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**COUNTY BOROUGH OF NORTHAMPTON.**

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**R E P O R T**


OF THE

**MEDICAL OFFICER OF HEALTH**

**FOR THE YEAR 1933.**

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By **STEPHEN ROWLAND**, M.D.Edin., D.P.H.Camb.,  
Medical Officer of Health,  
School Medical Officer, and  
Chief Tuberculosis Officer.



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*To the Mayor, Aldermen, and Councillors of the County Borough  
of Northampton.*

MR. MAYOR, LADIES, AND GENTLEMEN,

I present herewith the Annual Report of the Medical Officer of Health for the year 1933, which for statistical purposes embraces a period of fifty-two weeks ending on 30th December, 1933.

The report follows the general lines of its predecessors and is not what the Ministry of Health calls a "survey report."

It is gratifying to note the continued good health of the inhabitants of Northampton, as shewn by the low death-rate and the remarkably low infantile death-rate of 45·1.

The incidence of notifiable infectious disease remained slight and the amount of diphtheria in the Borough was less than in any year since 1892 ; the death-rate from tuberculosis continues low for an industrial borough.

The work for maternity and child welfare was further extended by the inauguration of clinics for "toddlers," *i.e.*, children from one to five years of age.

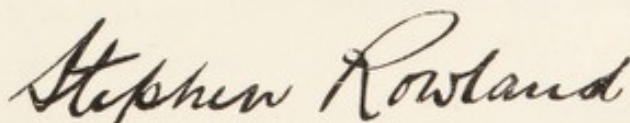
Progress was made in slum clearance and with the representation of individual unfit houses. The subject is fully dealt with in the section on housing, pages 23 to 25.

Having now obtained the County Volume of the 1931 Census, I have included a few interesting tables (*see page 8*).

I have again to acknowledge the loyal assistance and support received from all members of my Staff during the year under review, a support without which efficiency would be impossible.

I remain, Mr. Mayor, Ladies, and Gentlemen,

Your obedient Servant,



*Medical Officer of Health.*

PUBLIC HEALTH DEPARTMENT,  
GUILDHALL, NORTHAMPTON.  
APRIL, 1934.



## PUBLIC HEALTH STAFF.

<i>Medical Officer of Health, School Medical Officer, and Chief Tuberculosis Officer</i>	STEPHEN ROWLAND, M.D. Edin., D.P.H. Camb.
<i>Tuberculosis Officer</i> .. ..	.. NORMAN B. LAUGHTON, M.B., Ch.B., D.P.H.
<i>Assistant Medical Officer for Maternity and Child Welfare</i>	MISS EVELYN F. BEBBINGTON, M.B., Ch.B., D.P.H., M.R.C.S., L.R.C.P.
<i>Sanitary Inspectors</i> .. ..	.. W. J. BARKER*† ( <i>Chief Inspector and Rat Officer</i> ) J. WALKER*† ( <i>also Inspector of Common Lodging Houses</i> ) J. BROWN*† ( <i>Meat and Food Inspector</i> ) B. KNOWLES*†
<i>Assistant Sanitary Inspectors</i> ..	.. T. L. BOAST*† S. A. TENCH* C. V. FRISBY*† ( <i>also Inspector of Canal Boats</i> )
<i>Health Visitors</i> .. ..	.. MISS L. M. ISLIP‡    MISS M. E. MOSSEY‡   § MRS. F. H. SMITH‡   § MISS F. M. V. BLYTHE BROWN‡    MISS E. C. AGAR‡   ¶
<i>Tuberculosis Nurse</i> .. ..	.. MISS L. REESE
<i>Matrons</i> .. ..	.. MISS M. E. NORMAN   § ( <i>Harborough Road Infectious Diseases Hospital</i> ) MISS K. B. STONE   § ( <i>Welford Road Tuberculosis Hospital</i> )
<i>Clerks</i> .. ..	.. A. F. KNIGHT ( <i>Chief Clerk</i> ) S. J. KNIGHT ( <i>Tuberculosis Dispensary</i> ) H. T. BOSWELL MISS D. E. ADNITT ( <i>Infant Welfare Centre</i> ) G. B. PRATT
<i>Removal and Disinfecting Staff</i> ..	.. C. H. WILLIAMS A. W. BLASON R. G. A. BRITTEN
<i>Rat-catcher</i> .. ..	.. J. MALONE

All the above are whole-time Officers. School Medical Staff is not included.

\*Holds Inspector's Certificate of the Royal Sanitary Institute.

†Holds Certificate for Inspecting Meat and Other Foods.

‡Holds Certificate of the Central Midwives Board.

||General Trained Nurse.

§Fever Trained Nurse.

¶Holds Health Visitor's Certificate.

## SUMMARY OF STATISTICS.

Latitude.....	52° 14' North.	Longitude.....	0° 54' West.
Height of Public Health Office above general mean sea level (in feet)	252		
Area of Borough (in acres) as extended, 1st April, 1932 ....	6,201		
Population :—			
Census 1931 (before extension) .....	92,341		
Census 1931 (including area added 1st April, 1932) ....	96,546		
Registrar-General's Estimate at Mid-year 1933 .....	96,630		
Number of Inhabited Houses :—			
Census 1931 .....	23,141		
According to Rate Books (31st December, 1933) .....	26,150		
Number of Families or Separate Occupiers (Census 1931) ...	24,966		
Rateable Value (31st December, 1933) .....	£677,696		
Yield of One Penny Rate (31st December, 1933) .....	£2,671		

## EXTRACTS FROM VITAL STATISTICS FOR THE YEAR 1933.

	TOTAL.	M.	F.		
Live Births	Legitimate .....	1,117	564	553	} Birth-rate 11·9
	Illegitimate .....	35	19	16	
	Total .....	1,152	583	569	
Stillbirths	Legitimate .....	35	18	17	} Rate 0·39*
	Illegitimate .....	3	0	3	
	Total .....	38	18	20	
Deaths .....	1,091	554	537	—Death-rate	11·3
“ Standardised Death-rate ” (Factor 0·921) .....					10·4
Percentage of Total Deaths occurring in Public Institutions ..					39·5
Number of Women dying in, or in consequence of, Childbirth			{ From Sepsis .....		1†
			{ From Other Causes ..		0
Deaths of Infants under One Year of Age per 1,000 Live Births :—					
Legitimate..	44·8	Illegitimate..	57·1	Total .....	45·1
					NUMBER. RATE.
“ Zymotic Deaths ” .....					16 0·17
Deaths from Measles (all ages) .....					0 0·00
Deaths from Whooping Cough (all ages) .....					3 0·03
Deaths from Diarrhœa (under two years of age) ....					4 ‡
Deaths from Respiratory Tuberculosis .....					63 0·65
Deaths from Other Tuberculous Diseases .....					12 0·12
Total Tuberculosis Deaths .....					75 0·77
Deaths from Cancer .....					175 1·81
Deaths from Influenza .....					46 0·48

\*31·9 per 1,000 Total (Live and Still) Births Registered.

