11	14	5	7	44
	F.	3	2	--	--	--	1	8	24	38
1956	M.	--	--	2	5	11	8	1	7	34
	F.	1	--	--	--	--	2	12	28	43
1957	M.	3	2	4	7	9	10	3	8	46
	F.	2	2	--	--	2	3	3	30	42
Totals	M.	15	5	19	31	58	60	28	58	274
	F.	13	7	5	3	9	21	46	165	269

The sex-age distribution of all accidental deaths for the years 1950-57 is given in Table VIII. The vast majority of road fatalities during that period were males aged 15-64. Half the male deaths from all other accidents were in the age-group 15-64, which suggests that most of them occurred at work. It is probable that most of the deaths in males aged 65 and over resulted from accidents in the home and these were almost certainly the cause of most of the accidental deaths in females.

The matter of accidents is stressed because they take an unnecessary toll of life. Moreover, a fact that is not widely appreciated is that a large proportion of all the deaths that occur in children and young people result from accidents.

TUBERCULOSIS

The death rate from respiratory tuberculosis has shown a remarkable decline in Bedfordshire during the past quarter of a century. In 1957 there were 19 deaths and the death rate of 5.7 per 100,000 home population was the lowest ever recorded. In 1931 the figure was 75. The rate for 1938 was 44. Ten years later, in 1948, it had dropped to 34. The corresponding death rate for England and Wales in 1957 was 9.5 per 100,000.

There were three deaths from non-respiratory tuberculosis in 1957. In 1947, there were 29 such deaths.

CANCER

There were 617 deaths attributable to malignant neoplasms in 1957 and a further 12 due to leukaemia or aleukaemia. For the purposes of comparison with previous years, the latter group has been omitted from the figures in Table IX which show that the vast majority of cancer deaths occur in the second half of life. Whilst much has still to be discovered concerning this disease, it can be said that there is a good hope of cure in certain types of cancer if treatment is undertaken early. Medical advice should, therefore, be sought immediately there is any suspicion of the disease.

In Bedfordshire, there were 136 deaths from lung cancer, compared with 115 in 1956 and 126 in 1955. The sex-age distribution of these deaths and of cancers of all other sites including leukaemia and aleukaemia is shown in Table X. Lung cancer is predominantly a male affliction and much has been written in recent years about the relationship between this form of the disease and smoking. The statistical evidence for the connection is convincing but the reason for it has yet to be discovered. Amongst other possible causes is atmospheric pollution, for there is a marked difference in the death rates from cancer of the lung in the urban and rural areas of the County. This difference has been noted in the country as a whole. A recent report of the Registrar General states that in the period 1950-53 "There was a regular gradation of declining mortality (from lung cancer) from Greater London through the other conurbations, large, middle-sized, and small towns down to the rural districts".

Excluding the lung and bronchus, cancer has been responsible for more deaths in females than in males in Bedfordshire during the last eight years. This is the case in all age-groups from 25 years.

TABLE IX -- AGE DISTRIBUTION OF DEATHS FROM CANCER* OF BEDFORDSHIRE RESIDENTS IN YEARS 1941 to 1957, TOGETHER WITH PERCENTAGES OF DEATHS IN CERTAIN AGE GROUPS

	Deaths at Age						Total No. of Deaths	Percentage of deaths occurring at ages	
	0 -	1 -	5 -	15 -	45 -	65 -		Under 45	65 and over
1941	--	1	--	32	171	264	468	7.1	56.4
1942	--	1	3	28	178	250	460	7.0	54.3
1943	--	1	--	34	200	271	506	6.9	53.6
1944	--	1	3	35	208	283	530	7.4	53.4
1945	--	2	1	35	192	168	498	7.6	53.8
1946	--	--	1	35	152	285	473	7.6	60.2
1947	--	1	3	37	159	265	465	8.8	57.0
1948	--	--	--	41	188	300	529	7.8	56.7
1949	--	2	2	31	189	283	507	6.9	55.8
1950	1	2	--	26	207	296	532	5.5	55.6
1951	--	1	2	44	212	288	547	8.6	52.7
1952	--	2	--	40	230	316	588	7.1	53.7
1953	--	1	2	38	183	290	514	8.0	56.4
1954	1	--	4	41	226	338	610	7.5	55.4
1955	--	3	1	34	242	389	669	5.7	58.2
1956	1	1	2	44	217	337	602	8.0	56.0
1957	1	--	2	38	248	328	617	6.6	53.2

* All forms except leukaemia and aleukaemia.

TABLE X -- SEX-AGE DISTRIBUTION OF LUNG AND OTHER CANCERS* IN BEDFORDSHIRE, 1950-57

	MALES								FEMALES							
	0 -	5 -	15 -	25 -	45 -	65 -	75 -	Total	0 -	5 -	15 -	25 -	45 -	65 -	75 -	Total
LUNG, BRONCHUS																
1950 ...	--	--	--	2	51	14	4	71	--	--	--	--	4	8	2	14
1951 ...	--	--	1	4	52	21	6	84	--	--	--	2	6	3	5	16
1952 ...	--	--	--	5	59	27	10	101	--	--	--	--	6	4	--	10
1953 ...	--	--	--	3	43	17	7	70	--	--	--	2	4	3	--	9
1954 ...	--	--	--	5	49	34	10	98	--	--	--	1	8	5	1	15
1955 ...	--	--	--	6	59	36	8	109	--	--	1	1	8	5	2	17
1956 ...	--	--	--	7	51	24	17	99	--	--	--	2	6	6	2	16
1957 ...	--	--	1	2	70	38	12	123	--	--	--	1	7	3	2	13
ALL OTHER SITES																
1950 ...	4	--	1	11	62	75	65	218	2	--	1	15	93	69	65	245
1951 ...	2	1	1	14	74	64	58	214	3	3	2	24	82	73	63	250
1952 ...	4	--	1	19	65	62	73	224	1	--	--	19	102	54	90	266
1953 ...	1	1	2	12	63	71	65	215	3	2	2	24	74	54	79	238
1954 ...	1	2	1	16	68	58	74	220	--	3	4	18	106	72	86	289
1955 ...	3	1	2	11	86	73	77	253	2	1	1	13	93	96	95	301
1956 ...	2	2	1	12	59	63	70	209	--	4	--	23	105	82	78	292
1957 ...	1	2	2	12	70	60	63	210	2	1	2	20	105	70	83	283

* Including leukaemia and aleukaemia.

MATERNAL MORTALITY

Three deaths ascribed to maternal causes were registered in 1957, giving a maternal mortality rate per 1,000 total (live and still) births of 0.50, compared with 0.54 in 1956. The corresponding rate for England and Wales in 1957 was 0.47. Two of the deaths were caused by necrosis, due in one case to severe puerperal anaemia and in the other to ante-partum haemorrhage. The third death was primarily due to the inhalation of vomit, with toxaemia of pregnancy and post-partum haemorrhage as contributory factors.

INFANT MORTALITY

During 1957, 135 infants under one year of age died, 95 of them within the first month of life. The distribution of infant deaths amongst the County Districts is shown in Table I on page 12. The number of such deaths per 1,000 live births registered during the year constitutes the Infant Mortality Rate. The rates for the individual districts are also shown in the Table. It should be borne in mind, however, that the figures are so small in some cases that the rate calculated may not be truly significant. Table II on page 13 shows the Infant Mortality Rates for the Urban and Rural Areas, for the County as a whole, and for England and Wales for the past fourteen years. The rate for the County was 23.0 compared with 22.2 in 1956. The causes and sex-distribution of the infant deaths registered in 1957 are set out in Table XI. Prematurity is included in "Other Defined Causes".

TABLE XI -- CAUSES OF INFANT DEATHS IN URBAN AND RURAL AREAS, 1957
SUBDIVIDED ACCORDING TO SEX

CAUSE	URBAN DISTRICTS		RURAL DISTRICTS		COUNTY	
	Male	Female	Male	Female	Male	Female
Whooping Cough	--	1	--	--	--	1
Other Infective and Parasitic Diseases ...	1	--	--	--	1	--
Cancer	--	--	--	1	--	1
Leukaemia, Aleukaemia ...	--	--	--	1	--	1
Influenza	1	--	1	--	2	--
Pneumonia	2	9	3	1	5	10
Bronchitis	1	--	--	--	1	--
Other Respiratory Diseases	1	--	--	1	1	1
Gastritis, Enteritis and Diarrhoea	--	1	--	--	--	1
Congenital Malformations	6	7	7	5	13	12
Other Defined Causes ...	26	29	11	14	37	43
Accidents*	2	2	1	--	3	2
TOTALS ...	40	49	23	23	63	72

* Other than motor vehicle accidents.

S E C T I O N II

GENERAL PROVISION OF HEALTH SERVICES IN THE AREA

THE LOCAL HEALTH SERVICES PROVIDED UNDER THE NATIONAL HEALTH SERVICE ACTS

Administration

The County Council as Local Health Authority established a Health Committee in accordance with the requirements of the National Health Service Act, 1946. The Health Committee in turn established the following Sub-Committees, all of which have a majority of members of the Local Health Authority or Local Sanitary Authorities :-

(a) A General Purposes Sub-Committee to deal with the development of the services and matters of administration;

(b) An Ambulance Sub-Committee;

(c) A Mental Health Sub-Committee;

(d) Four Divisional Committees. These cover the whole County, and to them is referred the day-to-day management of the following services :-

The Care of mothers and young children, health visiting, home nursing, domiciliary midwifery, domestic help, vaccination and immunisation. The prevention of illness, care and after-care section of the Act is, to some extent, administered centrally.

The Divisional Committees are :-

Eastern Division:	Comprising Biggleswade Urban and Rural Districts; Sandy Urban District.
Northern Division:	Comprising Bedford Borough; Ampthill and Kempston Urban Districts; Ampthill and Bedford Rural Districts.
Southern Division:	Comprising Dunstable Borough; Leighton Buzzard Urban District; Luton Rural District.
Luton Division:	Comprising Luton Borough.

Each Divisional Committee has a medical adviser, who is designated Divisional Medical Officer. In all cases he is a Medical Officer of Health of one or more County Districts, but in his capacity as medical adviser to his Divisional Committee he has the status of Senior Assistant County Medical Officer and is on the staff of the County Medical Officer. General supervision of the Maternity and Child Welfare Services is exercised by the Senior Assistant County Medical Officer for Maternity and Child Welfare, and the nursing services are supervised by the Chief Nursing Officer, both officers being on Headquarters staff. A full list of the Authority's senior Public Health Officers is given on pages 7 and 8.

The services provided by the County Council under the National Assistance Act, 1948, are administered by the Welfare Committee.

SECTION 21 -- HEALTH CENTRES

There are no Health Centres of the type envisaged by the National Health Service Act, 1946, and there is no immediate prospect of action being taken.

SECTION 22 -- CARE OF MOTHERS AND YOUNG CHILDREN

Ante-Natal Care

Facilities for ante-natal care are provided by the County Council at ante-natal clinics which are conducted by experienced medical officers who see to it that a specialist opinion is obtained whenever it appears necessary. In every pregnancy, haemoglobin estimation is done. In addition, if the woman's blood has not previously been sent to a laboratory for Group, Rhesus, Kahn and Wassermann examinations, this is done. If these tests have been made, the report is obtained and no further examination of the blood is made unless there is some indication for making one.

As from the beginning of the year, ante-natal work ceased at Shillington Clinic and from July, expectant mothers were seen at the Infant Welfare Clinic at Sundon. No new clinics were opened during the year. Of the 11 clinics functioning at the end of the year, seven were held in premises rented for the purpose. Details of attendances during 1957 are given in Table XII. The number of women who attended again showed an increase although this only amounted to 44 as compared with 206 in the previous year. The scheme under which general practitioners carry out ante-natal examinations on behalf of the Local Health Authority continues in operation, but little use is now made of it.

Although there are no formal arrangements, some assistance is given in rural areas to those general medical practitioners who undertake ante-natal work on their own premises. The domiciliary midwife collects two or three expectant mothers and takes them to the doctor's surgery at the time appointed for the examinations.

In addition to the medical work of the clinics, instruction in mothercraft is given, in Luton by the midwives and in the rest of the County by the health visitors. In some cases special classes are held. Also, in Bedford, Dunstable, Leighton Buzzard and Luton, birth relaxation classes are held and there seems no doubt that those who attend find them most helpful.

With regard to unmarried expectant and nursing mothers, the routine maternity facilities are available and are used, but, where it is necessary to do so, special arrangements are made for their care through voluntary Moral Welfare organisations.

Post-Natal Work

Separate post-natal clinics are not held, but facilities are available for mothers to be examined post-natally at ante-natal clinics. Women who feel in normal health and who suffer no discomfort do not usually take the trouble to attend and this probably explains why only 143 examinations were carried out during the year. It should be added that hospitals and general practitioners provide facilities for their own patients after confinement.

Arrangements still exist whereby women in outlying areas can be examined post-natally by general practitioners on behalf of the Local Health Authority, but only four such examinations were made during 1957.

TABLE XII -- DETAILS OF ANTE-NATAL CLINICS IN THE COUNTY AND ATTENDANCES DURING 1957

Clinic	Medical Officers' Sessions	Midwives' Sessions*	Total number of women who attended during the year	Number of new cases seen during year	Total number of attend-ances
AMPTHILL --					
The Cedars ...	25	--	95	70	494
BIGGLESWADE --					
The Lawns, The Baulk ...	26	--	48	34	277
DUNSTABLE --					
Health Centre, Kingsway ...	74	--	175	135	888
HOUGHTON REGIS --					
Baptist Schoolroom	25	--	20	17	128
LEIGHTON BUZZARD --					
1 Grovebury Road	26	--	76	64	299
ϕLUTON --					
Dallow Road ...	51	129	612	562	1,290
Farley Hill ...	--	27	130	111	421
Stopsley ...	--	76	429	365	1,009
†SHEFFORD --					
Digswell House	26	--	8	4	21
†STOTFOLD --					
Unionist Club ...	24	--	17	15	29
†SUNDON --					
Skefco Sports Pavilion ...	26	--	23	13	89
TOTALS ...	303	232	1,633	1,390	4,945

* No Medical Officer in attendance.

ϕ The Luton Clinics are Midwives' Clinics, the midwives seeing their own patients.

† Ante-natal work is only part of the activities at these sessions.

Infant Welfare Centres

Two new centres were opened in July, 1957; one on the Putnoe Estate in Bedford and the other at Clophill. No centres were closed during the year so that the total number at the 31st December was 72. Table XIII gives details of attendances during the year.

A Health Visitor is present at each session and a doctor attends at regular intervals, depending on the size of the centre. No consultant or other special clinics are provided for young children by the Authority, but appropriate steps are taken to see that they obtain whatever treatment is required. Thus, some children are referred to the family doctor, while others use the facilities provided at the school clinics for speech therapy, child guidance, etc. No assistance is given to general practitioners holding clinics on their own premises.

In rural areas, one clinic often serves two or more villages. In some areas where a convenient public service is not available, transport is provided by the Authority.

Premature Births

All infants weighing 5½ lbs. or less at birth are regarded as being premature, irrespective of the period of gestation. Details of the premature live births notified in the County during the year (as adjusted by transferred notifications) are given in Table XIV. The total of 387 represented 6.7 per cent of notified live births in 1957. Of the 387, 55 or 14.2 per cent, died within 28 days. There were 79 premature stillbirths notified, representing 61.7 per cent of all notified stillbirths.

Premature babies need the most skilled attention if they are to survive. To this end, the Authority have available for use when required special cots, together with appropriate equipment. Where it is necessary for a premature baby to be admitted to hospital, arrangements have been made for nursing care en route and the equipment required for such a journey has been provided.

The Unmarried Mother and Her Child

As already mentioned, the routine maternity facilities provided by the Authority are available to and are used by unmarried expectant and nursing mothers. Additional care, to the extent that is necessary, is provided for unmarried mothers and their babies by Diocesan bodies. Thus, the St. Albans Diocesan Council for Moral Welfare provides an outdoor welfare service covering the whole County and in addition provides a Home in Luton. The Bedford and County Girls' Home which the Diocesan Council provided in Bedford was closed on the 31st March, 1957. The Local Health Authority make substantial grants towards the costs incurred in providing these services.

The Northampton Diocesan Catholic Child Protection and Welfare Society engages in outdoor social work and makes arrangements for unmarried mothers to be admitted to suitable homes.

Under the Authority's scheme, 40 Bedfordshire cases were admitted to homes outside the County during 1957. The arrangements whereby health visitors co-operate with voluntary association workers and hospital almoners in the care of illegitimate children were continued.

TABLE XIII -- DETAILS OF ATTENDANCES AT INFANT WELFARE CENTRES DURING 1957

Centre	No. of sessions per month	No. of children who attended during year				No. of attendances during year			
		Born in			Total	Age at date of attendance			Total
		1957	1956	1955-52		0 -	1 -	2-4	
Ampthill	4	47	46	71	164	885	299	384	1,568
Arlesey	2	45	57	56	158	734	184	114	1,032
Aspley Guise	2	26	16	25	67	295	147	240	682
Barton	2	39	20	44	103	503	223	186	912
Bedford - Barford Avenue	8	163	151	141	455	3,027	656	435	4,118
Brereton Road	8	283	200	81	564	3,581	525	263	4,369
Goldington	4	120	37	16	173	2,163	366	229	2,758
Putnoe (com. 29.7.57)	2	57	32	28	117	413	84	70	567
Queen's Park	4	73	59	34	166	1,323	455	152	2,930
Biggleswade	4	94	59	10	163	1,975	500	238	2,713
Blunham	1	10	9	14	33	93	45	82	220
Bromham	2	38	31	49	118	557	217	187	961
Cadddington	2	55	41	36	132	823	306	249	1,378
Clapham	4	62	37	23	122	1,032	321	143	1,496
Clophill (com. 22.7.57)	1	18	10	18	46	60	33	35	128
Cranfield	2	26	42	67	135	497	201	325	1,023
Cranfield College	1	11	13	28	52	92	79	81	252
Dunstable	12	356	304	167	827	6,649	1,531	918	9,098
Eaton Bray	2	38	40	47	125	426	255	122	803
Eaton Socon	2	38	16	42	96	325	170	202	697
Elstow	4	90	86	33	209	1,396	441	181	2,018
Flitwick	4	57	66	51	174	1,052	389	431	1,872
Great Barford	1	7	8	16	31	70	46	61	177
Harrold	1	14	13	56	83	130	129	200	459
Haynes	2	11	12	12	35	130	88	119	337
Heath & Reach	2	28	24	21	73	416	103	97	616
Henlow	4	82	113	94	289	1,272	249	56	1,577
Houghton Conquest	1	8	15	18	41	98	60	82	240
Houghton Regis	4	54	55	73	182	1,298	387	370	2,055
Kempston	8	136	123	129	388	3,162	1,003	1,056	5,221
Kensworth	2	25	26	55	106	321	145	196	662
Langford	2	18	26	46	90	372	299	261	932
Leighton Buzzard	6	132	122	121	375	2,097	514	272	2,883
c/fwd	110	2,261	1,909	1,722	5,892	38,267	10,450	8,037	56,754

Centre	No. of sessions per month	No. of children who attended during year				No. of attendances during year			
		Born in			Total	Age at date of attendance			Total
		1957	1956	1955-52		0 -	1 -	2-4	
b/fwd	110	2,261	1,909	1,722	5,892	38,267	10,450	8,037	56,754
Luton - Beechwood	8	165	194	200	559	3,536	679	219	4,434
Castle Street	4	101	77	96	274	1,481	301	142	1,924
Dallow Road	4	178	108	115	401	2,446	424	187	3,057
Farley Hill	4	122	122	185	429	1,567	281	247	2,095
Leagrave High St.	4	84	94	83	261	1,256	167	88	1,511
Leagrave Marsh Rd.	4	171	137	87	395	2,681	403	124	3,208
Limbury	8	177	138	147	462	2,872	441	193	3,506
Park St.	4	58	57	67	182	958	174	203	1,335
Round Green	4	101	84	81	266	1,782	234	120	2,136
St. Anne's	4	100	96	83	279	1,621	376	104	2,101
Stopsley	8	249	216	231	696	3,917	547	311	4,775
Marston Moretaine	2	22	22	38	82	213	70	116	399
Marston Shelton	2	7	10	27	44	111	80	134	325
Maulden	2	17	16	19	52	333	104	183	620
Potton	2	38	28	58	124	414	197	241	852
Ridgmont	2	23	22	51	96	265	181	227	673
Riseley	1	12	15	36	63	99	60	102	261
Sandy	2	35	35	69	139	407	262	242	911
Sharnbrook	2	25	28	49	102	346	210	297	853
Shefford	4	82	94	91	267	1,646	308	577	2,531
Shillington	2	28	19	50	97	378	216	217	811
Shortstown	2	45	33	51	129	492	112	176	780
Slip End	2	36	35	28	99	611	196	158	965
Stevington	1	4	8	20	32	37	44	58	139
Stewartby	2	14	26	27	67	298	166	234	698
Stotfold	2	52	59	51	162	779	350	103	1,232
Streatley	2	59	48	42	149	759	223	133	1,115
Studham	2	13	10	35	58	218	112	178	508
Sundon	4	90	82	121	293	1,558	367	521	2,446
Tempsford	1	9	7	11	27	65	36	41	142
Toddington	4	40	46	86	172	1,081	361	400	1,842
Turvey	1	10	22	16	48	104	34	88	226
Westoning	2	17	13	34	64	243	92	212	547
Wilstead	1	18	17	6	41	63	62	70	195
Woburn	2	19	21	43	83	278	114	327	719
Wootton	2	27	26	44	97	427	182	233	842
Wrestling-worth	1	8	10	9	27	77	35	51	163
Wyboston	1	18	23	19	60	126	64	100	290
Wymington	1	12	14	25	51	119	66	96	281
TOTALS	220	4,547	4,021	4,253	12,821	73,931	18,781	15,490	108,202

TABLE XIV -- NUMBER OF PREMATURE BIRTHS NOTIFIED IN THE COUNTY DURING 1957, SHOWING WHERE BORN AND NURSED, AND SUBDIVIDED ACCORDING TO WEIGHT AND PERIOD OF SURVIVAL

	BORN AT HOME OR IN PRIVATE NURSING HOME											BORN IN HOSPITAL					
		Nursed entirely at Home or in Nursing Home					Transferred to Hospital										
	Total	3 lb. 4 oz. or less	Over 3 lb. 4 oz. to 4 lb. 6 oz.	Over 4 lb. 6 oz. to 4 lb. 15 oz.	Over 4 lb. 15 oz. to 5 lb. 8 oz.	TOTAL	3 lb. 4 oz. or less	Over 3 lb. 4 oz. to 4 lb. 6 oz.	Over 4 lb. 6 oz. to 4 lb. 15 oz.	Over 4 lb. 15 oz. to 5 lb. 8 oz.	TOTAL	3 lb. 4 oz. or less	Over 3 lb. 4 oz. to 4 lb. 6 oz.	Over 4 lb. 6 oz. to 4 lb. 15 oz.	Over 4 lb. 15 oz. to 5 lb. 8 oz.	TOTAL	Grand Total
Died in first 24 hours ...	3	1	--	--	--	1	--	2	--	--	2	17	5	2	3	27	30
Died on 2nd day to 28th day	4	--	1	--	--	1	2	--	--	1	3	9	9	2	1	21	25
Survived 28 days	107	1	3	17	78	99	1	5	1	1	8	9	34	56	126	225	332
TOTALS ...	114	2	4	17	78	101	3	7	1	2	13	35	48	60	130	273	387

Birth Control

There are three clinics in the County where advice on birth control is given to women in whose cases pregnancy or further pregnancy would be detrimental to health. The Clinics are at Bedford, Dunstable and Luton. Details of the patients seen are given in Table XV.

During the year a request was made by the Family Planning Association for facilities to carry on their activities in Luton and Bedford. These activities are wider in scope than those of the Authority's clinics and the Health Committee felt obliged to refuse the request.

TABLE XV -- ATTENDANCES AT BIRTH CONTROL CLINICS, 1957

	Number of women who attended for the first time	Total number of women who attended	Total number of attendances	No. of sessions
Bedford, Barford Avenue	57	241	463	23
Dunstable ...	28	129	246	23
Luton, Beechwood Health Centre	204	818	1,014	56
TOTALS ...	289	1,188	1,723	102

Day Nurseries

It is generally accepted that normally the best place for a young child is at home, preferably with his mother. Circumstances sometimes arise, however, when it is in the child's interest that daily care of some other kind should be provided for him. It may be that there are relatives able and willing to care for him, but there are circumstances in which the most reasonable solution is the admission of the child to a day nursery. In Bedfordshire, five day nurseries were provided by the County Council at the end of the year. The criteria for admission are :-

(1) The mother is obliged to work. This arises most frequently in the case of widows, wives whose husbands are suffering from prolonged illness, wives separated from their husbands, and single mothers.

(2) There is no mother available to care for the family and the father is working and caring for the children as best he can.

(3) The home environment is bad and the child is suffering thereby.

(4) Other reasons such as low family income and heavy expenses.

Responsibility for admitting a child to a day nursery lies with the Divisional Committees and a charge is made according to the family's means.

Children from the eastern part of the County are admitted to a Nursery at Letchworth, by arrangement with the Hertfordshire County

Council. From time to time a Buckinghamshire child has been admitted to the Leighton Buzzard Nursery.

Details of accommodation and average attendance at the five day nurseries are given in Table XVI. Nursery students continued to be trained at four of the nurseries, as indicated in the Table.

The unsuitability of the premises housing the Bedford nursery has been a matter for concern for a very long time and plans were made to build a new 40-place nursery. The project is, however, held up indefinitely by the embargo on capital expenditure.

The Nurseries and Child-Minders Regulation Act, 1948, requires the Local Health Authority to register premises, other than premises wholly or mainly used as private dwellings, where children are received to be looked after for the day or a substantial part thereof or for any longer period not exceeding six days. Also, persons who for reward receive into their homes more than two children under the age of five to be similarly looked after must be registered. At the end of the year, one nursery providing for 25 children, and eight daily minders providing in all for 67 children, were so registered.

At no time during the year were there any daily minders receiving fees from the Authority under Section 22 of the National Health Service Act.

TABLE XVI — ACCOMMODATION AND AVERAGE DAILY ATTENDANCE AT THE DAY NURSERIES IN 1957

Address of Nursery	No. of approved places		No. of children on the register at the end of the year		Average daily attendance during the year	
	Under 2	Years 2-5	Under 2	Years 2-5	Under 2	Years 2-5
BEDFORD --						
34 St. John's Street ...	15	25	8	32	7	26
LEIGHTON BUZZARD --						
Bassett Road[#]	10	28	3	20	4	16
LUTON --						
Alder Crescent[#] ...	20	30	14	38	14	19
Manor Road[#]	16	34	9	39	7	30
Stopsley[#]	16	24	13	33	9	25

[#] Training Nursery.

Children in Care

The provision of residential homes and nurseries for children is a responsibility of the Care of Children Committee, the services of the Health Department's medical staff being utilised as and when required. Regular visits are paid to the homes to ensure that everything is in order from a health point of view.

The Health Department also arranges for children who are boarded-out to be medically examined in accordance with Home Office Regulations. The usual practice is for the examinations to be carried out by the general practitioner who attends the household.

Dental Care

Under the National Health Service Act, 1946, priority in dental treatment is given to expectant and nursing mothers, and children. This treatment is provided free of charge. In Bedfordshire, the Local Health Authority provide facilities for the dental care of these classes in conjunction with the School Dental Service.

The following report has been contributed by the Senior Dental Surgeon, Mr. R.B.T. Dinsdale :-

> "Routine dental treatment continues to be available at all the static clinics in the County. Special sessions are set aside to treat expectant and nursing mothers as well as the pre-school children who may present themselves. These sessions are held in the static clinics at Bedford (St. Peter's), Biggleswade, Dunstable and Leighton Buzzard. Treatment is also available at the mobile clinics when they visit the schools in the rural areas. At the first visit appointments are made to suit the patient. Details of the work done are given in Tables XVII and XVIII. A full range of treatment can be given as a routine, covering fillings, extractions and X-rays. Cases requiring specialist treatment are referred to the local hospitals either in Bedford or Luton.
>
> "The shortage of Dentists in the foreseeable future places a responsibility on the public to do all in their power to avoid dental disease and maintain a good standard of dental health. The Dental staff with the assistance of the Health Education Officer are always pleased to co-operate with any organisation in helping the general public to increase their knowledge on dental subjects.
>
> "While dental disease in itself is not a killing disease, it can and does reduce the body's resistance to those diseases which are, besides reducing the individual's feeling of well-being. Good oral health and a feeling of general good health are important -- especially to expectant and nursing mothers. Thus it is up to everybody to get orally fit and co-operate in maintaining that fitness with a minimum of professional assistance. Excess carbohydrates (sweets, sticky cakes, etc.) in the diet, snacks between meals and lack of oral cleanliness all contribute to dental disease. While sweets and cakes are pleasant and part of the high standard of living, people should discipline themselves to avoid excess. While the rewards are not apparently spectacular, the benefits are infinite."

TABLE XVII -- FORMS OF DENTAL TREATMENT PROVIDED AT DENTAL CLINICS DURING 1957

	Extractions (teeth)	General Anaesthetics	Fillings	Scalings and gum treatment	Silver nitrate treatment	Crowns or Inlays provided	Radiographs	Dentures provided	
								Full upper or lower	Partial upper or lower
BEDFORD --									
Mothers	35	3	30	3	--	1	--	3	3
Infants	79	14	53	2	--	--	1	--	--
BIGGLESWADE --									
Mothers	7	1	9	4	--	--	--	2	2
Infants	7	2	--	--	--	--	--	--	--
DUNSTABLE --									
Mothers	225	100	130	74	1	--	12	17	18
Infants	132	79	43	2	1	--	2	--	--
LEIGHTON BUZZARD --									
Mothers	58	22	8	71	--	--	--	8	8
Infants	74	38	17	20	58	--	--	--	--
LUTON --									
Mothers	--	--	--	--	--	--	--	--	--
Infants	46	30	8	--	--	--	--	--	--
TOTALS: Mothers	325	126	177	152	1	1	12	30	31
TOTALS: Infants	338	163	121	24	59	--	3	--	--

TABLE XVIII -- MOTHERS AND INFANTS PROVIDED WITH DENTAL CARE AT DENTAL CLINICS DURING 1957

	Examined	Needing Treatment	Treated
BEDFORD --			
Mothers	17	16	10
Infants	78	72	69
BIGGLESWADE --			
Mothers	5	5	5
Infants	2	2	2
DUNSTABLE --			
Mothers	76	76	76
Infants	112	112	112
LEIGHTON BUZZARD --			
Mothers	35	35	35
Infants	85	85	85
LUTON --			
Mothers	--	--	--
Infants	44	34	34
TOTALS: Mothers	133	132	126
Infants	321	305	302

Welfare Foods

The term "Welfare Foods" embraces national dried milk, orange juice, cod liver oil and vitamin A and D tablets. As the result of a report on Welfare Foods prepared by a Joint Sub-Committee of the Central and Scottish Standing Medical Advisory Committees, the Minister of Health announced in October, 1957, that orange juice would only be supplied to children up to the age of two, instead of five as previously. It was also decided to make a substantial reduction in the Vitamin D content of National Dried Milk and of cod liver oil issued for infants and young children. In addition to seven major distribution centres at Ampthill, Bedford, Biggleswade, Dunstable, Leighton Buzzard, Luton and Sandy, there were, at the end of the year, 109 minor centres. These minor centres are located at infant welfare centres, village halls, etc., and are mainly manned by volunteers. The Authority are greatly indebted to the W.V.S. for their assistance in this important work. Although only one additional minor centre was opened during the year, several changes were made which resulted in better distribution and improved service. For instance, there has been an increase in the number of centres stocking National Dried Milk.

Every endeavour is made to ensure that families living in the more isolated parts of the County receive welfare foods. This is not always easy and some villages are still without a distribution centre. In really exceptional circumstances, where it is impracticable for a mother to get to a centre, national dried milk is sent by post.

In addition to the welfare foods already mentioned, infant welfare centres supply a variety of other dried milks and nutrients at cost price. Iron and other tablets are issued free of charge.

SECTION 23 -- MIDWIVES SERVICE

In Bedfordshire, the domiciliary midwifery service is provided directly by the County Council. In the Bedford and Luton Boroughs whole-time midwives are employed, but in the remainder of the County midwives undertake home nursing as well. In three instances the midwives are trained health visitors and carry out comprehensive duties, i.e. midwifery, home nursing, health visiting and school health work. At the 31st December, 1957, the staff comprised 20 whole-time midwives, 32 nurse-midwives and three health visitor-nurse-midwives. Non-medical supervision is carried out by the Chief Nursing Officer, assisted by the Divisional Nursing Officer in Luton and by the Assistant Supervisor of Midwives and Home Nurses in the remainder of the County. Supervision of domiciliary midwives not employed by the Local Health Authority and of midwives in Nursing Homes is undertaken in accordance with the rules of the Central Midwives Board. At the end of the year there were none of the former and only three of the latter practising in the County.

Ante-natal supervision by midwives is carried out in accordance with the rules of the Central Midwives Board and in addition every expectant mother is normally seen at least twice by a doctor during the ante-natal period. In Luton, midwives' ante-natal clinics are held regularly at a central clinic. In the remainder of the County all ante-natal supervision by midwives is undertaken in the patients' homes. Maternity outfits are supplied free in all domiciliary cases.

The number of deliveries attended by midwives in the County during 1957 is given in Table XIX. The number of cases delivered in hospital and discharged into the care of domiciliary midwives before the fourteenth day was 270. 40.2 per cent of all notified Bedfordshire births (live and still) in 1957 were domiciliary, compared with 38.4 in 1956 and 38.3 in 1955.

During 1957, 13 midwives attended refresher courses organised by the Royal College of Midwives, and the Assistant Non-Medical Supervisor of Midwives attended a recognised course organised by the Association of Supervisors of Midwives.

Analgesia in Childbirth

All the midwives employed by the Authority are qualified to administer gas and air analgesia and 54 sets of apparatus were in use at the end of the year. The midwives are also supplied with pethidine. Trilene is not used. It may be said that, in the normal course of events, analgesia is available to every woman attended by the Council's midwives.

During the year, of the 1,688 women delivered by the Council's midwives without a doctor being present, 1,282 or 75.9 per cent, received gas and air analgesia. Of the 691 cases where a doctor was present at the delivery, 576 or 83.4 per cent, received gas and air. Pethidine was administered by the midwives to 409 women when a doctor was present and to 1,004 when no doctor was present at the time of delivery.

TABLE XIX -- NUMBER OF DELIVERIES ATTENDED BY MIDWIVES DURING 1957, SHOWING NUMBER OF CASES IN WHICH DOCTOR WAS PRESENT

	Domiciliary Cases					Cases in Institutions
	Doctor not booked		Doctor booked		Total	
	Doctor present at delivery	Doctor not present	Doctor present at delivery	Doctor not present		
Midwives employed by County Council	9	154	682	1,534	2,379	--
Midwives employed by Hospital Management Committees ...	--	--	--	--	--	2,480
Midwives in Private Practice (including Nursing Homes) ...	--	1	10	--	11	165
TOTALS ...	9	155	692	1,534	2,390	2,645

SECTION 24 -- HEALTH VISITING

During recent years the scope of the health visitor's duties has been gradually extended. In her work with mothers and children, greater emphasis is now laid on health education. At the same time, more and more of her time is taken up by problem families and with the care of old people. Further details concerning problem families are given in that part of this Report dealing with Section 28 of the Act.