†0·84 per 1,000 Total Births.

‡3·5 per 1,000 Live Births Registered.

## I.—STATISTICS AND SOCIAL CONDITIONS.

## Population

The Registrar-General estimated the population of Northampton at mid-year 1933 to be 96,630, a decrease of one hundred on his estimate for the previous year. From this it is not necessarily to be inferred that the population of the Borough declined since we received the Registrar's last estimate.

The natural increase of the population, *i.e.*, the excess of births over deaths for 1933 was only sixty-one, or 0.6 per thousand living.

Census,  
1931

From the Census Volume dealing with Northamptonshire and the Soke of Peterborough published last summer, we learn that the enumerated population of the County Borough of Northampton on the night of 26/27th April, 1931, was 92,341. I have included five tables on pages 75 to 77 giving some of the more important data extracted from this document, but the fact that the Borough was extended a year after the Census has lessened, to some extent, the value of the information. On the other hand, comparisons with 1901, 1911, and 1921 are reliable, because the boundaries remained unaltered throughout the period covered by all four censuses.

Table 1 is interesting, indicating as it does the growth of the Borough from the first census taken in 1801. In reading the intercensal increases, it must be kept in mind that the large extension of boundaries on 9th November, 1900, accounted for most of the increase between 1891 and 1901.

Table 2 gives certain information for each of the old wards of the Borough and its main interest lies in comparison with a similar table on page 65 of the Report for 1923.

Table 3 gives the age constitution of the enumerated population. This shews that 5,780 (6.3 per cent.) consisted of children under five years of age; 13,860 (15.0 per cent.) were in the five to fifteen years, or school group; 22,552 (24.4 per cent.) were fifty years of age or over; 7,620 (8.2 per cent.) were sixty-five years of age or over; and 868 (0.9 per cent.) were eighty or over.

In 1921 these percentages were 7.8 under five years of age; 17.2 five to fifteen years; 19.9 fifty or over; 6.4 sixty-five or over; and 0.7 eighty or over.

The next table (No. 4) also shews the change which has taken place in the age distribution of the population between 1921 and 1931. This change has been brought about, of course, by the falling birth-rate. To take another illustration, the average age of males in 1921 was 31.1 years; in 1931 it was 33.4. For females, the figures were 31.9 and 34.7. It is interesting to note that the proportion of females to each one thousand males dropped in the ten years from 1,120 to 1,111.

Table 5 contains other valuable information, the figures for 1921 being included for comparison.

In Part II. of the Registrar-General's Statistical Review of England and Wales for the Year 1932 further information is given with regard to the extension of the Borough on 1st April, 1932. This has been embodied in two tables (Nos. 6 and 7) on page 78. Borough  
Extension,  
1932

The 1931 Census population of the area which now forms the Borough was 92,341 (for the unenlarged Borough) + 4,205 (added area) = 96,546.

The figures in Table 7 added to those in Table 3 give the age constitution of the population in the enlarged Borough, as disclosed at the 1931 Census.

The extension added only 4.6 per cent. to the population, but as the acreage was increased from 3,469 to 6,201, the expansion in size was equal to 78.8 per cent.

It will be seen from Table 6 that the population of the newly-annexed districts rose from 1,118 to 4,205 between 1921 and 1931, an increase per cent. of 276.1, compared with 3.4 for the County generally, 1.6 for the Borough, and 5.5 for England and Wales. It must be obvious, even to anyone not conversant with local conditions, that the bulk of this large increase in the district adjacent to the Borough was caused by the movement of population into new houses erected just outside the old boundaries.

1,152 live births were registered, giving a birth-rate of 11.9 per thousand, compared with 14.4 for England and Wales. The rate of 11.9 is the lowest ever recorded for the Borough. How the falling birth-rate has affected the age constitution of the population is dealt with in the paragraph on the Census of 1931 on page 8. Table A (page 92) gives the birth-rates since 1901. Births

Thirty-five (3.0 per cent.) of the births were illegitimate.

There were thirty-eight stillbirths registered, giving a rate of 0.39 per thousand of the population, as compared with 0.62 for England and Wales. The rate expressed per thousand total births (live and stillbirths) registered was 31.9; for England and Wales it was 41. Stillbirths

There were 1,091 deaths registered, equal to a death-rate of 11.3, compared with 12.3 for England and Wales. Table A (column 13) on page 92 gives the death-rates since 1901. Deaths

Deaths of elderly persons (sixty-five years of age and upwards) accounted for 53.8 per cent. of them.

505 persons, including residents and non-residents, died in local institutions. This figure represents 39.5 per cent. of the total deaths. The deaths of non-residents were transferred by the Registrar-General to their respective areas, whilst the deaths of Northampton residents which took place outside the Borough were credited to us as "inward transfers."

Ninety-four deaths occurred for which no medical certificates of the causes of death were furnished; these included seventy-eight inquests, thirteen coroner's certificates after post-mortem examinations without inquests, and three uncertified, or 8.6 per cent. of the nett deaths registered.

The "standardised death-rate" for Northampton (found by applying the Registrar-General's factor for age and sex constitution to the crude rate) was 10.4.

Table C at the end of this report, giving the causes of death at different periods of life, was prepared in the Public Health Department from information supplied weekly by the local registrars. The classification agrees closely with the figures received from the Registrar-General on 31st March, 1934.

#### Social Conditions

No change of any importance occurred in the social conditions of the Borough during the year. There was a slight improvement in the staple industry and also a revival in the building trade, in fact it is probable that at the end of the year more building was in progress in the Town than had been the case for some years.

#### Unemployment

The Manager of the Employment Exchange has again kindly furnished particulars regarding unemployment in Northampton, from which the following particulars emerge:—

Total Number on the Register on 25th July, 1932 (including 2,284 temporarily stopped claimants)	6,311
Total Number on the Register on 24th July, 1933 (including 1,261 temporarily stopped claimants)	4,865
Total Number on the Register on 18th December, 1933 (including 3,138 temporarily stopped claimants)	6,523

There is usually a considerable rise in the number of persons on the register about Christmas, but this is entirely due to extended holidays during the Christmas period. The July figures shewed that there was a general all-round improvement in trade and, on the average, the number on the register approximated to one thousand less than at a corresponding time in 1932. The total on the register on 16th January, 1933, was 7,182.

During the week ended 30th December, 617 men, on whom depended 471 women and 1,081 children, received unemployment relief from the Public Assistance Committee.

The Borough Engineer has supplied the following information relating to public works upon which unemployed labour was engaged:—

#### CONTRACT WORKS.

Main Outfall Sewer—Pumping Station;

Far Cotton Surface-water Sewer ;  
 Extension of Main Sewer and Construction of New  
 Works.

DEPARTMENTAL WORKS—DIRECT LABOUR.

Reconstruction Works :—

Duke Street ;  
 Grove Road ;  
 Henry Street ;  
 Holly Road ;  
 Ivy Road ;  
 St. Edmund's Road ;  
 St. George's Avenue ;  
 Upper Harding Street ;  
 Weston Street.

Painting Fences :—

Cow Meadow ;  
 Far Cotton Recreation Ground ;  
 Kingsthorpe Cemetery ;  
 Racecourse ;  
 Towcester Road Cemetery.

Abington Housing Estate ;  
 Grafton Street Widening ;  
 St. David's Housing Estate.

The records (*see* Table 8, page 79) from which these notes were compiled were kindly supplied by Mr. R. H. Primavesi. For the first time, owing to the kindness of Mr. H. E. Cooper, we are able to give the hours of bright sunshine.

Meteorology

The year 1933 will be recalled as one of the most remarkable in living memory, for it was abnormal from several points of view, the chief being the marked deficiency in the rainfall all over the country, together with an abnormal amount of sunshine. The total rainfall in Northampton was 18·53 inches, compared with an average of 24·35 for the past twenty-nine years. One month (December) only registered 0·50 inches, while the totals for April and August only amounted to 0·72 and 0·90 inches respectively. The heaviest fall in forty-eight hours occurred on 20th-21st June when 1·06 inches were registered, of which 0·82 inches fell on the former day. Snow was practically absent during the year.

The total hours of bright sunshine recorded (1,685) is considerably above the average for this part of the country, where it ranges from 1,200 to 1,400 hours. The sunniest month was July with 247½ hours to its credit, followed next in order by May with 240 ; the month with the least amount of sunshine was November with 34¾ hours.

The highest shade temperature was 88°F., recorded twice during the summer, on 5th June and again on 27th July, while the lowest reading, 22°F., occurred on 23rd January. There

were fifty-four cold nights, *i.e.*, nights during which the thermometer fell to 32°F. (freezing point) or below.

Another abnormality about the weather of 1933 was the absence of heavy gales. The prevailing direction of the wind was south-west on 111 days, south-east on 50, north-east on 98, and north-west on 103. Three "calm" days were recorded.

Other  
Statistics

The notes on infant mortality, the incidence of, and mortality from, infectious diseases, housing conditions, and other statistics usually included in the annual report, will be found under the headings referring to these matters.

Attention is directed also to the vital statistics on page 7 and to Tables A, B, C, and D at the end of this report.

## II.—GENERAL PROVISION OF HEALTH SERVICES.

Public  
Health  
Officers

A list of the whole-time officers of the Public Health Department on 31st December, 1933, appears on page 6.

The part-time officers connected with the Department comprise two medical officers, one male orderly, and one nurse at the Venereal Diseases Clinic; one non-resident medical officer and his deputy at the Public Assistance Committee's Institution, Wellingborough Road; three public vaccinators, who also act for poor law medical out-relief; one consultant obstetrician; a public analyst; two vaccination officers; and one veterinary surgeon. In addition, from May, 1933, onwards, the part-time services of one medical practitioner and one nurse were requisitioned for work in connection with maternity and child welfare.

The staff employed in the school medical service is mentioned in the paragraph dealing with that subject on page 16.

Laboratory  
Facilities

These facilities remain as in previous years, *i.e.*, for the examination of clinical material (sputum, swabs, etc.), water, milk, and foodstuffs. (See page 12 of 1930 report).

Ambulance  
Facilities

**INFECTIOUS CASES.** No addition was made to the ambulances owned by the Local Authority. The three vehicles were maintained in good order.

**NON-INFECTIOUS AND ACCIDENT CASES.** Ambulance facilities for these are provided by the Northampton Branch of the St. John Ambulance Association, with headquarters in King Street.

**MATERNITY PATIENTS.** These are generally moved by the Ambulance Association.

Nursing in  
the Home

This remains as outlined in my report for 1930. There was no appreciable extension of this work during the year, so far as the Public Health Department was concerned, owing

probably to the very efficient service already provided by the Queen's Institute of District Nursing under the voluntary contributory scheme.

The Maternity and Child Welfare Centres, School Clinic, Orthopædic Clinic, Tuberculosis Dispensary, and Venereal Diseases Clinic were fully described in my report for 1930, pages 19 and 20. A note on the Mental Diseases Clinic appeared on page 13 of last year's report. In view of the importance attached by the Ministry of Health to the supervision and medical care of children from one to five years of age (the so-called "toddlers"), to bridge the gap between infancy and the commencement of school attendance, the Maternity and Child Welfare Committee started a special clinic for toddlers, which is held monthly at the Central Building, Dychurch Lane, by Dr. Lilian M. Blake.

Clinics and  
Treatment  
Centres

Full reports of the four municipal hospitals were given in my reports for 1930 and 1931 :—

Municipal  
Hospitals

**HARBOROUGH ROAD INFECTIOUS DISEASES HOSPITAL.** Nothing in the way of additions or alterations was done at this hospital during the year. (See also page 40).

**WELFORD ROAD TUBERCULOSIS HOSPITAL.** Several minor alterations were made at Welford Road Hospital, viz :—a consulting room was made by taking a portion off one of the large ward kitchens, the washing facilities for patients were extended, the wards were re-decorated, and electric bells were fitted. The whole cost about £300. (See also pages 40 and 55).

**SMALLPOX HOSPITAL.** This building called for no expenditure of money during the year. It is maintained in such a state as to be fit to receive patients at a few hours' notice. (See also page 40).

**THE INFIRMARY, WELLINGBOROUGH ROAD INSTITUTION.** A description of this infirmary was given in my report for 1930, pages 15 and 16, together with suggestions for improvement. It will be remembered that two of the requirements urgently called for were the provision of lifts in the two infirmaries (male and female) and a radical change in the accommodation for the nursing staff. I am pleased to say the lifts have been fitted and are giving great satisfaction, everybody wondering why they were not installed years ago. The enlargement of the nurses' home was on such an extensive scale as practically to constitute a new home and a very fine one it is, with thirty-three bedrooms, each having hot and cold running water, and a built-in wardrobe. Three more bedrooms in the old building make a total of thirty-six. The old kitchen has been enlarged to bring it into line with the rest of the building. The home is likely to be ready for occupation early this summer. (See also page 40).



Voluntary  
Hospitals,  
etc.