At the 31st December, 1957, there were 36 qualified health visitors employed by the Authority. Four were doing full-time health visiting, 28 combined health visiting with school nursing, and three were combining health visiting with midwifery, home nursing and school nursing. In addition, one health visitor was employed part-time. In Luton it has been necessary to make use of some nurses not trained as health visitors.

During the year, 16,891 families were visited and 21,131 children under five years of age were seen in their homes. Further particulars of the visits paid by the Council's Health Visitors during the year are given below :-

	First Visits	Total Visits
Expectant mothers	1,146	1,765
Children under 1 year ...	5,837	27,457
Children between 1 and 2 ...		11,961
Children between 2 and 5 ...		24,212
Other cases		4,117

The total number of attendances made by Health Visitors at clinic sessions during the year was 3,917.

In accordance with the recommendation of the Rushcliffe Committee, four Health Visitors and two Tuberculosis Visitors attended approved courses in 1957.

SECTION 25 -- HOME NURSING

The County Council make direct provision of a Home Nursing Service. The nurses deal with any emergency to which they may be called but the general practice is for them to place on their lists only patients referred to them by the general medical practitioners under whose direction they work. Patients on discharge from hospital are referred to their own doctors, from whom the nurses take instructions. Occasionally, however, it is necessary for reference to be made both to doctor and to nurse. Message forms are left at the patient's home to facilitate interchange of information between doctor and nurse. No all-night service is provided, but the nurses are available for night calls if required urgently.

It is difficult to assess how much the availability of the home nursing service relieves pressure on hospitals by providing home care for patients. Home conditions, the availability of domestic help and the ability and willingness of relatives and neighbours to help are other factors to be taken into account in determining whether a patient should be nursed at home or be admitted to hospital. Nevertheless, the existence of the home nursing service is undoubtedly the deciding factor in certain cases which may be classified thus :-

(1) Where an aged widow has only a son living at home. In general a man cannot care for his mother as a daughter would and a visit by the nurse often overcomes the difficulty.

(2) Where an aged couple live together and both have gone beyond the stage of being able to care adequately for each other. Home nursing care for a bedridden partner has often prevented them from being parted in their last years.

(3) Where a sick relative is living with a family in which there are young children and the mother is unable to manage. Visits by the home nurse will often lighten the load sufficiently for the person to remain at home.

(4) Where the home nurse can help to rehabilitate a patient or prevent deterioration so that the person does not become bedridden and require admission to a geriatric unit.

The nursing service also relieves pressure on hospital accommodation by enabling persons to be discharged earlier than would otherwise be the case. There is much to be said for the early discharge from hospital of some types of post-operative case into the care of the family doctor and home nurse but this can only take place to the extent that home nurses are available.

There is an increased use of antibiotics given by injection and also increasing calls for nursing assistance to the aged. Thus of the 7,544 patients attended in 1957, 3,077 were 65 years of age or over. The average number of visits paid to old people was 35, compared with 14 in the case of patients under 65 years of age.

At the 31st December, 1957, there were, in addition to the 32 nurse-midwives and three health visitor-nurse-midwives already mentioned, 34 full-time nurses of whom six were men. There was also one part-time home nurse.

The numbers of patients in various categories who were attended during the year are shown overleaf, together with the numbers of visits paid.

Type of Case	No. of Cases	No. of Visits
Medical	5,388	137,339
Surgical	1,042	28,575
Infectious Disease ...	6	97
Tuberculosis	110	4,024
Maternal Complications	64	514
Others	934	2,025
TOTALS ...	7,544	172,574

The Queen's Institute of District Nursing arranges refresher courses for District Nurses. Two nurses attended such courses in 1957.

SECTION 26 -- VACCINATION AND IMMUNISATION

Smallpox Vaccination

Smallpox has been virtually eradicated in this country, but it is still present in Eastern countries and there is always a risk that the disease may re-appear here, brought into the country either by someone who is infected or by material, such as raw cotton. Protection against smallpox is provided by vaccination in infancy and revaccination in later years. In Bedfordshire all vaccination against smallpox under the Scheme is undertaken by general practitioners.

Table XX shows the number of persons vaccinated for the first time during 1957 in each of the Divisions. There was an increase of 1,115 over the figure for 1956. Whilst part of the increase can be accounted for by persons needing to be vaccinated before proceeding abroad, there seems no doubt that the combined efforts of the clinic doctors, health visitors and health education officer have had an effect. Thus the number of infants under one year of age who were vaccinated was 31.5 per cent of births registered in 1957. The corresponding figure for the previous year was 26.8 per cent, whilst in 1950 it was only 16.0 per cent. There has also been a considerable increase in the number of children aged 1 - 4 years who are vaccinated. These figures are encouraging but they are still not enough. During 1957, 1,203 persons were re-vaccinated.

TABLE XX -- NUMBER OF PERSONS IN EACH DIVISION VACCINATED FOR THE FIRST TIME DURING 1957, SUBDIVIDED ACCORDING TO AGE

Age at date of vaccination	DIVISION				Totals
	Northern	Southern	Eastern	Luton	
Under 1 year	750	326	139	637	1,852
1 - 4 years	207	67	25	173	472
5 - 14 years	132	44	14	169	359
Over 14 years	208	87	24	252	571
TOTALS	1,297	524	202	1,231	3,254

Diphtheria Immunisation

The occurrence of a fatal case of diphtheria in Bedfordshire in 1957 was a tragic reminder of the need for immunisation. The importance of the matter is being continually stressed and mothers are urged to take their babies either to the family doctor or to the infant welfare centre to be immunised. In a great many cases immunisation is now being combined with protection against whooping cough. Immunisation of schoolchildren is arranged through the schools.

After about five years the protection given by immunisation falls below a safe level. For this reason a "booster" injection is normally given when the child enters school at the age of five; again between the eighth and ninth birthdays; and lastly between the 12th and 13th birthdays.

To make it virtually certain that outbreaks of diphtheria will not occur, at least 75 per cent of children under 15 years should be effectively immunised, i.e., they should have received some protection within the last five years. The percentage of the child population thus protected is referred to as the "immunity index". As will be seen from Table XXI, the immunity index for the age-group 1 - 4 years at the end of 1957 was 68.6, but only 55.3 for the age-group 5 - 14 years. The corresponding figures for the previous year were 68.7 and 58.1. Table XXII shows the number of children immunised during 1957. The number of primary immunisations was 61 less than in 1956, whilst the number of "booster" injections fell by 490.

TABLE XXI -- NUMBER OF CHILDREN IN THE COUNTY KNOWN TO HAVE COMPLETED A FULL COURSE OF IMMUNISATION BY 31ST DECEMBER, 1957, SUBDIVIDED ACCORDING TO THE AGE AT THAT DATE

Age at 31.12.57	Under 1	1 - 4	5 - 9	10-14	Total Under 15
Last complete course of injections (whether primary or booster):					
1953-57	471	13,398	18,372	10,331	42,572
1952 or earlier	--	--	3,960	11,993	15,953
Estimated mid-year child population ...	5,550	19,550	51,900		77,000
Immunity Index ...	8.5	68.6	55.3		55.3

TABLE XXII -- NUMBER OF CHILDREN WHO RECEIVED A FULL COURSE OF PRIMARY DIPHTHERIA IMMUNISATION IN 1957, SUBDIVIDED ACCORDING TO AGE AT DATE OF FINAL INJECTION, TOGETHER WITH NUMBER OF CHILDREN IN VARIOUS AGE GROUPS WHO RECEIVED "BOOSTER" INJECTIONS

	AGE			Total
	Under 1	1 - 4	5 - 14	
Primary Immunisation	2,479	1,319	565	4,363
"Booster" Injections	--	190	4,786	4,976

Protection Against Whooping Cough

Since the 1st November, 1954, the Authority have provided facilities for protection against whooping cough to children under the age of two years who have not suffered from the disease, and whose parents make a request for such protection. The vaccine is given alone or in combination with diphtheria prophylactic. It will be seen from the figures in Table XXIII that in the vast majority of cases the combined prophylactic is preferred. As far as is known only 17 cases of whooping cough in 1957 occurred in children who had received a full course of injections.

TABLE XXIII -- NUMBER OF CHILDREN PROTECTED AGAINST WHOOPING COUGH ALONE OR IN CONJUNCTION WITH DIPHTHERIA IMMUNISATION DURING 1957, SUBDIVIDED ACCORDING TO AGE ON COMPLETION

	AGE							Total
	0-	1-	2-	3-	4-	5-9	10-14	
Combined with Diphtheria Immunisation	2,311	821	170	48	39	110	14	3,513
Alone	32	17	5	7	3	5	--	69
TOTALS ...	2,343	838	175	55	42	115	14	3,582

Poliomyelitis Vaccination

In the U.S.A., Dr. J.E. Salk and his associates developed an inactivated poliomyelitis vaccine, using strains of each of the three types of virus and killing them with formaldehyde. A carefully controlled large-scale field trial was carried out in 1954 and the vaccine was found to be safe and effective. Immediate steps were taken to apply the vaccine in the U.S.A. on a very large scale and preparations were also made in a number of other countries. Unfortunately, a serious set-back occurred in 1955, when over 200 cases of poliomyelitis resulted from the use of the vaccine. Investigations showed that a batch of vaccine prepared in one laboratory had not been completely inactivated and contained live virus. Since then, however, millions of doses of Salk vaccine have been administered without serious adverse effects.

A similar vaccine was subsequently developed in this country, the main difference being that it did not contain the virulent Mahoney strain of virus which was responsible for the unfortunate experience in the U.S.A. A limited quantity of the British vaccine became available for the first time in 1956 and was offered to Local Health Authorities by the Ministry of Health. The County Council decided to avail themselves of the offer and the scheme under Section 26 was amended accordingly. Production of the British vaccine was (and still is) relatively small and initially it was available generally only for children born in the years 1947 to 1956 inclusive. On the 11th September, 1957, the Ministry of Health announced that the offer was to be extended to all children under 15 years of age and to expectant mothers. This information was conveyed to Local Health Authorities in an official circular dated the 19th November.

In order that all these additional persons could be offered vaccination before the summer of 1958, it was decided to import Salk vaccine from Canada and the U.S.A. This had not been done in the first place because the Medical Research Council had thought the use

of the Mahoney strain of the virus was inadvisable and were of the opinion that the British vaccine was the safest and most effective available. At the end of July 1957, the Medical Research Council, whilst still maintaining this opinion, advised that the risk of using Salk vaccine as a temporary measure should be weighed against the risk of leaving substantial numbers of children unvaccinated during the summer of 1958. Vaccine thus imported was to be subject in this country to the same tests of safety, potency and purity as British vaccine, these tests being additional to those carried out in the country of manufacture. As the tests take up to three months it was not expected that Salk vaccine would be available before the end of December, 1957. In the meantime, work proceeded on the production of a second British vaccine similar to that already in use, but only a small quantity became available before the end of the year.

An assessment of the vaccinations carried out in Great Britain during May and June, 1956, was undertaken by the Medical Research Council (B.M.J. 1.6.57). The number of children who received two injections was 148,684. In the 74,660 children aged $5\frac{1}{2}$ - $9\frac{1}{2}$ years, one case of paralytic poliomyelitis occurred, giving an attack rate of 1.3 per 100,000. The attack rate in the corresponding unvaccinated children was 8.2 per 100,000. In the 74,024 children aged $1\frac{1}{2}$ - $5\frac{1}{2}$ years, three cases occurred, giving an attack rate of 4.1 per 100,000 against a rate of 20.1 in the corresponding unvaccinated children. Thus in both age groups the observed incidence of paralytic disease was significantly less than that in the unvaccinated.

At the present time no-one knows how long the immunity conferred by this type of vaccine will remain effective.

Research workers are now endeavouring to perfect an attenuated live virus vaccine. The principle is to develop a weakened strain of the virus to the point where it cannot cause illness when administered to the human body, but will result in the production of poliomyelitis antibodies. Such a vaccine can be taken by mouth and should confer the same immunity as that given by natural infection without the accompanying risk of paralysis. Sufficient progress had been made for the W.H.O. Expert Committee on Poliomyelitis, meeting in July 1957, to recommend giving the vaccine large-scale trials among the population. They do not, however, suggest that this vaccine should displace the Salk-type of killed-virus vaccine in those countries where it is now being used. It should be an adjunct to the present vaccine, though it might eventually replace it.

The Expert Committee has also discussed the question whether vaccination should be started in the middle of an epidemic. A report in the Medical Officer for the 2nd August, 1957, stated: "In some regions emergency campaigns have been undertaken in such circumstances, but the advantages and disadvantages have not been assessed. When vaccination is undertaken while natural cases of the disease are currently occurring, it is inevitable that cases of paralysis will appear in the vaccinated also; most of them will probably represent examples of co-incident natural infection, but the possibility must be borne in mind that the inoculation may provoke local paralysis at the place of injection, or be followed by a short period during which natural infection may have a greater paralytic effect ..... In general, the experts conclude, there might be some hesitation in vaccinating for the first time in the face of an intense epidemic in a crowded community, since the virus would have spread already so widely that there would be little hope of producing artificial immunity through vaccine in time to have a useful effect. On the other hand, early and extensive vaccination should be started in the peripheral regions to which the outbreak would be expected to spread over a period of months.

"As concerns the danger of provoking paralytic poliomyelitis by

injections in general the experts believe that, if a child is already successfully inoculated against poliomyelitis, no accident will occur. Hence there is no reason for withholding vaccinations or injections in general from protected individuals at any time, including those of epidemics of poliomyelitis. On the other hand, the experts re-emphasised their opinion that tonsil and adenoid operations should be prohibited during the so-called polio season because they are believed to increase the risk of acquiring the bulbar form."

In Bedfordshire, vaccination of the 11,970 children aged 2 - 9 years who were registered in 1956 continued to be undertaken by the Council's medical staff during 1957. At the end of June, 1957, parents were invited to register for vaccination children born in 1955 and 1956. The number of registrations was 3,201. Subsequently, a second opportunity was given for children under 10 years of age to be registered. Action on the second extension of the scheme was not taken until the beginning of January, 1958.

By the 31st December, 1957, 10,271 children had received two injections since the scheme began. A further 1,705 had received one injection only and 12,652 were on the waiting list.

SECTION 27 -- AMBULANCE SERVICE

The Authority make direct provision of an ambulance service for the whole of Bedfordshire except a small area on the Buckinghamshire border and one on the Northamptonshire border. In these areas, agency agreements are in existence with the Buckinghamshire County Council and the Rushden and District Motor Ambulance Association respectively.

Radio-telephones are installed in all vehicles and radio control centres are situated at the Luton and Kempston depots. In the south the Dunstable depot is linked with Luton, and in the north the Ampthill and Biggleswade depots are linked with Kempston. The system works well. The new depot in Luton came into operation during the year.

At the 31st December, 1957, the total ambulance personnel directly employed numbered 69. It comprised one superintendent, one maintenance officer, five station officers, two deputy station officers and 60 driver-attendants. A valuable re-inforcement to the service is received from the Hospital Car Service and from the attendance of voluntary personnel of the St. John Ambulance Brigade and the British Red Cross Society at the depots. During the year, the Hospital Car Service travelled 152,196 miles in conveying 4,914 patients on 2,503 journeys for the Authority. Car Hire Services were employed to convey 572 patients to and from the Chest Clinic in Bedford, and 5,895 miles were travelled on 223 journeys.

Wherever possible patients who have to travel long distances are sent by train. This was done on 172 occasions during the year, 22 of the patients being stretcher cases. It is pleasing to record that the arrangements made for the patients by British Railways are most satisfactory. It is fitting also that tribute should be paid to the London County Council for the help given to patients sent to London by train, either by transporting them to their final destinations or to other main-line stations from which they continue their journeys.

Table XXIV shows the number of journeys made and miles travelled by vehicles at each of the five depots and by the Linslade and Rushden depots during 1957. These figures have been divided into two groups -- accidents and other emergencies, and sickness and other

TABLE XXIV -- JOURNEYS AND MILES DONE BY AND ON BEHALF OF THE COUNTY AMBULANCE SERVICE, 1957

DEPOT	EMERGENCY CASES				SICKNESS AND OTHER CASES				ALL CASES			
	IN-COUNTY		OUT-COUNTY		IN-COUNTY		OUT-COUNTY		IN-COUNTY		OUT-COUNTY	
	Journeys	Miles	Journeys	Miles	Journeys	Miles	Journeys	Miles	Journeys	Miles	Journeys	Miles
Bedford	1,131	10,833	25	1,388	3,197	127,650	179	21,222	4,328	138,483	204	22,610
Biggleswade ...	454	12,716	200	6,234	1,480	45,894	629	27,979	1,934	58,610	829	34,213
Ampthill ...	491	13,074	33	1,456	1,588	67,529	261	14,450	2,079	80,603	294	15,906
Dunstable ...	942	14,738	46	1,989	1,371	54,369	144	8,672	2,313	69,107	190	10,661
Luton	1,874	21,139	69	2,970	2,043	66,570	474	35,201	3,917	87,709	543	38,171
Linslade (Bucks. C.C.)	41	963	82	2,068	580	14,630	596	13,815	621	15,593	678	15,883
Rushden Ambulance	--	--	6	164	--	--	88	1,671	--	--	94	1,835
TOTALS ...	4,933	73,463	461	16,269	10,259	376,642	2,371	123,010	15,192	450,105	2,832	139,279

cases. Of the 86,537 miles travelled by the County Council's vehicles in conveying accidents, etc., 27,119 were done at night (i.e. between 8.0 p.m. and 8.0 a.m.). The Linslade Depot did 1,364 of its 3,031 miles in conveying accidents, etc. at night. In the case of sickness, the County depots did 5,350 miles at night out of a total of 469,536 and the Linslade Depot 89 miles out of 28,445. The Rushden Ambulance Service did no journeys at night. Altogether, the Council's vehicles recorded 556,073 miles during 1957 and of that total 8,675 miles were travelled on behalf of other authorities.