A description of the Northampton General Hospital, Creaton Sanatorium, Manfield Orthopædic Hospital, and Berrywood Mental Hospital appeared in the report for 1930, pages 16 and 17. Further reference is made to Manfield Hospital on pages 56 and 66 of this report and to Creaton Sanatorium on page 56.

As mentioned in last year's report, the Borough is very well supplied with hospital facilities for both ordinary and specialist services, with one possible exception, viz :—the want of a maternity home or a maternity department in connection with the General Hospital.

Up to the end of the year no further progress had been made in respect of the proposed maternity home to be built by the Queen's Institute of District Nursing on Kingsthorpe Road, the project being held up by want of money.

Poor Law  
Medical  
Out-relief

No change has been made in the provision of poor law medical out-relief since my last report; the three medical officers serving the three districts into which the Borough is divided for this purpose are :—No. 1 District, with an approximate population of 46,000, Dr. E. Robertson, 220, Kettering Road; No. 2 District, approximate population 44,000, Dr. J. Cullen, 5, St. Matthew's Parade; and No. 3 District, with an approximate population of 7,000, Dr. H. F. Percival, 2, Spencer Parade. The service is working satisfactorily.

Care of  
Mental  
Defectives

The question of appointing a full-time paid organiser to co-ordinate the work done by the Mental Deficiency Committee of the Corporation and voluntary bodies has not been again considered.

As far as one can see, not much progress has been made with the conversion of Bromham House, near Bedford, into a colony for mental defectives by the Joint Board composed of representatives of the Northamptonshire County Council, Bedfordshire County Council, and Northampton Borough Council, the scheme having been temporarily held up, but since the commencement of the present year (1934) plans have been submitted by the Joint Board to the constituent authorities with a view to proceeding at an early date with the building of a colony for 250 mentally defectives.

The Public Assistance Institution is certified under Section 37 of the Mental Deficiency Act, 1913, for the reception of nine medium to low-grade mental defectives, of both sexes, over the age of sixteen years.

Maternity  
and Child  
Welfare

The information required by the Ministry of Health on the services provided under the following heads will be found in Section VII. of this report, dealing with Maternity and Child Welfare, on pages 45 to 49 :—

- (a) Midwifery and Maternity Services ;
- (b) Institutional Provision for Mothers and Children ;
- (c) Health Visitors ;
- (d) Infant Life Protection ;
- (e) Orthopædic Treatment.

At the end of December, 1933, seven nursing homes were on the register, viz :—

Maternity Homes .....	2	Maternity and Other Nursing Homes
Mixed Home .....	1	
Homes for Aged and Infirm, etc. ....	3	
Home for Mothers and Babies .....	1	

The last mentioned institution is St. Saviour's Home, which is managed by the Peterborough Diocesan Authorities and was fully described on page 18 of my report for 1930. I understand the home was about half full during most of the year. The great majority of the girls come from out of town.

No application to open a new nursing home was received. All these institutions were visited and inspected at regular intervals by the Assistant Medical Officer for Maternity and Child Welfare, who was appointed by the Local Supervising Authority to carry out this duty. (See page 68).

Five institutions are exempted from registration under Section 6 of the Nursing Homes Registration Act, 1927, viz :—Northampton General Hospital, Margaret Spencer Convalescent Home, Manfield Orthopædic Hospital, John Greenwood Shipman Convalescent Home, and the Nursing Home at Bethany Homesteads.

It was not thought necessary to reprint the list of Local Acts, General Adoptive Acts, and Bye-laws relating to public health in force in the Borough, which appeared on pages 14 to 16 of last year's report. Legislation  
in Force

To bring the list up to date, The Northampton (Scarletwell Street) Housing Confirmation Order, 1933, and The Northampton (Bath Street) Housing Confirmation Order, 1933, require to be added to the Local Acts and Orders and The Northampton (Grafton Street) Housing Confirmation Order, 1931, deleted. There is one addition to the list of Bye-laws, viz :—Pleasure Grounds, etc. (1933).

A description of the provision made for blind persons under the Blind Persons Act, 1920, was given in my report for 1931, pages 17 and 18. The Act is administered by the Blind Persons Committee, consisting of His Worship the Mayor and twelve members, eight being members of the Borough Council and four co-opted. At the end of 1933, there were 161 persons whose homes are in the Town certified as blind within the meaning of the Act. Of these :— Blind  
Persons

5 were at St. Dunstan's ;  
 2 were training at institutions ;  
 1 was in a residential home ;  
 4 were in the County Mental Hospital ;  
 5 were in the Public Assistance Institution ;  
 3 were children at school ;  
 22 were employed in the Workshops, Gray Street (17 males  
 and 5 females) ;  
 3 were employed as homeworkers ;  
 4 were employed elsewhere ; and  
 112 were classified as unemployable and were living at home  
 or in lodgings.

No action was taken under Section 66 of the Public Health Act, 1925, for the prevention of blindness or for the treatment of persons suffering from any disease or injury to the eyes. These are all catered for at the special department at the General Hospital.

School  
 Medical  
 Service

As mentioned in previous reports, the Medical Officer of Health, acting as School Medical Officer in an administrative capacity, keeps the Public Health and School Medical Departments in close touch with each other. Dr. Mason carried out the medical inspection of school children without any outside help, and if it had not been for his own illness at the beginning of the year he would have been able to complete the inspections according to the Board of Education's requirements. As it was, one school was not inspected.

There was only one change in the staff at the School Clinic, Miss C. M. Finnemore, the Assistant School Dentist, resigned and was succeeded on 1st December by Mr. James Philip Wilson, L.D.S.R.C.S. Eng. The work of the Clinic proceeded smoothly throughout the twelve months.

The whole-time staff employed on school medical work during the year was one medical officer designated Assistant School Medical Officer, two dentists, three nurses, and four clerks. One ophthalmic surgeon and a radiologist are employed part-time and an ear, nose, and throat specialist is engaged for the removal of tonsils and adenoids.

The average number of scholars on the registers was 12,813, the average attendance being 11,871 (92.6 per cent.).

The annual report of the School Medical Officer, prepared according to the requirements of the Board of Education for the Education Committee, is published separately and gives details of the work performed by the school medical service.

(See also " Schools," page 20).