Table XXV shows the total mileages travelled in the years 1953-57 in providing an ambulance service for Bedfordshire, and includes mileages recorded by other Ambulance Services acting on the Council's behalf.

TABLE XXV -- MILES TRAVELLED IN PROVIDING AMBULANCE SERVICE FOR BEDFORDSHIRE, 1953-57

Work done by	1953	1954	1955	1956	1957
County Council Depots*	584,857	588,780	585,865	562,141	547,398
Hospital Car Service ...	121,948	137,014	156,179	164,663	152,196
Car Hire Services ...	33,920	23,819	15,504	11,090	5,895
Bucks. C.C. (Linslade Depot) ...	37,528	37,525	34,930	35,020	31,476
Rushden Ambulance ...	4,227	4,308	4,268	3,060	1,835
Other Authorities ...	11,363	12,751	13,998	16,390	14,367
TOTALS ...	793,843	804,197	810,744	792,364	753,167

* Excluding mileage travelled on behalf of other Authorities.

SECTION 28 -- PREVENTION OF ILLNESS, CARE AND AFTER-CARE

Tuberculosis

In the case of tuberculosis, the Authority's responsibility is in relation to prevention, care and after-care, treatment being provided by the Regional Hospital Board. The Senior Chest Physicians, who work at and from the Chest Clinics, are jointly employed by the Regional Hospital Board and the Local Health Authority. Six Tuberculosis Visitors are employed full-time by the Authority and the establishment also provides for two Welfare Officers. Early in 1956, the Welfare Officer at the Luton Chest Clinic resigned and steps to fulfil the vacancy have proved abortive. For some months, the Welfare Officer at the Bedford Chest Clinic covered the whole County and then, on the 30th June, 1957, she also resigned. Thus at the end of the year both posts were vacant. As a temporary measure, arrangements were made with the Bedford Group Hospital Management Committee for the Senior Hospital Almoner at the Bedford General Hospital (North Wing) to perform the duties of Welfare Officer at the Bedford Chest Clinic in addition to her normal duties. In Luton, one of the Tuberculosis Visitors undertook as much of the work as she could.

In appropriate cases extra nourishment in the form of milk and eggs is provided and 201 patients benefited in this way during 1957. Tuberculous patients being nursed at home also receive domestic help if required, and 18 persons were so assisted during the year. Beds, bedding and shelters are available, in addition to medical comforts. At the end of the year 53 tuberculous patients were receiving occupational therapy at home.

Arrangements exist with settlements for the reception of suitable patients. When they are sufficiently recovered to embark on rehabilitation the County Council accept financial responsibility for their maintenance. At the end of the year there was one patient at Preston Hall and none in Papworth Village Settlement.

As part of the scheme for prevention, arrangements are made, where necessary, to provide boarding-out accommodation for the children of infectious persons, but the need did not arise during 1957.

The Authority have made arrangements under Section 28 for B.C.G. vaccination of contacts of tuberculous persons. During the year, 522 contacts were vaccinated. In addition, 30 members of hospital staff received protection. Where the contact is a new-born baby of tuberculous persons, there is a scheme whereby it is segregated prior to receiving B.C.G. vaccination. The necessity for this only arose on one occasion during the year. During 1957, 13-year-old schoolchildren were offered B.C.G. vaccination under the scheme approved by the Authority. Details are given in Section III of this Report.

Other Types of Illness

For the care and after-care of the non-tuberculous sick being nursed at home, the Authority provide, where required, medical comforts, domestic help and occupational therapy.

Medical Comforts

The Authority provide certain articles of apparatus on loan when required by sick persons for continuous use in their homes. This is mainly done indirectly through the British Red Cross Society and the St. John Ambulance Brigade who, between them, were operating 27 Medical Comforts Depots in the County at the end of the year.

Convalescence

The Local Health Authority have a scheme for the provision of such convalescent facilities as lie outside the scope of the Regional Hospital Board. During 1957, 12 adults and two children were sent away under this scheme.

Occupational Therapy

There is a fairly common misconception that occupational therapy is merely a means of providing homebound patients with craft work for the purpose of occupying their time. This is a very restricted view. Occupational therapy is that form of treatment which includes any occupation, mental or physical, definitely prescribed and guided for the distinct purpose of contributing and hastening the recovery from disease or injury, and of assisting in social and environmental adjustment of individuals requiring long and indefinite periods of treatment.

In some cases, it is true, patients are encouraged to do craft work as part of a general treatment. This is good for their morale and helps to create a mental attitude that is conducive to recovery. With such patients it is important to ensure, as far as possible, that the craft does not become a mere mechanical routine and interest must be maintained by varying the occupation from time to time. Unfortunately the time required to give instruction in new crafts is often more than can be spared.

In Bedfordshire, emphasis is now being placed more and more on rehabilitation. This takes various forms. Thus, for those who are suffering from a temporary physical disability, the aim is to restore full muscular movement. Where the patient has a permanent physical disability, he is assisted so to adjust himself that he may become independent as far as possible. With mental patients, the aim is to enable them to once again take their places as normal members of the community.

Patients are referred by hospitals, general practitioners, welfare officers and mental health workers. In all cases a medical certificate is required. Patients who are given craft work to do receive an initial gift of material to the value of 16s. 0d.

During the year, two occupational therapists continued to be employed, one in the south of the County and the other in the north. At the 31st December, 1957, 187 patients were being attended at home. They were in the following categories :-

Respiratory tuberculosis	48
Non-respiratory tuberculosis	5
Other respiratory diseases	10
Heart diseases	7
Other circulatory diseases	5
Diseases of the central nervous system ...	49
Arthritis	22
Other diseases of bone and joint	4
Congenital malformations	5
Mental illness	9
Others	23

In addition to domiciliary patients, fortnightly visits are paid to seven of the Welfare Committee's homes, to Heathwood Hostel, and to Ampthill Park House. At these places instruction in handicrafts and recreational activities is given.

Problem Families

Towards the end of 1954, the Minister of Health issued Circular 27/54 dealing with the prevention of break-up of families. In this it was stated that "Children in the 'problem families', where one or both parents are often handicapped by physical ill-health or are of low intelligence or suffering from mental instability, are peculiarly exposed to physical neglect and risk of mental illness such as psychological disturbance and retarded mental development. Problem families thus tend to reproduce themselves in the next generation and cost the community an expense out of all proportion to their numbers. ..... The health visitor whose work now extends to cover the whole field of prevention of ill-health, including prevention of mental ill-health, is by reason of her close contact with families with young children particularly well placed to recognise the early signs of failure in the family which may lead to the disruption of normal home life with consequent risk to the mental health of the children. Often she can, from her own training and experience, offer advice which will enable

the family to overcome these difficulties: at other times she may need to call in other officers of the local authority, e.g. the mental health worker or home help. There are also many voluntary organisations with workers accustomed to dealing with matters of family welfare or with problem families, whose co-operation may be sought. It may well be that some local health authorities will find there is need to employ a trained social case worker, who might of course be one already engaged in similar work under other powers, in order that the particular needs of such families may be studied and met in appropriate ways. The provision of a specially selected home help to work with the mother, to teach her housecraft, is meeting with success in one or two areas where it is being tried and the use of special convalescent and re-training facilities for this type of mother has a limited but valuable application. But it is important that, notwithstanding that other help may have to be called in, the health visitor should not regard her responsibilities as at an end before a solution has been found."

In Bedfordshire, the Health Visitor is playing her full part in this work. When she becomes aware of the difficulties of a family she does what she herself can to remove these difficulties. If she feels that she cannot resolve them, she calls on officers from other services to play a part. If this does not achieve results, the problem is placed before the Divisional Medical Officer who considers the facts and then invites to a conference all who may be able to assist in finding a solution. Work of this kind is very time-consuming and the results are seldom spectacular, but even occasional and partial success is important. By it much unhappiness is prevented and, incidentally, heavy expenditure of public money avoided.

A Deputy Superintendent Health Visitor was appointed in 1955 with a special duty of supervising the work of Health Visitors with problem families. Then at the beginning of 1956 a conference between representatives of the County Council's Health, Welfare, and Care of Children Committees was held at which it was agreed that there was a very great need for ad hoc social workers, such as those trained by the Family Service Units, to supplement the efforts being made by the existing services to prevent the break-up of family life and to rehabilitate families where serious problems had already arisen. It was considered that none of the existing officers had sufficient time to undertake the intensive daily work involved and the Health Committee were recommended to take steps to employ a Family Service Unit. This proved to be impracticable and it was subsequently decided to appoint a suitably qualified Social Worker. Mr. F.A. Warren was appointed to the post on the 1st November, 1957.

Health Education

Every member of the Health Department staff who has contact with the public is a health educator to some degree and the most effective results are achieved when all work together as a team. Thus, medical officers, health visitors, mental health workers, etc., all play their part as well as the Health Education Officer. Much of the work is done by personal contact both in the home and in the clinic. 42 film shows and 12 talks were given to various groups by the Health Education Officer during the year. In addition, talks were given by other members of the staff. Thus, health education was carried on continuously during the year in one form or another.

In Luton, health education is undertaken by the Borough Health Committee, the Local Health Authority contributing 50 per cent of the expenditure incurred.

Home Safety

In Bedfordshire much thought has been given to the question of home safety during the past four years and the Health Education Officer has made a special study of the subject. It is necessary to convince people that dangers exist in the home and that many accidents could be avoided by taking a little thought and care. Unfortunately information regarding home accidents is not easy to obtain, except in cases where death results. Attempts have been made locally to remedy this defect and the co-operation of the Bedford General Hospital in supplying monthly returns of cases treated in the Casualty Department is gratefully acknowledged. The information obtained, supplemented by some reports by health visitors and ambulance personnel, has been the basis of occasional letters to the local newspapers.

The health visitors, as part of their everyday work, give advice on home safety and posters are displayed in the clinics from time to time. The Health Education Officer has given many talks during the past few years on the subject to Women's Organisations, etc., in addition to showing films in Infant Welfare Clinics and schools. The schools have been supplied with notes on home safety and suggestions for introducing the subject into handicraft and domestic science lessons.

The Authority make a contribution to the Royal Society for the Prevention of Accidents and receive information and material from that organisation. There are now four voluntary Home Safety Committees in the County -- in Bedford, Biggleswade, Dunstable and Luton. The Health Department is represented on the first three by the Health Education Officer.

Smoking and Lung Cancer

At the end of June, 1957, the Medical Research Council issued a statement on tobacco smoking and cancer of the lung.

The conclusions were :-

1. A very great increase has occurred during the past 25 years in the death rate from lung cancer in Great Britain and other countries.
2. A relatively small number of the total cases can be attributed to specific industrial hazards.
3. A proportion of cases, the exact extent of which cannot yet be defined, may be due to atmospheric pollution.
4. Evidence from many investigations in different countries indicates that a major part of the increase is associated with tobacco smoking, particularly in the form of cigarettes. In the opinion of the Council, the most reasonable interpretation of this evidence is that the relationship is one of direct cause and effect.
5. The identification of several carcinogenic substances in tobacco smoke provides a rational basis for such a causal relationship.

Having received the report, the Minister of Health made a statement in the House of Commons on the 27th June, in the course of which he said :-

"The Government feel that it is right to ensure that this latest authoritative opinion is brought effectively to public notice, so that everyone may know the risks involved in smoking. The Government consider that these facts should be made known to all those with responsibility for health education. The Minister of Education included in his recently published Handbook for Teachers on Health Education advice about the dangers of smoking and he is circulating copies of this statement to local education authorities and education authorities generally. Corresponding action will be taken by the Scottish Department in Scotland. The Government now propose to bring these views to the notice of the local health authorities who are concerned under statute in the prevention of illness and who are responsible for health education as a means of prevention. Local health authorities will be asked to take appropriate steps to inform the general public and in this task they will have the assistance of the Central and Scottish Councils for Health Education."

The Government took action the same day, Circular 7/1957 being issued by the Ministry of Health. The text of the Circular is as follows :-

"I am directed by the Minister of Health to enclose a copy of the statement made by him in Parliament today on the subject of smoking and cancer of the lung, in the light of the special report of the Medical Research Council. A copy of this report is also enclosed. The Medical Research Council have concluded that the most reasonable interpretation of the very great increase in deaths from lung cancer in males during the past 25 years, is that a major part of it is caused by smoking tobacco, particularly heavy cigarette smoking. It is the Government's intention that this opinion should be brought effectively to public notice, so that everyone may know the risks involved in smoking. Your Council is accordingly requested to take appropriate steps to this end. What is wanted is that the risks should be made known so that the individual who smokes can then make up his or her own mind.

"All Local Health Authorities have undertaken to provide health education in their areas as part of their approved proposals for the prevention of illness under Section 28 of the National Health Service Act, 1946. While health education measures have hitherto been directed primarily to the mothers of young children and other special groups, publicity of a more general character will be required to disseminate information about smoking. The Central Council for Health Education already has available some publicity material and is understood to have further material in preparation. This will be available to authorities in the usual way."

The press has already given much publicity to this matter and attention has been directed to it in the annual reports of medical officers of health. It would seem that a particular responsibility falls on the school health service to ensure that children and adolescents are warned of the risks of smoking. Something has already been done in this connection. "Health Education" (Ministry of Education Pamphlet 31) which has been prepared mainly for intending teachers, draws attention to the dangers of smoking.

The County Director of Education sent to Head Teachers on the 22nd July a copy of the Minister's statement, saying that he felt sure that it would be brought to the notice of older children in a suitable way. Since the end of the year a further letter has been sent to all

Head Teachers of senior schools enclosing a copy of a Family Doctor pamphlet -- "Smoking - The Facts", and offering the assistance of the Health Department.

SECTION 29 -- DOMESTIC HELP SERVICE

Home Helps are provided for households where assistance is needed because of illness, confinement, old age, etc. The amount of help given varies according to the needs of the individual assisted. Thus in some cases whole-time assistance is given, while in others one or two hours a day are all that is necessary. This service meets a great social need and, by enabling a great many people to remain in their own homes, reduces the pressure on hospital accommodation. A charge is made, this being based on the family income and liabilities.

In some families, difficulties arise on account of the recklessness of the mother. Such a mother needs instruction in housecraft, including the proper spending of whatever money is available, and a specially selected home help can do much in this direction.

In addition to the Home Help Scheme, there is a Sitters-up Scheme covering the whole County. Sitters-up may be defined as individuals who undertake to be present in the homes of other people during the night for the purpose of rendering assistance of a personal nature to individuals who through age or illness need such assistance and cannot otherwise secure it.

At the end of the year, 29 full-time and 200 part-time Home Helps were employed, under the supervision of three Organisers. The number of cases where domestic help was provided during the year was :-

Maternity	360
Tuberculosis	18
Chronic sick (including aged and infirm)	1,035
Others	420
Total ...	1,833

At the end of the year, three sitters-up were employed.

SECTION 51 -- MENTAL HEALTH SERVICE

Administration

A Mental Health Sub-Committee is responsible to the Health Committee for the organisation and conduct of the Authority's mental health and mental deficiency services. There are 16 members, of whom 14 are members of the County Council and two are individuals with special knowledge of and interest in mental health. The Sub-Committee includes in its number persons who are members of Hospital Management Committees, the Local Executive Council, and the Local Medical Committee.

Meetings are held quarterly, and more frequently if necessary. Sub-Committees are appointed from time to time to deal with special matters, such as staffing appointments and proposed new premises. In addition, the two Occupation Centres are visited monthly by two members of the Sub-Committee.

Co-ordination of the work of the Local Health and Hospital Authorities is largely achieved by the actual membership of these bodies, but much is done at officer level. There is no formal joint user of officers in the sense that financial arrangements to that end have been made, and present experience is that there is no need for such arrangements.

The Authority have not found it necessary or desirable to delegate any of their duties to voluntary associations, but use is made of convalescent facilities provided by the Mental After-Care Association, and of holiday homes supervised by the National Association for Mental Health.

Supervision of mental hospital patients on trial is not carried out by this Authority's workers except in a very few cases. On behalf of the hospital concerned, defectives on licence are supervised and reports are made on home circumstances for the information of the Visitors in accordance with Section 11 of the Mental Deficiency Act, 1913.

The staff at the 31st December, 1957, consisted of :-

The County Medical Officer of Health.
The Deputy County Medical Officer of Health.
1 Senior Mental Health Worker - male - who is qualified as a Psychiatric Social Worker.
5 Mental Health Workers - all male - one of whom is qualified as a Psychiatric Social Worker. Another was being trained in Mental Health social work under the guidance of the Senior Mental Health Worker. The latter and the five Mental Health Workers are all Duly Authorised Officers for the purposes of the Lunacy and Mental Treatment Acts and also authorised to present Petitions under the Mental Deficiency Acts.
1 Home Teacher for defectives.
2 Occupation Centre Supervisors (trained).
2 Assistant Occupation Centre Supervisors (1 trained, 1 untrained).
1 General Assistant.
1 Cook (part-time).
2 Caretakers (part-time).
3 Clerical Assistants.

Assistant Medical Officers take part in the ascertainment of mental defectives.