### III.—SANITARY CIRCUMSTANCES.

Water

The sources of the Borough water supply were given in my report for 1930. Early in 1933, a communication was

received from the Ministry of Health regarding the reports on the bacteriological examination of the Town's water, which eventually led up to a meeting at the Ministry on 30th March for discussion of the whole subject, in which F. R. Seymour, Esq., M.D., one of the Minister's Inspectors, who had visited the waterworks in 1932, Professor R. Tanner Hewlett the Bacteriologist, the Water Engineer, and the Medical Officer of Health took part. It was suggested that Professor Hewlett should make an inspection of the gathering grounds and the waterworks at Ravensthorpe and the Billing Road Well. On 25th May, Professor Hewlett spent the day visiting Billing Road Well, the gathering grounds at Ravensthorpe and the villages thereon, along with the waterworks, and his report was received on 1st June. Since then regular samples of the Town water, taken from different points on the mains, have been forwarded to Professor Hewlett for examination and his reports go to shew that the water reaches a high standard of purity, in fact "excellent."

During the latter part of the year, owing to the long-continued drought, it was not the quality of the water but the quantity in store in the reservoir which gave rise to anxiety. This was daily becoming less in spite of what is normally the rainy season being well advanced. So urgent had the question of the water supply become, owing to the continued absence of rain, that a special meeting of the Town Council was held on 18th December to receive a report from the Water Engineer on the advisability of at once undertaking works to supplement the Ravensthorpe supply. Mr. Tomlinson proposed the taking of water from the river gravel on land owned by the Corporation at Boughton Crossing and Merry Tom and the erection of pressure filters with chlorination and de-chlorination plants, pumps, etc., and to put the additional supply into the main as it passes Boughton Crossing on the way from Ravensthorpe to the Town, as was done in 1922. Work was commenced immediately, and on 24th January, 1934, use was made of this subsidiary supply to the extent of about 400,000 gallons per day. It will be remembered that a somewhat similar procedure was followed during the prolonged drought of 1921-1922, but on that occasion filtration was not resorted to, owing to circumstances which need not be detailed here.

Altogether, twenty samples of Town water were submitted for bacteriological examination and one for chemical analysis.

The daily consumption of water per head of the population for the year averaged 23.6 gallons.

Continued attention was paid to houses which were not provided with a separate internal water supply and sink and which were not likely to be scheduled under the five-year slum clearance plan. During the year, forty houses were dealt with,

Houses with  
Insufficient  
Water  
Supply

Polluted  
Wells

Water from a well supplying a small block of isolated cottages was reported by the Public Analyst and the Bacteriologist to be so polluted as to be unsafe for drinking purposes. Steps were taken to have the Town water laid on and the well closed.

Drainage  
and  
Sewerage

The reconstruction of the main soil and surface-water sewers and the sewage disposal works was completed in the autumn and the works were inspected by the Mayor and Town Council on 2nd November. As the existing sewers were too small to take the maximum discharge from the developed areas and some of the sewers were obsolete in design, it was decided to provide main soil and surface-water sewers of sufficient size to deal with the maximum discharges when the area is fully developed. The old sewage works on the Bedford Road had long been out of date.

The whole scheme comprises the following sections :—

1. St. James' and Far Cotton districts main drainage ;
2. St. James' sewage pumping station ;
3. New 5 ft. main outfall conduit, Northampton to Ecton ;
4. Main storm-water automatic pumping station, Bedford Road ;
5. New sewage purification works, Ecton.

The works undertaken are of such capacity as to avoid the surcharging of the sewers with the possibility of flooding ; in other words, drainage is provided for the undeveloped portions of the Borough and will be sufficient to deal with any developments which are likely to take place within the next twenty-five years.

The whole of the sewage is treated at Ecton on biological lines, though not on what are usually (though somewhat erroneously) called "filter beds." It is really treated by a process which was formerly called "intermittent downward filtration," that is, after tank treatment the sewage is run on to a portion of the land previously ploughed to receive it and allowed to soak in for a given period, then run on to another prepared portion of land. While one portion of the land is resting another part is being treated with sewage. The effluent, *i.e.*, the sewage after it has been acted on by bacteria, is allowed to flow into the River Nene, but in order that it shall come up to the necessary standard of purity it is under daily examination by the Resident Analytical Chemist. One sometimes hears of effluent being so clear that people say they can drink it. Nothing could be more foolish, for though it may be clear to the eye it is teeming with sewage organisms, because no attempt has been made to eliminate them, in fact the whole process consists in subjecting the raw sewage to bacterial action in order to break it up into simpler chemical bodies. Filtration, on the other hand, as applied to public water supplies, involves not only clarification but the removal of bacteria.

Since the abandonment of farming at Ecton, the system of sewage purification has been entirely re-organised. The whole of the land, 442 acres in extent, has been divided into sections and the sewage, as previously stated, is applied to each section alternately in accordance with an established routine providing for proper aeration of the soil. The cost of working the areas has been reduced from £6,700 in the last year of farming to £3,512 in 1932-1933, which includes the cost of road making and adapting the land to the new system, and it is estimated the annual cost of upkeep will average approximately £2,600 when the various improvement works, roads, etc., are completed.

The cost of the whole undertaking, which was carried out by contract, is given as:—

St. James' Scheme .....	£44,618
Far Cotton Scheme .....	£20,004
Main Outfall Conduit Scheme .....	£86,921
New Purification Works .....	£26,128
	<hr/>
Total Cost .....	£177,671

In addition to this figure, there is the cost of easements and miscellaneous expenditure, which will bring the amount to approximately £200,168 inclusive.

The work was planned and carried out by Alfred Fidler, Esq., M. Inst. C.E., who retired on 31st December, 1933, after occupying the position of Borough Engineer and Surveyor for thirty-one years.

In addition to the above, the Borough Engineer has kindly supplied the following information regarding other sewerage work carried out by, or under the supervision of, his Department during the year:—

CONTRACT WORKS.

Kenmuir Avenue Sewer ;  
 Dallington and New Duston Sewer ;  
 Spinney Hill ;  
 Far Cotton Surface-water Sewer ;  
 Main Outfall Sewer and Pumping Station ;  
 Extension of Main Sewer and Construction of New Works ;  
 Kingsthorpe Main Drainage.

DEPARTMENTAL WORKS—DIRECT LABOUR.

Church Way ;  
 Campbell Square ;  
 St. David's Housing Estate ;  
 Abington Housing Estate.

In spite of the dry season and the low state of the river, Rivers and Streams  
 no action was necessary regarding pollution.

Closet  
Accommo-  
dation

One pail closet was converted to the water-carried system during the year. As intimated in my last report, a number of these conversions, especially in the village of Dallington, will have to be made in the near future, but this work could not be commenced up to the end of the year owing to the absence of a sufficient water supply in some instances and the want of a sewer within the requisite distance in other cases. As mentioned under the heading "Drainage and Sewerage," a sewer was laid from St. James' Park Road through Dallington village to Duston and this, together with an extension of the Borough water-main, will enable all the houses in Dallington to be put on the water-carried system in the near future.