During the year, one of the Mental Health Workers, Mr. A. Austin, who has been with the Service since its inception in 1948, attended the Refresher Course arranged by the National Association for Mental Health in conjunction with the University of Leeds. The Course, which provides two periods of residential training divided by twenty weekly non-residential casework seminars, is very valuable.

Mr. B.G. Garner, the Mental Health Worker who was undergoing in-service training, continued to progress satisfactorily and from the 1st April, 1958, he has been granted full status as an experienced Mental Health Worker. This in-service training which was started in 1953 as an experiment to meet and overcome the impossibility at the time of recruiting trained or experienced staff, has proved well worth while. Nevertheless, it is very doubtful if, in the field of mental health, such training can ever be a fully adequate substitute for a properly planned and constituted course of training under an ad hoc training body. No such course of training (other than a full-time University Course in Psychiatric Social Work) yet exists for Mental Health Workers. The matter is still under consideration by the Working Party on the Training and Recruitment of Social Workers in Local Authority Health and Welfare Services.

Mental Illness

Some account has been given elsewhere in this Report of the work done in connection with after-care and the provision of convalescent and holiday home facilities. In the general field of mental illness there were 856 referrals during the year from the following sources :-

General Practitioners	470
Police	87
Relatives	72
Welfare Department	38
General Hospitals	36
Patients themselves	34
Three Counties Hospital	32
Other Mental Hospitals	11
Probation Officers	7
Health Visitors	4
Other Sources (neighbours, W.V.S., other Departments, National Assistance Board, employers, etc.)	65

The reasons for referral are extremely varied. They range from the mild anxiety state with considerable insight, to the florid psychosis with complete lack of insight -- from the patient who is willing, even eager to receive help in any form suggested to him to the patient who is resentful of "interference", obstructive, or even physically violent towards any effort to help him in any way. Mental illness presents itself in many forms. It may even appear in the guise of a physical disorder, but usually it leads to referral only when the patient becomes socially ineffective -- unable to carry on normal work, unable to maintain satisfactory human relationships, or frankly anti-social. Table XXVI below gives the sex-age distribution of referrals during 1957.

TABLE XXVI -- SEX-AGE DISTRIBUTION OF PERSONS SUFFERING FROM MENTAL ILLNESS REFERRED TO THE AUTHORITY IN 1957

	Age							Totals
	Under 21	21-30	31-40	41-50	51-60	61-70	71 and over	
Males	23	53	84	64	52	47	44	367
Females	11	56	96	106	59	59	102	489
Totals	34	109	180	170	111	106	146	856

Once more it will be noted that nearly one third of all referrals were in respect of persons over 60 years of age. A close liaison is maintained with the Welfare Department and the General Hospitals' Geriatric Consultants in these cases and every endeavour is made to avoid certification. It is frequently said that old people should not be admitted to mental hospitals and where such a course can be avoided, this contention would be accepted. It must, however, be remembered that at present it is only in mental hospitals that there are facilities for the protection of such patients from the dangers which they create for themselves -- wandering, fire, turning on gas taps, etc. Because many of them need considerable supervision, they cannot be managed in Homes provided by the Council under Part III of the National Assistance Act and others are too disturbed for admission to chronic sick hospitals. In default of a special unit for this type of case, the only possibility is admission to a mental hospital.

It is to the good that active treatment in such a hospital can and frequently does lead to a remission of symptoms and the fitness of the patient to return, at least for a time, to normal life. Such return is, however, sometimes rendered impossible by the relatives' inability or unwillingness to resume responsibility.

Whenever the circumstances of the referral make it possible, the social factors contributing to the breakdown are fully investigated. In a number of cases it is possible to relieve the situation simply by adjustment in this sphere, though this frequently takes a great deal of time. Where the problem is more difficult to resolve, full use is made of referral to Psychiatric Out-Patient Clinics, and, where appropriate, Child Guidance Clinics. Only after all other possible steps have been taken, is there resort to compulsory action under the Lunacy and Mental Treatment Acts. Table XXVII shows the actions taken in respect of cases referred during the year.

The total figure in this Table does not coincide with that given in Table XXVI as in some cases more than one action is taken in the same case, e.g., temporary detention under Section 20 of the Act, followed by certification, admission as a voluntary or temporary patient, or discharge to some form of care in the community.

It will be noted that of the 1,027 actions taken only 131 (12.7 per cent) were for long term compulsory detention. 240 (23.4 per cent) resulted in voluntary admission and 575 (56.0 per cent) were for disposal other than under the Lunacy and Mental Treatment Acts. If it is borne in mind that a large proportion of patients are referred because there is an urgent need for action, the relatively small number for long-term compulsory detention seems to indicate that great care is taken by the Service to secure appropriate treatment.

The volume of mental health work has more than trebled since the inception of the Service in July, 1948. In the first twelve months, 318 actions were taken. During the next five years the annual average was 505, and in April, 1955, an additional Mental Health Worker was appointed. In the twelve months to June, 1955, 576 actions were taken and that figure increased to 680 in the following year. For the twelve months ended June, 1957, a further substantial increase (to 872) took place. The situation was reviewed by the Health Committee and the establishment has been increased by one additional Mental Health Worker.

It will be noted from Table XXVIII that the proportion of cases dealt with by admission to Mental Hospitals decreased from 67 per cent in 1948/49 to 42.4 per cent in 1956/57 while the proportion of cases dealt with in the community increased from 33 per cent to 57.6 per cent in the same period.

It is also of interest to note that there has been, since 1954, little fluctuation in the number of actions leading to admission to hospital. At the same time, the number of other actions (whereby the patient remains in the community in one way or another) has risen steadily so that at the 31st December, 1957, it was 140 per cent higher than in 1954.

It seems that two conclusions may be drawn: (1) there is an increase in referral of cases before they have so far deteriorated that admission to hospital is necessary; (2) with increasing experience and skill the Mental Health Workers are able more effectively to use other community resources in their endeavour to assist the patient.

Throughout the year something over 100 cases on the average have been under active community care at any one time. About one third of

TABLE XXVII -- NUMBER OF ACTIONS TAKEN IN RESPECT OF CASES OF MENTAL ILLNESS REFERRED TO THE AUTHORITY IN 1957

Type of Action	Males	Females	Total
Temporary detention under Section 20 of the Lunacy Act, 1890 (in a designated Ward of a General Hospital)	38	33	71
Temporary detention under Section 11 of the Lunacy Act (Urgency Order -- in a Mental Hospital)	28	22	50
Certification (Summary Reception Order) Sections 14 and 16 of the Act	26	55	81
Admission as Temporary patients under Section 5 of the Mental Treatment Act, 1930	1	9	10
Admission as Voluntary patients under Section 1 of the Mental Treatment Act, 1930	105	135	240
Other action -- which includes referrals for community care, admission to Welfare Homes, discharge to the care of relatives or friends, or referral to some other Service	281	294	575
Totals ...	479	548	1,027

TABLE XXVIII -- NUMBERS AND PERCENTAGES OF ACTIONS TAKEN 1948-57*

	Actions leading to admissions to Hospitals		All other actions		Totals
	No.	Per cent	No.	Per cent	
1948/49	213	67.0	105	33.0	318
Average 1949/54	335	66.4	170	33.6	505
1954/55	368	63.8	208	36.2	576
1955/56	380	55.9	300	44.1	680
1956/57	370	42.4	502	57.6	872

* Year is from 1st July to 30th June.

these are long term cases, a few of whom have been receiving support and guidance from the Service over periods extending up to three years. A further third are cases in which interpretative work is being done with patients and their families in order to educe an appreciation of the need for treatment. The remaining third receive help in resettlement after treatment or to prevent the necessity for admission or re-admission to hospital.

Much of the work on this aspect of the Service is protracted and difficult, and calls for the highest casework skills. Deep-seated prejudices and fears are met and must be dealt with. The work requires an understanding of the psychological forces at work both between and within the personalities (including the Mental Health Worker) concerned with a situation, and an appreciation that many of those forces are

working outside the consciousness of those concerned. Its aim must always be to assist the patient to find what is for him the best possible solution to his problems within the limits set by the society in which he lives.

The Report of the Royal Commission on the Law relating to Mental Illness and Mental Deficiency, published in May, 1957, calls for a major re-orientation of emphasis. Broadly, it is suggested that all work (other than active in-patient and out-patient treatment, which would, of course, remain in the hands of the hospitals) should be the responsibility of the local authority and that compulsory powers should only be used as a last resort. This would mean a considerable expansion in the provisions for social work, hostels, clubs, residential homes, etc. New legislation is expected in the near future.

Mental Deficiency

Under the provisions of the Mental Deficiency Act, 1913, as amended, it is the duty of the Local Health Authority, inter alia, to ascertain what persons in their area are defectives, to provide supervision for such persons (and, where necessary, to obtain hospital care for them), and to provide suitable training or occupation for defectives who are under supervision or guardianship.

The majority of mentally defective children who are ascertained are reported to the Local Health Authority by the Local Education Authority under Section 57 of the Education Act, 1944, following examination by one of the School Medical Officers. The children are subsequently re-examined by the Deputy County Medical Officer of Health, who reports on them to the Mental Health Sub-Committee, making a recommendation as to the category in which the child shall be placed, and whether he shall be placed under supervision or under guardianship or in an institution. Adult defectives and some infants are, from time to time, brought to the notice of the Local Health Authority by relatives, general practitioners, etc. During the year, 30 males and 23 females were referred as mental defectives. Of these, 26 were under sixteen years of age.

At the end of the year, 464 persons were under community care as follows :-

	Males	Females	Total
Under Guardianship	16	11	27
Under Supervision --			
Statutory (i.e. confirmed defectives and found "subject to be dealt with" under the Acts)	123	72	195
Voluntary (i.e. confirmed as defectives but not "subject to be dealt with")	76	64	140
On licence*	20	13	33
Totals under formal community care ...	235	160	395
Cases not yet confirmed as defectives but to whom friendly visits were being paid	29	40	69
Totals of defectives or possible defectives under community care ...	264	200	464

* Ten males and five females not Bedfordshire cases. In addition two male and three female Bedfordshire cases are on licence outside the County.

At the 31st December, 1957, no defectives were awaiting vacancies in Mental Deficiency Hospitals. Nevertheless, there are a number of cases in the community where the home situation is such that the illness or death of the person in charge of the defective would precipitate an urgent demand for hospital care. It is now possible, however, to consider the need for institutional care as it affects the defective and not merely as a means of meeting social crises.

The cases on licence, which represent only 7 per cent of the defectives under community care, entail an amount of work out of all proportion to their number. Some of them have been in hospitals and institutions for many years and in consequence need a great deal of support and guidance in their rehabilitation into normal life. In each case, the Mental Health Worker concerned endeavours to provide a kindly, understanding, yet firm and stable background figure to replace the ordered routine of the hospital.

More defectives could be given a trial on licence if suitable residential employment, or homes in which they could live and from which they could go out to daily work, could be found. Employment, as such, though not quite so easy as in the past, still does not present a major problem, so long as living accommodation can be found. One solution to this problem might be the setting up, in collaboration with the Regional Hospital Board, of hostels in, say, Bedford and Luton, to which defectives on licence could go to live as a "half-way house" between full hospital care and normal life in the community.

Occupation and Training of Defectives

The purposes of Occupation Centres are two-fold, viz., (1) to provide occupation and training for the defectives, and (2) to provide some relief to the family, particularly the mother. The first of these objects may be stated more fully as (a) to develop the defectives' physical and mental abilities as far as possible, so that their lives may be fuller and happier, and (b) with this end in view to help them to form good habits, to acquire self-control, and to develop a social sense as they learn to work and play with others. Similarly, the second is more than a mere taking of the defective off the family's hands for a few hours each day. The benefit of this specific relief must not be underestimated, giving as it does time to the mother to do her shopping, cook the family's meals, etc., secure in the knowledge that the defective is being cared for. There are, moreover, less obvious benefits. Training at the Centre aims at teaching the defective to be less demanding of attention, to be useful in small household tasks, and generally to be more socially acceptable. There is no doubt that attendance at a Centre assists the family to continue to cope with the defective and thus reduces the demand for hospital care.

The Authority provide two Occupation Centres, one in the north and one in the south of the County.

The South Bedfordshire Centre at Dunstable serves the Luton and Dunstable areas, and at the end of the year 30 children were in attendance. It is housed in leased, adapted premises and is at the limit of its capacity, 20 defectives under and ten over 16 years of age being in attendance. There are also in the area six defectives under 16 and 21 over 16 who are considered to be suitable for a Centre but for whom no places are at present available. Plans for the provision of a new centre with 60 places, catering for adults as well as children, were submitted to the Minister and sanction to proceed has just been received.

The North Bedfordshire Centre was housed in a former Church of

England School, leased to the Council. A new building, providing 35 places, and situated at Kempston, came into use on the 25th November, 1957. 12 defectives under 16 and 11 defectives over 16 are in attendance. The appointment of an additional assistant supervisor has been approved by the Health Committee and when this appointment is made it will be possible to admit other defectives who are waiting for places.

Each Centre is staffed by a qualified supervisor and an assistant supervisor. The South Beds Centre also has a general assistant. The children are conveyed to the Centres by buses and remain for a mid-day meal. At the South Beds Centre the meal is prepared on the premises by a part-time cook. At the new North Beds Centre the meal is provided through the School Meals Service. The usual Centre subjects are taught.

In addition to the defectives in attendance at the Bedfordshire Occupation Centres, there are four female defectives under the guardianship of nominees of the Guardianship Society, Brighton, who attend that Society's Occupation Centres.

Home teaching cannot be regarded as a completely satisfactory substitute for attendance at an occupation centre. It fails to provide the defective with companionship of and competition with his peers and leaves him without experience of group life. For those, however, who live in isolated rural areas, and for those with physical or emotional difficulties which preclude their attendance at a Centre, home teaching does provide some small measure of training and occupation and moreover helps break down the barrier of isolation both for the defective and the family. Group teaching serves a dual purpose -- by reducing travelling time and telescoping visits it enables the Home Teacher to give more time than would be possible with individual visits, and, even more important, it gives the defectives experience in handling group relationships and thereby fosters social improvement.

Further progress was made in this field during the year by the opening, on the 31st May, 1957, of classes in Luton -- five defectives under 16 years of age attending on Friday mornings and nine defectives over 16 on Friday afternoons. By November, the total number of defectives under the care of the Home Teacher (Mrs. M. Messenger) was 42, made up as follows :-

Barton Group (mixed)	...	...	7
Bedford Group (adult)	...	...	7
Luton Group (junior)	...	...	6
Luton Group (senior)	...	...	11
Individual visits	...	...	11

With the opening of the Kempston Centre, the Bedford Group were offered daily attendance at the Centre and six accepted. As the result of other variations (new cases, admissions to the South Beds Centre, admissions to institutions) the number at the end of the year was 35. There remain about 40 other (mainly adult) defectives who would benefit from Home Teaching and for whom no provision is at present made. The appointment of a second Home Teacher to meet this need has been authorised and will be proceeded with as soon as possible.

HANDICAPPED PERSONS

Blind Persons

The Welfare Committee of the County Council are responsible under the National Assistance Act, 1948, for the welfare of Blind Persons and they exercise their powers through the North and South Beds. Societies for the Welfare of the Blind.

During 1957 there was a net decrease of ten in the number of Blind Persons registered in the County. At the beginning of the year the number was 701. New cases during the year numbered 74 and there were 11 inward transfers. 72 persons died, nine left the district and 14 were removed from the registers as no longer blind, leaving 691 persons on the registers at the 31st December, 1957.

Before a person is admitted to the Blind Persons Register he is examined by an ophthalmic specialist who completes a form B.D.8. The information contained in these forms for persons registered during 1957 is analysed in Table XXIX. The cause of blindness was cataract in 18 cases, glaucoma in five cases, diabetes in four cases and senile macular degeneration in 27 cases. The remaining 20 persons had a variety of other conditions.

Every effort is made to see that persons who would benefit from treatment receive it. Of the 16 persons for whom operation was recommended, three have received treatment, six are waiting, three have died and one has refused. In the other cases, the person's general condition makes an operation inadvisable. Six of the cases in which treatment was not recommended had previously been treated unsuccessfully, one for cataract and five for other conditions. In most of the other cases the blindness is irremediable.

Of the total of 74 persons registered, 55 were aged 70 years or over. Reference to Table XXX shows that of the 691 registered blind persons in the County at the end of the year, 393 or 56.9 per cent were aged 70 years or over. Whilst the increasing number of aged in the general population is reflected in the number of aged blind, old age by itself does not cause blindness and it may well be that there is an accumulation of cases of blindness due to causes that are more susceptible to treatment at an earlier age. Table XXXI divides the number of blind persons according to the age at onset of blindness and from that it will be seen that of 654 persons where the age at onset is known, in 72 cases it was 0 - 4 years and in a further 156 cases, 5 - 49 years. 70 years or over was given as the age at onset in 265 cases, i.e. 40.5 per cent.

A great many of the persons registered as blind give no history of any previous treatment for their eye condition. In some cases, of course, advice is not sought until the sight has almost failed. In the case of glaucoma, for instance, one eye often becomes completely blind without the patient realising it and he only becomes aware of the fact when the other eye becomes seriously affected. The incidence of blindness could undoubtedly be reduced and the following points indicate ways in which this could be done :-

1. Prompt attention should be given to any child who squints. No child is too young for the modern methods of treatment, the aim of which is not merely to get the eye straight but seeing and functioning in binocular vision.
2. The old teaching that no operation can be done until a cataract is "ripe" is no longer valid and modern methods

TABLE XXIX -- BLIND PERSONS REGISTERED IN BEDFORDSHIRE DURING 1957

	Cause of Disability						Total
	Cataract	Glaucoma	Retrolental Fibroplasia	Diabetes	Senile Macular Degen.	Other	
No. of cases in which no treatment recommended...	4	3	--	2	26	17	52
No. of cases in which treatment recommended:							
(i) Medical	--	1	--	2	--	2	5
(ii) Surgical	14	1	--	--	--	1	16
(iii) Optical	--	--	--	--	1	--	1
No. of cases who received treatment:							
(i) Medical	--	1	--	2	--	2	5
(ii) Surgical	3	--	--	--	--	--	3
(iii) Optical	--	--	--	--	1	--	1

TABLE XXX -- AGE DISTRIBUTION OF REGISTERED BLIND PERSONS IN BEDFORDSHIRE AT THE 31ST DECEMBER, 1957

	0 - 4	5 - 15	16 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+	Total
Males	4	6	9	24	31	38	47	122	281
Females	2	4	9	9	16	24	75	271	410
TOTALS	6	10	18	33	47	62	122	393	691

TABLE XXXI -- NUMBER OF REGISTERED BLIND PERSONS IN BEDFORDSHIRE AT THE 31ST DECEMBER, 1957, SUBDIVIDED ACCORDING TO THE AGE AT ONSET OF BLINDNESS

	0 - 4	5 - 15	16 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+	Unknown	Total
Males	38	5	30	28	24	20	28	90	18	281
Females	34	11	14	16	28	42	71	175	19	410
TOTALS	72	16	44	44	52	62	99	265	37	691

of surgery enable the cataract to be removed as soon as vision is seriously reduced. Every effort should be made, therefore, to ensure diagnosis at the earliest possible moment.

3. All doubtful cases of visual disability, however vague and indeterminate, should be referred for expert ophthalmological opinion.

4. All myopic children should be kept under supervision.

5. Industrial workers engaged in processes where there are hazards to the eyes (e.g. welding and grinding) should always use goggles or other protection provided.

With regard to the Partially Sighted, the number on the register at the 31st December, 1957, was 100. During the year, 25 cases were added to the register and 12 were removed.

Two infants were notified as suffering from Ophthalmia Neonatorum during the year. Both made a complete recovery.

Epileptics

It may be stated at the outset that little information is available about the incidence of epilepsy generally amongst adults in the County. Such information as there is derives from the Disablement Resettlement Officer Service, from the Mental Health Service of the Local Health Authority, from applications for Driving Licences received by the Local Taxation Department, and from the Welfare Authority. Thus at the 15th April, 1957, 102 epileptics were registered under the Disabled Persons (Employment) Act, 1944, and at the 31st December, 1957, the Mental Health Service had knowledge of 43 mental defectives who were also epileptic. In addition, during the year, 13 epileptics were referred for action under the Lunacy and Mental Treatment Acts. Of these, four showed major personality difficulties or violent or dangerous propensities. All suitable patients are referred to the Disablement Resettlement Officer of the Ministry of Labour. The Welfare Authority at present have four epileptics in their residential homes and maintain a further 12 in residential accommodation provided by voluntary organisations.

With regard to children a fairly reliable picture can be presented, because children who suffer from epilepsy are ascertained at as early an age as possible so that education suited to their disability may be provided. No child is labelled as an epileptic without a period of observation and in doubtful cases the help of the diagnostic department of the hospital service is sought.

Epileptic children are assessed at school-leaving age with particular regard to the severity of the disability and the possibility of employment. At this stage there is close co-operation with the Youth Employment Service and the Welfare Department.

At the end of the year there were, in Bedfordshire, eight epileptic schoolchildren ascertained as requiring special educational treatment; seven were attending boarding schools and the eighth was receiving tuition at home. A further 80 children known to have suffered from fits of an epileptiform type were attending ordinary schools, but in many cases no fits have occurred for at least two years.

Cerebral Palsy

As in the case of epileptics, little information is available as to the incidence of cerebral palsy in adults. One difficulty is that registers of Disabled Persons and Handicapped Persons (General Classes) do not, except in the case of epilepsy, sufficiently distinguish the organic nervous diseases included in Class V. Table XXXII which follows illustrates the point. Some of the 164 individuals, other than epileptics, in Group V are undoubtedly cases of cerebral palsy, but the number is not at present known. It is not expected, however, that it will be large.

TABLE XXXII -- PERSONS IN BEDFORDSHIRE REGISTERED UNDER THE DISABLED PERSONS (EMPLOYMENT) ACT, 1944, AT THE 15TH APRIL, 1957

Type of Case	North Bedfordshire	South Bedfordshire	Total
All classes	1,648	3,259	4,807
Epileptics	38	64	102
Others in Group V* ...	63	101	164

* Disseminated sclerosis, cerebral thrombosis, sciatica, etc.

More detailed information about adults will be available in due course, and reasonably reliable information regarding cases of cerebral palsy included in the substantially and permanently handicapped group will be available when registration has been completed by the Welfare Committee. At present seven persons have been registered as being of the spastic variety of cerebral palsy.

In the meantime, facilities, including occupational therapy, provided by the Local Health Authority are available and are being used. At the present time five patients with cerebral palsy are receiving instruction from the Occupational Therapists who are equally available for Health Committee and Welfare Committee work.

More information is available regarding the incidence of cerebral palsy in children. This is a matter which has excited national interest and sympathy, and much has been done within the last few years to educate the public in the true nature of the disability, and to point out the needs of such children. At the 31st December, 1957, 82 children under the age of 16 were known to be suffering from cerebral palsy.

The number of children of compulsory school age is 65. Four of these, however, have mental retardation to such an extent as to be ineducable. The position as regards education of the remaining 61 is as follows :-

35 attend the appropriate ordinary school (transport being specially provided for some cases).

2 attend day special schools.

21 attend residential special schools.

3 receive home tuition.

NURSING HOMES

Under the Public Health Act, 1936, the County Council are the responsible authority for the registration and supervision of Nursing Homes. Their powers and duties are, however, delegated to the Luton Borough Council in respect of premises in that Borough. In the remainder of the County there were, at the 31st December, 1957, eight Homes registered. These provided accommodation for 84 patients other than maternity cases. 17 inspections were carried out and the Homes were found to be satisfactory.

NURSES AGENCIES

The Nurses Agencies Act, 1957, came into force on the 21st April, 1957, and consolidated certain enactments relating to agencies for the supply of nurses. The County Council, as the Licensing Authority, have delegated their functions to the Luton Corporation in respect of that Borough. At the present time there is only one such Agency in the County.

S E C T I O N III

PREVALENCE OF, AND CONTROL OVER,

INFECTIOUS AND OTHER DISEASES

TABLE XXXIII -- NUMBER OF CASES OF INFECTIOUS AND OTHER NOTIFIABLE DISEASES NOTIFIED AND CONFIRMED IN THE SANITARY DISTRICTS OF BEDFORDSHIRE, 1957

	Ampthill		Bedford		B'wade		Dunstable Borough	Kempston Urban	L.B. Urban	Luton		Sandy Urban	Totals
	U.	R.	B.	R.	U.	R.				B.	R.		
Smallpox	--	--	--	--	--	--	--	--	--	--	--	--	--
Diphtheria	--	--	1	--	--	--	--	--	--	--	--	--	1
Scarlet Fever ...	--	7	75	10	--	10	2	2	5	19	3	1	134
Whooping Cough ...	1	36	42	54	10	143	24	4	60	143	26	--	543
Measles	11	139	1,205	459	115	353	111	117	260	736	199	8	3,713
Poliomyelitis --													
Paralytic	--	1	6	4	--	1	1	2	--	1	2	--	18
Non-Paralytic ...	--	--	2	2	--	--	--	--	--	--	--	--	4
Acute Encephalitis --													
Infective	--	1	1	--	--	--	--	--	--	--	1	--	3
Post-Infectious ...	--	--	1	--	--	1	--	--	--	--	--	--	2
Meningococcal Infection	--	--	4	2	--	--	--	--	--	--	--	--	6
Erysipelas	--	2	3	3	--	--	--	2	1	5	--	1	17
Acute Pneumonia --													
(Primary or Infl.)	1	13	83	20	3	22	4	9	51	103	13	12	334
Typhoid Fever ...	--	--	--	--	--	--	--	--	--	--	--	--	--
Paratyphoid Fever	--	1	1	--	--	--	--	--	--	--	--	--	2
Dysentery	32	7	100	4	--	10	16	--	1	478	58	9	715
Food Poisoning ...	4	1	11	3	--	16	--	--	4	26	5	--	70
Infective Hepatitis													
(including Jaundice)	--	5	112	9	1	2	--	3	--	32	9	--	173
Puerperal Pyrexia	--	1	125	--	4	5	--	--	--	57	--	2	194
Ophthalmia Neonatorum	--	1	1	--	--	--	--	--	--	--	--	--	2
Tuberculosis --													
Respiratory ...	1	1	46	17	2	4	8	4	7	103	14	1	208
Meninges & C.N.S.	--	--	--	--	--	--	--	--	--	1	--	--	1
Other	--	2	7	2	1	1	--	--	3	6	4	--	26
TOTALS ...	50	218	1,826	589	136	568	166	143	392	1,710	334	34	6,166

NOTIFIABLE DISEASES

The number of cases of infectious disease varies considerably from year to year. Thus, in 1957, there were 5,931 confirmed cases of infectious and other notifiable diseases (excluding tuberculosis) notified to the District Medical Officers of Health. The corresponding figures for 1956 and 1955 were 3,605 and 5,822 respectively. Measles and Whooping Cough were mainly responsible for these fluctuations. Detailed figures of notifications have been extracted from the quarterly returns submitted by the District Medical Officers and are set out in Table XXXIII.

Diphtheria

Unhappily, after a lapse of six years, a case of diphtheria again figures in the records. An Italian child aged 3 years 11 months, returned with his family from Italy to Bedford in October. He was unwell on the journey and two days after arrival a doctor was called. The child was removed to hospital where he died. The Medical Officer of Health for Bedford Borough took immediate action to examine all contacts and steps were taken to bring the facilities for immunisation to the notice of all the Italian families in the town. Fortunately no other case occurred.

Scarlet Fever

There were 134 cases of scarlet fever in 1957, the lowest number ever recorded in the County. The disease is endemic and the annual number of cases fluctuates. It cannot, therefore, be assumed that we are witnessing the disappearance of the disease. It is, however, far less serious than it used to be.

Whooping Cough

There were 543 cases of whooping cough notified during the year. There were, undoubtedly, very many more cases to which a doctor was not called and which, therefore, were not notified. It should be pointed out that the disease is by no means trivial and that it is not unusual for it to be followed by disabling after-effects. Reference is made elsewhere in the Report to the facilities for vaccination against whooping cough that are provided by the Authority.

Measles

Like whooping cough, measles is a disease which can have serious complications and be followed by disabling after-effects. It is by far the most common notifiable infectious disease and there were 3,713 cases notified in the County during 1957.

Poliomyelitis

Epidemic outbreaks of poliomyelitis were first reported about 100 years ago. Probably the earliest to be described occurred in the Island of St. Helena in 1834. The disease assumed epidemic form in the U.S.A. at the beginning of this century and was widespread in Scandinavia before the First World War.

In England and Wales, localised outbreaks occurred in 1910 (Cumberland), 1911 (Devon and Cornwall), 1927 (Yorkshire), 1930 (Lincolnshire), 1933 (Lancashire), 1934 (Hampshire), 1936 (Middlesex) and 1937 (Devon). More widespread outbreaks occurred in 1926 (1,296 cases) and 1938 (1,581 cases). During the period 1919 to 1946, there were, on average, 712 cases notified each year, ranging from 329 in 1920 to 1,581 in 1938. It is certain, however, that many mild and abortive cases occurred which escaped detection, particularly at times when the reported prevalence was low.

Starting in 1941, several severe epidemics occurred in the countries of the Western hemisphere, this country being badly hit in 1947 when 7,646 cases were confirmed. Since then the number of cases has been as follows :-

Year	Cases
1948	1,829
1949	5,918
1950	7,752
1951	2,609
1952	3,902
1953	4,538
1954	1,954
1955	6,328
1956	3,197
1957	4,841

The cases were not evenly distributed throughout the country and there has been a tendency for the disease to be concentrated in certain areas. Thus in 1954, the incidence was highest in the Northern and South-Western regions, whilst North-Midland, Midland, Southern, and London and South-Eastern regions had the lowest incidence experienced since 1947. In 1955, on the other hand, the London and South-Eastern regions had much the highest rate of any region whilst the Northern region had the lowest.

It is known that there are several types of poliomyelitis virus. There are, moreover, various strains of each type. It is not clear why a comparatively unimportant disease should suddenly have assumed epidemic proportions on such a wide-spread scale. A partial explanation is given by Meenan ("New Concepts of Poliomyelitis", Lancet, 1953) :-

> "Large epidemics of paralytic poliomyelitis seem to be a reflection of the improved living and sanitary conditions of the countries which suffer them. In most parts of the world poliomyelitis epidemics are small or unimportant; and paralysis, when it occurs, is almost limited to children under 5 years old. As the virus is liberally distributed, nearly everybody comes in contact with it before that age, and progressively acquires enough resistance to make a paralytic illness unlikely. On the other hand, in a person not protected by previous exposure to the virus, the likelihood of paralysis rises during childhood, being lowest in infancy and reaching a peak in early adult life. As research on the virus has been almost exclusively carried out in countries where the disease is epidemic rather than endemic, we have come to think of epidemics as the natural host-virus relationship. But the reverse appears to be actually the case. Instead of coming recently to prey on man, the virus seems rather to have lived in more or less harmonious relationship with us for centuries; and it is we who, by altering our living conditions, have upset the balance."

The same view is expressed in the first report of the W.H.O. Expert Committee on Poliomyelitis (1954). "In general, it would seem that the poorer the standard of living and sanitation of a people, the more extensively is poliomyelitis virus disseminated among them and the lower is the apparent incidence of paralytic poliomyelitis. But primitive living conditions, per se, ... are no guarantee of this relative freedom from paralytic poliomyelitis ..... Severe epidemics have been reported from isolated communities in the Arctic, where all age groups, including ..... even grandparents, have been involved. Such isolated communities may have been out of contact with poliomyelitis virus for long periods, and so even the adults have no immunity when a virulent invasive strain is introduced."

Meenan's explanation is partial because it does not explain the suddenness with which the disease became epidemic. One theory is that the virus strains causing the epidemics which followed the second World War were introduced by service personnel returning home from the Middle East and other highly endemic regions. The W.H.O. Expert Committee on Poliomyelitis said :-

> "No factual information is available on how virus survives in inter-epidemic periods in countries subject to periodic epidemics. It has been shown on several occasions that cases of infection may continue to occur through the winter, thus bridging the period between one epidemic season and the next. It is not known whether it is the usual method of survival of the virus in these communities, nor whether epidemics in such countries result from activation and spread of virus already present, or from the introduction of a strain of virus from without."

There are two other related problems. The first is why does the disease seem to concentrate in certain areas during an epidemic instead of sweeping through the country? A possible explanation is that in an area where the disease has broken out a large number of mild or abortive cases results in a high degree of immunity. After a few years, the proportion of immune persons has dropped and the disease breaks out again. Thus in any particular outbreak cases will be concentrated in areas of low immunity. The second problem is why should a small minority of infected persons become paralysed? Even of the recognisable cases of poliomyelitis, only a small proportion become severely paralysed. From data provided by hospitals it has become possible to estimate approximately the general prognosis in cases admitted to hospital as suffering from suspected poliomyelitis during an epidemic period. Judging from the experience in the years 1947 and 1949, of every 100 such patients, five or six are likely to die; nine or ten to be severely paralysed; 17 or 18 to have some degree of residual paralysis which is not likely to prevent them from working; 35 to 40 to suffer either no ill-effects or to be left with a slight degree of paralysis which may pass almost unnoticed, whilst, in the remaining 26 to 34 the initial diagnosis of poliomyelitis is disproved. There is evidence that recent local damage to tissues (e.g. removal of tonsils, and injections) and undue fatigue are predisposing factors to paralysis.

During the 28 years from 1919 to 1946, 90 cases of poliomyelitis were notified in Bedfordshire. In 1947, there were 94 cases, of whom 18 died. The annual number of cases since then is given in Table XXXIV. Table XXXV gives the age distribution of the cases that have been notified and confirmed in the past three years.

TABLE XXXIV -- NUMBER OF CONFIRMED CASES OF PARALYTIC AND NON-PARALYTIC POLIOMYELITIS CONFIRMED IN BEDFORDSHIRE, 1948-57, TOGETHER WITH NUMBER OF DEATHS

	Paralytic	Non-Paralytic	Deaths
1948	17		7
1949	41		4
1950	28	8	2
1951	4	3	2
1952	12	7	1
1953	18	6	--
1954	11	7	--
1955	22	9	3
1956	7	9	--
1957	18	4	1

TABLE XXXV -- AGE DISTRIBUTION OF POLIOMYELITIS CASES, 1954-57

	1954		1955		1956		1957	
	P.	N.P.	P.	N.P.	P.	N.P.	P.	N.P.
Under 1	--	--	--	--	--	--	--	--
1 - 4	2	2	6#	2	2	--	3	2
5 - 9	4	1	4	1	3	6	3	--
10 - 14	1	2	2	--	--	1	1	1
15 - 19	--	--	1	3	--	--	2	--
20 - 29	2	--	4#	1	2	1	4	1
30 - 39	2	1	5#	1	--	1	3#	--
40 - 49	--	--	--	1	--	--	2	--
50 - 59	--	1	--	--	--	--	--	--
TOTALS	11	7	22	9	7	9	18	4

Figure includes one death.

There was an exceptional proportion of non-paralytic cases in 1956. All but one occurred in Luton Borough where considerable use was made of the Public Health Laboratory Service in isolating the poliomyelitis virus. The high proportion of paralytic cases in 1957 suggests that many mild non-paralytic cases have not been recognised as such. No case occurred during the year in a child who had been vaccinated against the disease.