Public  
Cleansing

The methods of scavenging in use in the Borough were explained on pages 23 and 24 of my report for 1930 and are performed satisfactorily, without any reasonable ground for complaint.

Sanitary  
Inspection

The work of the inspectors is summarised in Table 9 (page 80) and Tables 10 and 11 give further particulars in connection with house drainage. During the year, 2,064 houses were inspected, of which 1,398 were found to require some attention, with the result that 1,051 were repaired, 872 were cleansed and whitewashed, while others were dealt with as the conditions required, details of which appear in Table 9.

Smoke  
Abatement

Though smoke from factory chimneys in Northampton is not a common source of nuisance, we do occasionally receive complaints concerning smoke. One or two of the chimneys are in rather low-lying situations and if the stoking in connection with these is not carefully attended to annoyance may be caused. One firm, in order to prevent nuisance as far as possible, has consulted specialists in smoke consumption and is spending a considerable sum of money on new plant.

## Schools

The Medical Officer of Health, the Assistant School Medical Officer, and the sanitary inspectors have kept the sanitary conditions of the schools under observation during the year. With the continued fall in the birth-rate and the moving of families from the centre to the outskirts of the Town, pressure is becoming less on the old out-of-date schools and more heavy on the new outlying ones.

The year under review has been very free from epidemics of infectious disease, especially as regards diphtheria, a subject which is dealt with elsewhere.

## Canal Boats

The Annual Report under the Canal Boats Acts was dispatched to the Ministry of Health before the appointed date, viz :—21st January. Mr. Frisby, the Canal Boats Inspector, inspected thirty-seven boats, which were registered to carry 120½

adults. The actual number of occupants carried was seventy-four adults and twenty-seven children. No case of infectious disease occurred in connection with any boat. The number of boats on the register believed to be in use is three. There is no sign of increase of traffic on the canal running to Northampton.

The number of common lodging houses on the register remains the same as for some years past, viz :—four, with accommodation for 148 men. No inconvenience is felt by the lack of accommodation in these houses for females, who find lodging in the casual wards of the Institution, Wellingborough Road. All the premises were visited regularly by Inspector Walker and from time to time by the Chief Sanitary Inspector and the Medical Officer of Health. Any defects found were remedied without legal proceedings.

Common  
Lodging  
Houses

There are no houses let in lodgings in the Borough.

Table E, at the end of this volume, gives particulars of the work done under the Factory and Workshop Act, 1901, set out in the prescribed form. The general scheme under which the Act is worked is that H.M. Inspector of Factories supervises the sanitary condition of all textile and non-textile factories, leaving the sanitary authority to take charge of workshops, workplaces, and domestic factories. If the Factory Inspector finds an insanitary condition in a factory he refers the matter to the local sanitary authority for necessary action.

Factories  
and  
Workshops

No applications to commence offensive trades were received and the number of names on the register remains as for several years past, viz :—two tanners and three tripe boilers. These trades are carried on without causing any nuisance. The premises were kept under observation, but no infringements of the bye-laws were observed.

Offensive  
Trades

We have only one shack dweller in the Borough and he is kept under observation by the district sanitary inspector.

Tents, Vans,  
Sheds, etc.

Particulars of these, excepting the above-mentioned, will be found in Section V. (pages 28 to 36) dealing with food, as they comprise cowsheds, dairies, bakehouses, slaughterhouses, ice cream shops, etc.

Premises  
Controlled  
by Bye-laws,  
etc.

Little rag flock is used in Northampton in the manufacture of low-priced furniture, furniture making not being one of the staple industries of the Town. The premises where rag flock is used were visited by the Chief Sanitary Inspector on fourteen occasions for the purpose of examining the invoices to ascertain if they contained the guarantee that the flock reached the standard prescribed by the Acts, and as the guarantees were furnished no samples were taken.

Rag Flock  
Acts, 1911  
and 1928



Rat  
Repression

We are still of the opinion that by making every week a "rat week" we do more effective work than by one spectacular effort for one week in the year. The Borough Rat-catcher, working under the supervision of the Chief Sanitary Inspector in his capacity as Rat Officer, is at the service of any ratepayer requiring his help and advice. The number of these rodents accounted for last year was 3,246.

#### IV.—HOUSING.

Council  
Houses

The Borough Engineer has supplied the Department with particulars of the progress made under the municipal housing schemes :—

Number of Council houses completed during 1933 ..	210
Total number of houses erected by the Corporation up to 31st December, 1933 .....	3,191

Other New  
Buildings

In addition to the above, the following private building operations, plans for which had been approved by the Highways Committee, were carried out during the year :—

New houses (private enterprise) .....	367
Additions to dwellinghouses .....	31
Shops and houses .....	7
Alterations to shops .....	12
Shop-fronts to dwellinghouses .....	11
New shops and offices .....	5
New factories and warehouses .....	4
Extensions to factories .....	5
New cowsheds .....	1
Additions to places of worship .....	3
Extensions to hospital .....	1
Alterations and additions to licensed premises ....	12
Additions to golf club house .....	1
Garages (service) .....	8
Motor houses .....	64
Electric light sub-stations .....	5
New water closets .....	14
Temporarily licensed buildings .....	12

Housing  
Acts

Tables 12 and 13 (pages 83 to 86) contain particulars of houses represented in 1933 and previous years under the Housing Acts, 1909-1930. It will be seen that 128 dwelling-houses were represented by the Medical Officer of Health during the year, under Section 19 of the Housing Act, 1930, because they seemed to be unfit for human habitation and were not capable at a reasonable expense of being rendered so fit. 105 Demolition Orders were made under the 1930 Act and at the end of the year the Public Health Committee had under consideration the making of Demolition Orders in four-

teen other instances. Fifteen houses were demolished in pursuance of Demolition Orders. When the year closed, thirty-nine houses on which Demolition Orders had been made (though not in all cases operative) were still occupied; the inhabitants of these were re-housed, however, early in 1934.

A Closing Order under Section 20 of the Housing Act, 1930, was made in one instance.

The revised slum clearance programme and the progress made with the Clearance Areas are mentioned under the heading "Slum Clearance" which follows.

Two houses were repaired under Section 17 of the Housing Act, 1930. Pressure had to be brought to bear on the owner and the work was not completed until 1934.

The staff made 1,458 visits of house-to-house inspection under the Housing Consolidated Regulations, 1925 and 1932, and found defects in 1,083, chiefly want of cleanliness and repairs.

A five-year programme of slum clearance under the Housing Act, 1930, was adopted by the Town Council in 1930 and submitted to the Ministry, and the position at the end of 1933 was as follows:—

#### NO. 1 CLEARANCE AREA (GRAFTON STREET).

All the houses were demolished before the end of 1932, the Corporation providing forty-five houses for displaced tenants. A considerable portion of the site is now covered by new works, which were completed in 1933. The upper portion of Grafton Street has been widened and is a great improvement to this part of the Town.

#### NO. 2 CLEARANCE AREA (SCARLETTWELL STREET) AND NO. 2A (BATH STREET AREA).

Compulsory Purchase Orders for the compulsory acquisition of land in and adjoining the Clearance Areas were confirmed by the Minister of Health on 18th April, 1933. There were amendments to the original proposals (a factory and two empty houses were excluded).

Area No. 2 included a site about one acre in extent, on which stood thirty-eight houses, of which thirty-seven were inhabited by 153 persons (at a re-count on 10th March, 1933). The remaining house was derelict. No. 2A Area included three dwellinghouses, occupied by three families comprising eleven persons. On lands outside the Clearance Areas were nine houses occupied by thirty-two persons, also two houses in Bath Terrace already closed and a plot of land on which formerly stood two houses demolished in 1929 under the Housing Acts.

By the end of 1933, the Corporation had re-housed twenty-one families, four had found their own accommodation (in one case the house was demolished afterwards); the derelict

house and the two houses in Bath Terrace, of course, remained uninhabited. This left twenty-four houses still occupied, the tenants of which the Corporation hoped to re-house during the early part of 1934.

#### NO. 3 CLEARANCE AREAS (CASTLE STREET, ETC.).

Areas Nos. 3A, 3B, 3C, 3D, and 3E were represented by the Medical Officer of Health under date 18th November, 1933 (*see* particulars of areas below) and brought to the Housing and Town Planning Committee on 20th November. On 4th December, the Town Council, in pursuance of Section 1 of the Housing Act, 1930, declared the areas as Clearance Areas. On 1st January, 1934, the Town Council decided to deal with them partly by Clearance Orders and partly by Compulsory Purchase Orders, and it was resolved that the Common Seal be affixed to the Orders and any other relevant documents and that the Town Clerk publish the Orders, serve the prescribed notices and submit the respective Orders to the Ministry of Health for confirmation and take all other necessary steps in the matter.

The Areas were as follow :—

	Houses to be Demolished.	Persons to be Displaced.
Area No. 3A .....	2	7
*Area No. 3B .....	5	23
Area No. 3C .....	12	59
Area No. 3D .....	20	71
Area No. 3E .....	4	12
	—	—
Totals .....	43	172
	—	—

\*Area No. 3B also included a common lodging house, with accommodation for thirty-one lodgers.

One of the houses in Area No. 3D was derelict, so that the forty-two occupied houses were inhabited by 172 persons (104 adults and 68 children)—an average of 4.1 persons per house.

#### INDIVIDUAL UNFIT HOUSES.

The original proposals in 1930 allowed for re-housing persons from 200 individual unfit houses within five years. The Medical Officer of Health represented sixteen dwellinghouses in the latter part of 1930 under Section 19 of the Housing Act, 1930, thirteen in 1931, and nineteen in 1932, a total of forty-eight.

In 1933, however, this work was expedited and 128 unfit houses were represented (*see* paragraph on "Housing Acts," page 22). These 128 houses in 1933 form part of the 168 included in the new five-year programme, details of which follow.

Notwithstanding the progress made under this five-year plan, the Ministry in April required a new five-year programme

of slum clearance to be prepared and forwarded to them before 30th September, 1933. The new programme was presented to the Public Health Committee on 12th July and forwarded to the Ministry before the appointed date. The foundation of this new five-year plan rests upon the uncompleted portion of the old one put forward in 1930, as the schemes then suggested are still, in my opinion, those of primary importance. To this were added groups of unfit houses not forming any large area, so that the new five-year programme comprised :—

	Houses to be Demolished.	Persons to be Displaced.
The Northampton Housing Confirmation Orders, 1933 (Scarletwell Street and Bath Street—Areas 2 and 2A) .....	50	196
Castle Street, etc. Areas (No. 3) .....	46	197
St. Andrew's Street, etc. Areas (No. 4) .....	25	101
Group I. ....	44	153
Group II. ....	40	136
Group III. ....	51	229
Group IV. ....	38	144
Group V. ....	26	74
Group VI. ....	23	67
Group VII. ....	12	38
Totals .....	<u>355</u>	<u>1,335</u>

To the above Clearance Areas were added an Improvement Area and 168 individual unfit houses :—

	Houses to be Demolished.	Persons to be Displaced.
St. Mary's Street, etc. Improvement Area ....	39	165
Individual Unfit Houses ..	168	578

The re-housing proposals drawn up by the Housing Committee allowed for the provision of 472 dwellings for the 2,078 persons to be displaced.

After the above had been submitted to the Ministry, the Housing Committee asked the Public Health Committee if the work could be expedited so as to complete the proposed five years' plan in from two to two and a half years. This was agreed to on condition that an additional sanitary inspector was appointed. This was sanctioned by the Town Council on 1st January, 1934, and it is hoped to be able to represent the whole of the areas by the middle of 1936.

Public  
Health  
Acts

One house was certified by the Medical Officer of Health under the terms of Section 46 of the Public Health Act, 1875, as being in such a filthy or unwholesome condition that the health of the occupants was affected or endangered thereby, and that cleansing and whitewashing were urgently required. A notice was served and the work done.

Table 9 (page 80) gives particulars of other work carried out under these Acts.

Prose-  
cutions

It was necessary to take legal action against an owner for failing to abate nuisances and to comply with notices served upon him under the Public Health Act, 1875, to do necessary work to drains at two houses. Defendant was fined £2 on the summonses respecting the nuisances and £12 regarding the drains.

For prosecutions under the Food and Drugs (Adulteration) Act, 1928, *see* page 34; under the Slaughterhouse Bye-laws, *see* page 33; and under the Milk and Dairies (Amendment) Act, 1922, *see* page 31.

Over-  
crowding

Overcrowding is not a prominent feature in Northampton, even in the poorer quarters, and the cases found were dealt with without recourse to legal action. The few cases which come to the notice of the Department are not confined to what are generally called the "slum" areas. Like many other terms, "overcrowding" can be interpreted in various ways, for instance, it can be measured according to cubic feet of space allowed to each person in the sleeping apartments, or premises may be said to be overcrowded if there cannot be in the sleeping quarters separation of the sexes over ten years of age. Again, another standard is that of the Registrar-General, who considers that overcrowding exists where people live more than two to a room no matter what its size. From the 1921 Census we find that 2.71 per cent. of the population in private families in Northampton was living more than two persons to a room, and by 1931 the percentage had fallen to 2.00.