Dysentery

The nationwide increase in the number of cases of sonné dysentery in recent years is disquieting. Whilst the actual illness is mild and of short duration in most cases, it is nevertheless troublesome and difficult to control. In Bedfordshire, apart from a small outbreak in Dunstable in 1951, only sporadic cases of dysentery occurred from 1947 to 1952. In 1953, there were 505 confirmed cases, 330 being in Luton Borough and 133 in Bedford Borough. The Luton outbreak continued into 1954 and accounted for 100 of the 114 cases notified in that year. Only 42 cases were notified in the County in 1955, followed by 195 cases in 1956. Of the latter, 163 were in Luton Borough, mostly in the last quarter of the year.

This outbreak lasted well into 1957, during which a further 478 cases were confirmed. A small outbreak in Bedford Borough in the spring was responsible for most of the 100 cases occurring in that town. There were 32 cases in Ampthill and 58 in Luton Rural District. The total number of cases in the County was 715.

In addition to dysentery, and often side by side with it, there was a considerable amount of intestinal illness superficially resembling dysentery, but yielding no identifiable pathogenic organism.

Food Poisoning

There were 70 cases of food poisoning notified during the year, compared with 45 in the previous year. There was no outbreak of any size.

Infective Hepatitis

In order to facilitate the work of a committee appointed by the Medical Research Council, "jaundice" was made compulsorily notifiable in November, 1943, in the region roughly comprising East Anglia, and including Bedfordshire. The number of cases reported annually since then in the County is given in Table XXXVI, together with the figures for Bedford and Luton Boroughs.

TABLE XXXVI -- NUMBER OF CASES OF "JAUNDICE" IN BEDFORD AND LUTON BOROUGHS AND WHOLE COUNTY, 1944-57

Year	Whole County	Bedford	Luton
1944	131	52	48
1945	108	14	71
1946	29	7	20
1947	34	8	12
1948	47	8	27
1949	69	29	12
1950	146	102	6
1951	65	32	4
1952	29	16	3
1953	26	16	2
1954	81	9	9
1955	59	7	41
1956	223	95	101
1957	173	112	32

There were 173 cases notified in the County in 1957, 50 less than in 1956, but far more than in any previous year. Past experience in Luton Borough suggests that only 10 per cent of cases are, in fact, reported. Thus, although the disease appears to have been concentrated in the Boroughs of Bedford and Luton there may well have been many cases in other parts of the County of which nothing is known.

It is known that infective hepatitis is spread by close personal contact and by food and there is no doubt that scrupulous attention to personal hygiene, particularly the washing of hands before touching food, might do much to eliminate the disease.

Puerperal Pyrexia

In accordance with the Puerperal Pyrexia Regulations, 1951, any rise in temperature to 100.4°F. occurring in a woman within 28 days of childbirth is notifiable. In 1957, 194 cases were notified compared with 117 in the previous year.

Influenza

Early in 1957, influenza became epidemic in South Western China. By the end of August the disease had spread to this country and was, not surprisingly, called "Asian" influenza. As influenza is not a notifiable disease accurate information concerning its incidence is not available. However, the number of new claims to sickness benefit indicate that the disease reached Bedfordshire early in September and reached its peak about the second week of October. By the end of November the epidemic was virtually over. The attack rate appears to have been very large. For instance, in the peak week there were 3,631 more new sickness claims than in the corresponding week of the previous year. Mortality, on the other hand, was low and the total number of deaths attributed to influenza for the year was only 57, compared with 15 in 1956. Deaths from pneumonia showed an increase of 18 on the previous year.

On the 23rd September, 1957, the Ministry of Health issued Circular 13/57 stating that a vaccine designed to give protection against Asian-type influenza was being commercially produced. Its effectiveness had not been determined but it was expected that two injections might give a reasonable degree of protection.

No mass vaccination scheme was contemplated; vaccination being limited to certain groups of doctors, nurses and others who were specially exposed to infection, e.g., home helps, ambulance staff and any other staff liable to visit the sick at home.

The necessary offer of vaccination was made, and 474 individuals, including 95 doctors, applied.

TUBERCULOSIS

Although there has been no substantial reduction in the incidence of tuberculosis, the disease is in some ways much less of a problem today than formerly. The tremendous advance in treatment, coupled with improvements in the earlier detection of cases, has had a dramatic effect upon tuberculosis mortality and upon the demand for hospital and sanatorium beds.

During 1957 there were 208 new cases of respiratory tuberculosis and 27 of non-respiratory tuberculosis notified. In addition, 89 respiratory and four non-respiratory cases came to notice otherwise than by notification, i.e., by Death Returns and Inward Transfers. Tables XXXVII and XXXVIII give details of these cases and the corresponding figures for the eight previous years.

At the 31st December, 1957, there were 2,613 cases of respiratory and 284 cases of non-respiratory tuberculosis on the Chest Clinic Registers. Table XXXIX shows these cases divided into men, women and children.

The number of attendances at the Chest Clinics during 1957 (including contacts) was 41,379, and 13,094 visits were paid to the

homes of patients by the Tuberculosis Health Visitors. 258 home visits and examinations were made by the Chest Physicians.

TABLE XXXVII -- NUMBER OF NEW CASES OF RESPIRATORY AND NON-RESPIRATORY TUBERCULOSIS NOTIFIED 1949-57, SUBDIVIDED ACCORDING TO SEX

	Respiratory			Non-Respiratory		
	M.	F.	Total	M.	F.	Total
1949	203	147	350	21	28	49
1950	256	137	393	25	25	50
1951	188	123	311	29	47	76
1952	213	168	381	14	32	46
1953	197	135	332	23	26	49
1954	135	105	240	17	24	41
1955	159	106	265	18	34	52
1956	109	74	183	19	22	41
1957	120	87	207	10	17	27

TABLE XXXVIII -- NUMBER OF CASES OF RESPIRATORY AND NON-RESPIRATORY TUBERCULOSIS WHICH CAME TO NOTICE OTHERWISE THAN BY NOTIFICATION 1949-57, SUBDIVIDED ACCORDING TO SEX

	Respiratory			Non-Respiratory		
	M.	F.	Total	M.	F.	Total
1949	19	27	46	5	9	14
1950	28	16	44	3	1	4
1951	27	22	49	2	4	6
1952	36	21	57	4	3	7
1953	46	23	69	6	3	9
1954	38	29	67	1	3	4
1955	51	31	82	2	3	5
1956	50	35	85	5	4	9
1957	48	41	89	2	2	4

TABLE XXXIX -- NUMBER OF MEN, WOMEN AND CHILDREN ON THE CHEST CLINIC REGISTERS AT 31ST DECEMBER, 1957, SUBDIVIDED INTO RESPIRATORY AND NON-RESPIRATORY CASES

	Respiratory			Non-Respiratory			Totals		
	M.	W.	C.	M.	W.	C.	M.	W.	C.
Bedford	582	465	52	24	69	23	606	534	75
Luton	799	610	105	50	78	40	849	688	145
TOTALS	1,381	1,075	157	74	147	63	1,455	1,222	220

Reference has already been made in the previous Section to the provision made by the Authority for the care and after-care of the tuberculous. From a public health view, however, preventive measures are even more important. Infectious cases must be discovered as early as possible and steps taken to prevent the spread of the infection. To this end, particular attention is paid to the examination

of contacts. Suitable contacts are offered B.C.G. vaccination.

In all cases of tuberculosis coming to light posthumously, steps are taken to examine contacts in much the same manner as when a live case is notified. Follow-up of early cases among children and others is done as a routine.

A scheme for the tuberculin testing by the Heaf method of school entrants with the consent of the parents was started in Bedford Borough towards the end of 1954 and in Luton Borough in 1955. The purpose was to detect active disease amongst contacts of children with positive reactions. So few positive reactors were discovered, however, that the scheme has now been discontinued in Luton. In Bedford, 432 children were tested during the year and six gave a positive reaction. These were referred to the Chest Clinic and one, an Italian child, was found to have respiratory tuberculosis. The mother was also found to be infected. Treatment was refused locally as they wished to attend the Italian Hospital in London. The family has since returned to Italy.

As a further step in the prevention and control of tuberculosis a scheme was evolved in 1956 for the giving of B.C.G. vaccination to children at 13 years of age so that they would have protection before commencing work. It came into operation in Luton Borough during 1957, and 1,271 children were skin tested. Twelve were absent from the reading and of the remainder, 1,119 were negative. All but one of these were vaccinated. The exception was a child who had been vaccinated previously.

Of the 140 positive reactors, two were thought to have active tuberculosis and 35 were kept under surveillance by the Chest Clinic.

Periodic surveys are carried out in the County by one of the Regional Hospital Board's Mass Radiography Units. Also, for the convenience of general practitioners, miniature film sessions are held weekly at the Chest Clinics for patients in whose case X-ray is required in order to exclude the possibility of pulmonary tuberculosis. Whenever it is desirable to do so, special investigations are carried out.

Mass Radiography

The Mass Miniature Radiography Unit from St. Albans again visited Bedfordshire during 1957. The results of the investigations had not been published when this Report was prepared, but some information is now available concerning the Unit's visits to Bedford, Dunstable, Kempston and Leighton Buzzard in the previous year. 10,718 employees of firms in these towns were X-rayed and 21 were found to have active tuberculosis. Only four cases of active disease were found amongst 3,351 members of the public.

The following statement is extracted from the report for 1956 of the Medical Director of the St. Albans Unit :-

> "Despite the drop in the total examined the yield of patients with active tuberculosis has not fallen -- 110 this year compared with 106 last year. Of these persons, 88 were between 20 and 60 years of age and only 9 outside the age range 15 - 65 years. Thus almost all were in the active working period of life, and liable to make many contacts. The case rate per 1,000 examined is higher in both sexes this year: in males 1.9 (1.6 in 1955) and 1.3 in females (1.1 in 1955). Though these differences might have occurred by chance selection of

groups, it seems reasonable to assume that there has been no fall in the incidence of tuberculosis judged by those submitting to Mass Miniature X-ray examination. A small group of Hungarian Refugees yielded 5 cases among 300 examined, but this is not surprising in the special circumstances, and Hungary has a relatively high incidence of tuberculosis.

"It is again worthy of note that those not previously x-rayed yielded a significantly higher proportion of new cases than those re-examined even after some years; the difference being 1.9 per 1,000 compared with 1.1 per 1,000.

"Many other abnormalities are found: in some cases the number reported gives little clue as to the true extent as examinees are only called for further investigation if it is necessary to exclude or confirm some serious condition. But there were 30 persons with other bacterial infection of the lungs, 21 with bronchiectasis, 12 with sarcoidosis and 24 with cancer of the lung or bronchus."

VENEREAL DISEASES

The Regional Hospital Board are responsible for the diagnosis and treatment of venereal diseases. Clinics are held at Bedford General Hospital (South Wing) and Luton and Dunstable Hospital. Table XL gives details of the numbers of patients who attended the two clinics during the year and the numbers who were removed from the registers for various reasons.

Although the figures have diminished in recent years and are now quite small, it must not be concluded that venereal disease is no longer a problem. This is made plain by the following extracts from the Report of the Chief Medical Officer of the Ministry of Health for 1956 :-

"Though foreigners, immigrants and prostitutes make up a high proportion of the patients in some city clinics, venereal disease is no respector of persons and the great majority of infections still occur in other sections of the community. Even in Holloway women's prison, where many infected prostitutes are treated, 75 per cent of the venereal disease diagnosed in 1956 occurred among other prisoners.

"Important though it is that the low incidence of infectious syphilis be kept low, gonorrhoea is at present the main venereal enemy. This disease is clearly not under control and one reason for this has been the tendency to play down its importance by over emphasising the power of penicillin. Relapse seems to be more common than it used to be and it now seems likely that in some areas strains of gonococci partially resistant to penicillin may be coming into circulation. Quite apart from its home-breaking propensities, which it shares with non-specific urethritis, gonorrhoea continues to be a potentially serious disease which may well be on its way to becoming again a difficult public health problem. The tracing and treating of the unsuspecting female carrier and the enlightenment of women generally about the danger of untreated infection

remain the most important epidemiological means of controlling the spread of the disease."

TABLE XL -- NUMBER OF PATIENTS ON REGISTERS OF V.D. CLINICS AT 31ST DECEMBER, 1957, TOGETHER WITH ADDITIONS AND REMOVALS THEREFROM DURING THE YEAR

	Syphilis		Gonorrhoea		Other Conditions		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.
No. of patients on register at 1.1.1957	76	90	26	6	103	67	205	163
No. of patients dealt with for first time during 1957 ...	18	10	96	16	258	121	372	147
No. of patients restored to register during 1957 ...	--	--	--	--	--	--	--	--
TOTAL A	94	100	122	22	361	188	577	310
No. of cases removed from register in 1957 as :-								
(a) cured or not confirmed ...	16	8	54	14	270	121	340	143
(b) defaulted ...	8	9	12	--	15	10	35	19
(c) transferred for treatment elsewhere	7	1	6	--	3	1	16	2
TOTAL B	31	18	72	14	288	132	391	164
No. remaining on register at 31.12.57 (A-B) ...	63	82	50	8	73	56	186	146

S E C T I O N IV

INSPECTION AND SUPERVISION OF FOOD

INSPECTION AND SUPERVISION OF FOOD

Legislation concerned with food was consolidated in the Food and Drugs Act, 1955, which came into force on the 1st January, 1956. Although several important changes have been made in the law, they do not materially affect the duties imposed on the County Council. The Council continue to be the Food and Drugs Authority for the Administrative County less the Boroughs of Bedford and Luton and are responsible for enforcing those provisions of the Act designed to secure that food intended for human consumption is not so treated as to render it injurious to health; that drugs are not adulterated; that no food or drug is falsely labelled or advertised; that milk intended for sale for human consumption is not adulterated or misrepresented; and that there shall be no misuse of the designation "cream". In addition, the Council have a duty throughout the County to prohibit the sale of milk from diseased cows. All the other provisions of the Act are enforced by the district councils.

In the County area, the inspection and supervision of food as outlined above, is undertaken by the County Health Inspector, assisted by a Milk Sampling Officer. There is very close co-operation between the County Health Inspector and the public health inspectors employed by the district councils.

The Food and Drugs Act also affects the County Council in their capacity as caterers on a considerable scale. Thus the school meals service is subject to the provisions of the Act and of the Food Hygiene Regulations, 1955. Supervision is being undertaken by the Health Department in association with other officers concerned.

SPECIALLY DESIGNATED MILK

There are now three special designations for milk -- pasteurised, sterilised and tuberculin tested. The Food and Drugs (Milk, Dairies and Artificial Cream) Act, 1950, empowered the Minister of Food to specify certain areas in which all milk sold by retail must be specially designated. The Act has been replaced by the Food and Drugs Act, 1955, but the power remains and is now vested in the Minister of Agriculture, Fisheries and Food. The southern half of the County became a specified area on the 1st March, 1955, and the remainder of the County on the 1st April, 1957.

Under the Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, 1949, the County Council, as a Food and Drugs Authority, are responsible for the licensing of pasteurising and sterilising plants. There were no new applications for pasteurising licences during the year. On the 31st December, 1957, two pasteurising licences were in force. There were no applications received for licences in respect of sterilising plants.

QUALITY OF MILK

Samples of milk are taken in order to ensure that the consumer receives milk that has not been adulterated either by the extraction of fat or by the addition of water. The law presumes, until the contrary is proved, that milk is not genuine if it contains less than 3 per cent of milk-fat or less than 8.5 per cent of milk solids

other than fat. The legal standard for milk-fat is low and most milks have a much higher fat content. Thus the average for all unadulterated samples taken in 1957 was 3.85 per cent, as shown in Table XLI. Excluding "Channel Islands" Milk, the average was 3.59 per cent.

In addition to the standards mentioned, which are applicable to all milk, there is a special standard for milk-fat content of not less than 4 per cent for Channel Islands and South Devon Milk. This standard was first laid down in 1954 and was repeated in the Milk and Dairies (Channel Islands and South Devon) Milk Regulations, 1956, which placed the duty of enforcement on Food and Drugs Authorities. Under the Regulations it is an offence to sell, for human consumption, any milk described as Channel Islands, Jersey, Guernsey or South Devon unless it contains at least 4 per cent of milk-fat and comes from cows of the breed specified. Table XLI shows the monthly fat content of samples of Channel Islands Milk taken during 1957.

411 samples were taken whilst milk was in course of delivery. All those of Channel Islands and South Devon milk were found to be satisfactory, but eight of the remainder were abnormal. Ten appeal-to-cow samples were then taken, of which seven were unsatisfactory. In all cases the milk was deficient in fat only. Appropriate action was taken.

TABLE XLI -- MONTHLY AVERAGE FAT CONTENT OF UNADULTERATED SAMPLES OF MILK, 1957

	Channel Islands and South Devon Milk		Other Milk		All Milk	
	No. of Samples	Milk fat %	No. of Samples	Milk fat %	No. of Samples	Milk fat %
January	7	4.77	43	3.79	50	3.93
February	9	4.59	31	3.76	40	3.95
March	7	4.63	18	3.47	25	3.79
April	13	4.47	32	3.44	45	3.74
May	12	4.27	33	3.29	45	3.55
June	2	4.37	8	3.76	10	3.98
July	10	4.52	28	3.56	38	3.81
August	6	4.44	30	3.68	36	3.81
September	8	4.58	29	3.71	37	3.90
October	10	4.69	28	3.63	38	3.91
November	6	4.85	16	3.75	22	4.05
December	6	4.87	14	3.68	20	4.04
TOTALS	96	4.50	310	3.59	406	3.85

BACTERIOLOGICAL EXAMINATION OF MILK

During the year, 279 samples of milk were taken from retailers supplying milk to the 148 maintained schools in the County (excluding Bedford and Luton). Samples were also taken from pasteurising and heat treating plants. These samples were submitted for bacteriological examination to determine the keeping quality of the milk. Details are given in Table XLII. Where a result was unsatisfactory, further samples were taken until the matter had been put right.

TABLE XLII -- NUMBER OF SAMPLES OF MILK SUBMITTED FOR BACTERIOLOGICAL EXAMINATION DURING 1957

	Routine Samples			First Follow-up			Second Follow-up			Total No. of Samples Taken
	Sat.	Unsat.	Total	Sat.	Unsat.	Total	Sat.	Unsat.	Total	
Samples taken from Schools ...	252	12	264	6	5	11	4	--	4	279
Samples taken from Pasteurising and Heat Treating Plants	69	3	72	3	--	3	--	--	--	75
TOTALS ...	321	15	336	9	5	14	4	--	4	354

BIOLOGICAL EXAMINATION OF MILK

At the end of 1957 there were 453 milk herds in the County. Of these, 283 were T.T. Attested, and 51 were Attested. The remainder were non-designated herds. Every effort is made to prevent the sale of milk infected with tuberculosis. To this end, samples are taken after the herds have been milked and the milk from all the cows has been mixed. These samples are tested by Guinea Pig inoculation. During the year, 302 such samples of milk were taken and six were found to contain Tubercle Bacilli. The facts were reported to the Divisional Veterinary Officer of the Ministry of Agriculture, Fisheries and Food, who took appropriate action.

ICE CREAM

During the year, 29 samples of ice cream were presented to the Public Health Laboratory Service for examination. They were graded as follows :-

Grade 1	...	...	15
Grade 2	...	...	9
Grade 3	...	...	5
Grade 4	...	...	--

Samples in Grades 1 and 2 are considered satisfactory. Samples falling into categories 3 and 4 are regarded as unsatisfactory. The five samples in these latter grades were further investigated.

33 samples of ice cream were purchased under the Food and Drugs Act, the fat content varying from 9.3 per cent to 17.6 per cent, averaging 11.7 per cent over the entire number of samples taken. The law states that ice cream must contain not less than 5 per cent fat, 10 per cent sugar and $7\frac{1}{2}$ per cent milk solids other than fat.

SAMPLES OTHER THAN MILK

140 routine formal samples of food and drugs, other than milk, were taken during the year and were all found to be satisfactory. 30 routine informal samples were also taken of which four were adulterated. In two cases the articles were condemned, and in another the entire stock was withdrawn. In the fourth case, a formal sample was subsequently taken which was also unsatisfactory. A warning letter was sent.

MERCHANDISE MARKS ACTS

654 routine visits were made to premises and samples were taken where necessary. Ten of these samples proved to be unsatisfactory. Proceedings were instituted in four cases covering eight offences. Three of these cases were successful and the fourth was dismissed on a technicality. Verbal warnings were given in respect of the other offences.

WASTE FOODS

The Diseases of Animals (Waste Foods) Order, 1957, came into operation on the 1st June, 1957, and was the result of the recommendation of the Gowers Committee on Foot and Mouth Disease that all substantial collectors of waste foods (other than local authorities) should be required to obtain a licence imposing on them an obligation to use an approved boiling plant which would be periodically inspected.

Waste foods may, if not boiled for one hour, spread foot and mouth and other diseases. The Order prohibits the feeding of unboiled waste foods to certain animals and to poultry. It also provides that where a person has collected from the premises of other persons on to his own premises any waste foods for feeding to animals or poultry the waste foods shall not be used on or moved from his premises unless they have first been boiled for one hour in a plant licensed by the appropriate authority. But if no animals or poultry are kept on the collector's premises, the unboiled waste foods may be moved from those premises, either by another collector for boiling in his own licensed plant, or to a plant operated by a local authority, or by a small stock keeper to his premises for feeding, after boiling, to his own pigs or poultry. The Order also prohibits the carriage of animals, poultry or feeding stuffs in a vehicle that is carrying unboiled waste foods, and it requires the disinfection of vehicles and containers after each occasion on which they are used for the carriage of unboiled waste foods before they are again used for the carriage of animals, poultry or feedingstuffs.

Prior to June 1957, licensing of collectors of waste foods was confined to certain urban areas only, and was the responsibility of the Ministry of Agriculture, Fisheries and Food under the Diseases of Animals (Licensing of Waste Food Sterilisation Plant) Order, 1954. This arrangement derived from a war-time plan (under Defence Regulations) to ensure the maximum use of waste foods as animal feedingstuffs, and was maintained as an animal health measure.

The responsibility for the licensing and inspection of boiling plants under the Diseases of Animals (Waste Foods) Order, 1957, has now been assigned to certain local authorities. The licensing authorities in Bedfordshire are the Boroughs of Bedford and Luton, and the County Council for the remainder of the County.

The County Health Inspector and the Sampling Officer have been authorised to act on behalf of the County Council for the purpose of inspecting plant and equipment.

The 19 licences issued by the Ministry of Agriculture, Fisheries and Food under the Diseases of Animals (Licensing of Waste Foods Sterilisation Plant) Order, 1954, remained in force when the Waste Foods Order, 1957, came into operation. At the 31st December, 1957, there were, in all, 28 plants licensed.

A P P E N D I X

THE DEVELOPMENT OF THE CHEST CLINIC SERVICES IN BEDFORDSHIRE, 1948 TO 1957

by: J. Brian Shaw, M.D.
N.R. Wynn-Williams, M.B., M.R.C.P.

In July, 1948, when the National Health Service Act came into operation, the hospital authorities took over responsibility for the diagnosis and treatment of tuberculosis. The prevention of tuberculosis and after-care of the patients remained the responsibility of the Local Health Authority. The up-grading of the Bedford and Luton Chest Clinics had largely taken place before this date and the new authority acquired modern Chest Clinics to which they continued to add the most up-to-date radiographical apparatus and other modern equipment. Later, a number of general hospital beds were given to each clinic, so forming two compact chest units well situated geographically to serve the populations in the northern and southern halves of the County. Each Chest Clinic had its senior physician and other medical staff. The services of a visiting consulting physician, Dr. F.P. Lee Lander, O.B.E., M.D., F.R.C.P., originally appointed by the Bedfordshire County Council, were retained, so continuing a valuable link with the teaching hospitals. Thoracic surgery was undertaken by Mr. O.S. Tubbs, F.R.C.S., at the Thoracic Surgical Unit, St. Bartholomew's Hospital, at Hill End. Mr. Tubbs also acted as consultant thoracic surgeon to the County, regularly visiting the Bedfordshire Sanatorium, and giving invaluable service in the early years. Later, as the regional services developed, Bedfordshire became more closely associated with the larger chest hospitals, Clare Hall and Harefield with their associated Thoracic Surgical Units. In 1952, Mr. G.C.W. James, F.R.C.S., was appointed as part-time thoracic surgeon, with surgical beds in these two hospitals. Regional integration became closer as the old tuberculosis service rapidly developed into medical units for the diagnosis and the medical and surgical treatment of general diseases of the chest, including tuberculosis. More recently an exchange of senior medical staff has occurred between Clare Hall Hospital and the Luton Chest Clinic, a senior consultant from the Chest Hospital undertaking outpatient sessions in the Chest Clinic, and the clinic physician undertaking the care of some non-tuberculous patients in the Chest Hospital. The Bedford Chest Clinic has received valuable help from Dr. W.E. Mashiter, the Physician Superintendent of the Bedfordshire Sanatorium.

The Tuberculosis Health Visitors who are particularly concerned with prevention and the Chest Clinic Welfare Officers who are responsible for after-care continued to work in the Chest Clinics under the day-to-day supervision of the chest physicians, although they remained on the staff of the Local Health Authority with the County Medical Officer as their superior officer. In spite of what might appear to be a complicated administrative system, the service in Bedfordshire has worked well in practice and the artificial division of responsibility has never been visible in the daily work of the Chest Clinics.

RESPIRATORY TUBERCULOSIS

Mortality

There has been a steady fall in mortality from respiratory tuberculosis over the ten year period, both in the County and in England and Wales, as shown in Table A. The decrease has been particularly noted in younger persons. Fifty-two (50%) of the 102 Bedfordshire deaths in 1948 were between the ages of 15 and 44, whereas only three (16%) of the 19 deaths in 1957 were in this age group.

Morbidity

The total number of new cases of tuberculosis found in Bedfordshire each year has declined since 1952 (see Table XXXVII on page 75), but it is difficult to be certain how this relates to the number of cases of still undiscovered disease in the population. However, there are some indications that there may be a decrease here as well.

The steady increase in the adult and child population at risk during the ten years is shown in Table B, which also shows separately the fall in respiratory and non-respiratory tuberculosis in children. Both forms of the disease are shown as probably many children receive non-respiratory as well as respiratory infection from adults. The Table also shows the attack rate from all forms of tuberculosis per 1,000 of the child population. This, after a preliminary rise, has markedly decreased in the last six years of the decade. It will be seen from the Table that, although there was a rise in the number of infectious cases known to the Chest Clinics between 1948 and 1952, the figure began to fall from the latter date. Thus, there were 336 sputum positive cases on the Chest Clinic registers in 1948 and 471 in 1952, but only 116 in 1957. These figures are based on sputum examinations in the last six months of each year.

A Mass Radiography survey of the County in 1950 yielded a rate of 3.1 per 1,000 persons suffering from active tuberculosis. The figures for 1952 and 1956 were 2.62 and 1.4 per 1,000 respectively. Repeat Mass Radiography surveys of the same population result in a number of the same people being X-rayed in each survey and diminishing returns in case finding. Nevertheless, the great difference in these figures suggests that there may be some parallel in the diminution of the unknown as well as the known reservoirs of infection. Other suggestive evidence is provided by the small number of tuberculin positive children found by the School Medical Officers during 1956 and 1957 on examining school entrants and children prior to B.C.G. vaccination.

It seems, therefore, that by 1952, the Chest Clinics having acquired the most up-to-date apparatus and equipment, the campaign of case finding reached its maximum. From 1952 onwards, in spite of using the same methods, the yield became progressively smaller. In this latter period the greatest advances were made in the application of treatment.

Treatment

The revolutionary change which has resulted in treatment by time honoured long-term bed rest being replaced by ambulant chemotherapy while at work, was a gradual process. In 1948, waiting lists for hospitals throughout the country were long and early cases of tuberculosis were often advanced and difficult to treat by the time they had gained admission to hospital some six to twelve months after acceptance. In 1948, by arrangement between the Physician Superintendent of the Bedfordshire Sanatorium and the Chest Clinic physicians, Bedfordshire Sanatorium was reserved for early cases who could be admitted quickly to receive part of their required treatment in hospital and then return home for their period of prolonged rest. While partly solving the problem of the early case these measures failed to isolate the chronic infectious patient. Provision of hospital beds attached to the Chest Clinics in 1949/50 allowed many of these infectious cases to be admitted to hospital near their home and friends. Apart from bed rest, treatment often consisted of temporary collapse therapy. The artificial pneumothorax and pneumoperitoneum techniques were widely used and usually required hospital admission for induction and minor surgery, after which refill treatment was continued at weekly or two-weekly intervals at the Chest Clinics for two to five years. This made considerable demands on the patient's time and

that of the Chest Clinic staff. Permanent collapse of the diseased part required major surgery and such patients were admitted to one of the Thoracic Surgical Units. From 1950 onwards a series of new and powerful anti-tuberculous drugs became available. At first these were used as a complement to the usual methods of treatment and were given for short periods while the patient was in hospital, or in bed at home. As experience in the use of these drugs accumulated, greater benefit was found when they were given for longer periods and they were so effective that the old methods of collapsing the diseased part of the lung were found to be no longer necessary. It is now the custom to give anti-tuberculous drug therapy for one to two years. It was also found that patients became non-infectious and non-toxic rapidly and that they could be discharged home or allowed out of bed in a shorter time. Finally, it was found safe and even the method of choice to treat many patients while at work, after only a short period of hospital admission to stablize them on their drugs. Surgery for tuberculosis also became more and more selective and now consists mostly of resection of the diseased part of the lung. The average time in hospital or bed at home for a patient with tuberculosis in 1950 was something approaching a year. In 1957, the average period spent by a patient in bed or in hospital was less than two months. There has been no hospital waiting list for tuberculosis in Bedfordshire for some years.

Prevention

The dramatic improvement in the mortality rate is a mark of successful medical treatment but the slow change in morbidity shows that good treatment is only part of the total requirements in dealing with this disease. Prevention of tuberculosis is the responsibility of the Local Health Authority. The chest physician acts as adviser on general matters when required and as executive officer in all matters concerning the patient.

Case Finding

The unknown infectious patient constitutes the greatest danger to his fellows and the search for new cases is the first line of attack. Most new patients are found from cases referred by general practitioners as ordinary out-patients or from those sent to the Chest Clinics for chest radiography. Both Clinics have Odelca camera units capable of taking large numbers of radiographs on strip film rapidly and at low cost. General practitioners can send large numbers of patients to special radiography sessions with very little formality.

Mass Miniature Radiography

Large scale surveys of the population of Bedfordshire by visiting Mass Radiography Units take place every two to three years. Many thousands of persons are radiographed.

Sputum Conversion

Having found a patient with active tuberculosis the next objective is to render him non-infectious as soon as possible with modern drugs and other treatment.

Contact Examination

Examination of the family and close contacts of the new patient is undertaken to discover any person who may have been infected by him so that such cases may also be offered early treatment. Contact examination includes the siblings and parents of the new patient in an attempt to find the original source which may have infected the patient.

Examinations may also extend to immediate colleagues at work or school. The investigations include chest radiography and tuberculin tests.

Tuberculosis Health Visitors

Six Tuberculosis Health Visitors are employed in the County. A great part of tuberculosis health visiting is concerned in organising contact examinations, persuading defaulting patients to attend the Clinic, and other social work. The Health Visitors have two tasks of special importance. The first is the education of the patient in the prevention of the spread of his disease. The infectious patient who observes some simple rules of hygiene is little danger to his fellows. Secondly, Health Visitors in their daily round keep continual check on the way patients are taking their drugs, reporting all difficulties to the physicians.

B.C.G. Vaccination

Tuberculin negative or susceptible contacts of infectious cases have been offered B.C.G. vaccination for some years. This has been the responsibility of the clinic physicians.

A general scheme to protect children before leaving school came into operation in the County in 1957 and all 13-year-old children who would benefit are now being offered vaccination. This is the responsibility of the Local Health Authority.

School Entrants

A scheme for tuberculin testing school entrants was introduced in 1954. The Heaf gun technique was used, so avoiding injection. Very few of the children have been found to be tuberculin positive but two new cases of tuberculosis have been found following examination of the parents.

Housing and Nutrition

The high rates of tuberculosis found where housing is bad and malnutrition prevalent are well known. The local housing authority may give priority in the re-housing of an infectious patient when he is living in such overcrowded circumstances as to be a danger to his fellows. Bed and bedding may be had on loan from the County Council to furnish a temporary bedroom, and extra allowances of milk and eggs may be given where malnutrition may be jeopardising recovery. Extra financial allowances are available from the National Assistance Board for patients who are in need and not able to work.

OTHER DISEASES OF THE CHEST

Chest Clinic attendances increased from 14,151 in 1948, to 48,717 in 1953. In the last five years they have been of the order of 43,000 per annum. In fact, in the latter period there has been a steady fall in the number of old patients attending due to changing methods of treatment which has been compensated for by a rise in new patient references with a variety of problems relating to chest diseases.

Chronic bronchitis is probably the greatest single problem apart from tuberculosis. Knowledge of this peculiarly British disease is far from complete and much research is required to improve treatment. An increasing number of these patients is referred to the Chest Clinics for advice. A special unit for chronic bronchitis has recently been established in Clare Hall Hospital. There is a waiting list for this unit even in summer.

Carcinoma of the lung continues to increase but remains primarily a disease of the middle aged and elderly male. Early diagnosis offers the best hope of successful treatment. The Odelca camera units in the Chest Clinics offer a useful service in early detection.

The close link between these two diseases and excessive cigarette smoking is now generally recognised and has been the subject of conferences between the County Medical Officer, the chest physicians and hospital authorities. Other factors which are associated with chronic bronchitis particularly are atmospheric pollution and occupational hazard.

TABLE A -- RESPIRATORY TUBERCULOSIS DEATH RATES PER 100,000 POPULATION, BEDFORDSHIRE AND ENGLAND AND WALES, 1948-57

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Bedfordshire	34.0	32.0	16.0	18.0	14.0	15.0	9.1	7.7	6.7	5.7
England & Wales	44.0	40.5	32.1	27.5	21.2	17.9	16.0	13.1	10.9	9.5

TABLE B -- TOTAL AND CHILD POPULATION OF BEDFORDSHIRE, 1948-57, WITH THE NUMBER OF SPUTUM-POSITIVE PATIENTS ON THE TUBERCULOSIS REGISTER, AND THE NUMBER OF CHILDREN DIAGNOSED TUBERCULOUS

Year	Population		Sputum-positive patients on register	Children diagnosed with tuberculosis			
	All ages	0 - 14 years		Resp.	Non-Resp.	Total	All forms per 1,000
1948	298,715	65,729	336	35	20	55	0.84
1949	301,920	66,800	354	26	31	57	0.85
1950	312,533	68,530	435	41	22	63	0.92
1951	319,000	68,710	354	31	36	67	0.98
1952	319,800	69,400	471	39	17	56	0.82
1953	320,200	69,800	402	33	25	58	0.83
1954	320,100	70,800	233	26	10	36	0.51
1955	323,600	72,200	210	21	8	29	0.40
1956	329,900	74,500	127	24	5	29	0.39
1957	335,500	77,000	116	19	10	29	0.38