Sufficiency  
of Supply  
of Houses

In spite of the fact that the Corporation has built 3,191 houses since the war and that private enterprise has been responsible for providing at least two thousand more within the present Borough boundaries, and bearing in mind the small increase of the population, there is still a call for more houses, so that at the end of 1933 it is estimated that the Housing Committee had seventeen or eighteen hundred applicants on the waiting list, over six hundred of these being already tenants of houses.

If the population has not grown much since the Census of 1921, the number of families has increased out of proportion to the number of inhabitants of the Borough (*see* Table 5, page 77). The housing need is often estimated in figures which vary

according to the standard or political object of the estimator. The excess of families to occupied houses in Northampton in the 1931 Census was 1,825, the families being 24,966 and the occupied dwellings 23,141. But a family from the Registrar-General's point of view is "any person or group of persons in separate occupation of any premises or parts of premises"—a lodger being so treated when boarded separately. At the last Census there were 1,440 of these one-person families, 720 of them occupying three rooms or less. Then the question arises—is it necessary for every such group, however small, to have a separate dwelling? Upon the answer to that question depends the answer as to the sufficiency of supply of houses. At present the chief energies of the Housing Committee, owing to withdrawal of the subsidies on all houses except those built for the re-housing of people from slum clearance areas, are being directed to slum clearance, but a considerable amount of building is taking place in the Town by private builders, a proportion, though not so large as formerly, of these houses being for sale.

The particulars for 1933 are set out below in the form required by the Ministry of Health :— Housing  
Statistics

1.—*Inspection of Dwellinghouses.*

(1) (a) Total number of dwellinghouses inspected for housing defects (under Public Health or Housing Acts) .....	2,064
(b) Number of inspections made for the purpose .....	2,064
(2) (a) Number of dwellinghouses (included under sub-head (1) above) inspected and recorded under the Housing Consolidated Regulations, 1925 and 1932 .....	1,458
(b) Number of inspections made for the purpose .....	1,458
(3) Number of dwellinghouses found to be in a state so dangerous or injurious to health as to be unfit for human habitation .....	128
(4) Number of dwellinghouses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation .....	1,270

2.—*Remedy of Defects without Service of Formal Notices.*

Number of defective dwellinghouses rendered fit in consequence of informal action by the Local Authority or their officers .....	401
--	-----

3.—*Action under Statutory Powers.*

A.—Proceedings under Sections 17, 18, and 23 of the Housing Act, 1930 :—

(1) Number of dwellinghouses in respect of which notices were served requiring repairs .....	2
--	---

(2) Number of dwellinghouses rendered fit after service of formal notices :—	
(a) By owners .....	2
(b) By Local Authority in default of owners .....	0
<b>B.—Proceedings under Public Health Acts :—</b>	
(1) Number of dwellinghouses in respect of which notices were served requiring defects to be remedied .....	841
(2) Number of dwellinghouses in which defects were remedied after service of formal notices :—	
(a) By owners .....	806
(b) By Local Authority in default of owners .....	0
<b>C.—Proceedings under Sections 19 and 21 of the Housing Act, 1930 :—</b>	
(1) Number of dwellinghouses in respect of which Demolition Orders were made .....	105
(2) Number of dwellinghouses demolished in pursuance of Demolition Orders .....	15
<b>D.—Proceedings under Section 20 of the Housing Act, 1930 :—</b>	
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made .....	1
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit .....	0

Other  
Housing  
Matters

Reference should be made to Section III. "Sanitary Circumstances" for other information bearing on housing.

The estimated number of inhabited houses in the Borough on 31st December, 1933, was 26,150.

#### V.—INSPECTION AND SUPERVISION OF FOOD.

Milk  
Supply

The number of milch cows housed within the Borough does not vary much from year to year ; it was 200 at the end of 1933. The premises of registered producers were kept under close supervision by the district sanitary inspectors, with occasional visits from the Chief Inspector and Medical Officer of Health.

From inquiries made recently we have reason to believe that no material change has taken place since my last report regarding the percentage of "Pasteurised" milk consumed in the Borough ; it remains about fifty per cent. of the whole quantity consumed, which is considerably below the figure

for London and some of the other great cities. This is probably due to the small size of the town and the consequent ease with which outside producers and retailers can drive into the Borough and keep in personal touch with their customers or clients. Sentiment probably plays as big a part in the milk trade as in any other business. The good lady of the house says, "Oh, I shall have "Pasteurised" milk as soon as Mr. — gives up, but of course I would not like to change my milkman." The price of "Grade A (Tuberculin Tested)" milk remains too high for its use or adoption by the great mass of the people.

The report on the chemical examination of milk by the Public Analyst will be found on page 34 under the heading dealing with the Food and Drugs (Adulteration) Act, 1928, while on page 31 the results of bacteriological examination of designated and ordinary milks are summarised.

The scheme for supplying "Pasteurised" milk in bottles during the forenoon to school children, at the price of one penny per third of a pint, continues and the amount supplied seems to have been fairly regular throughout the year, any falling off which may have occurred from time to time cannot be attributed to seasonal changes, as there were actually more bottles of milk consumed during the week ended 14th January, 1933, than during the week ended 14th July. All the milk is not paid for, some being issued free to children who need it but whose parents are considered to be financially unable to pay, according to a scale laid down by the Education Committee. The number of children on the "free" list varies somewhat, reaching at odd times almost twenty per cent. of the whole number taking the milk. The necessary inquiries into income and the general management of the scheme throws a large amount of work on the Education Office. The highest number of bottles of milk consumed in any one full week was 14,957 during the week ended 18th March and the lowest was 12,387 during the week ended 8th September. The greatest number of children taking milk was 3,583 for the week ended 11th March and the smallest number 3,020 for the week ended 15th September. The scheme is not entirely self-supporting.

Milk in  
Schools

199 cows were examined during April and May, and 200 in December, 1933, by Major J. J. Dunlop, M.R.C.V.S., D.V.S.M., the Veterinary Inspector appointed by the Local Authority under the Order, with a view to ascertaining if any of them were suffering from tuberculosis. One cow was found to be so affected at each of the examinations. Both were slaughtered under the Tuberculosis Order.

Tuberculosis  
Order, 1925

Forty-four samples of milk (forty primary and four secondary or "follow-up") were examined by inoculation tests for the presence of tubercle bacilli, of which one primary and two secondary samples were found to be positive. These



three specimens of milk were from the same vendor, who received milk from three out-of-town farms, hence the necessity for taking "follow-up" samples to discover which farm was supplying the infected milk. Immediately on receipt of the first positive report we informed the County Public Health Authorities, and later, having traced the infecting farm, we again communicated with them. In the meantime, their Veterinary Surgeon had discovered a cow, at what proved to be the infected farm, which was giving milk containing tubercle bacilli. This animal was destroyed under the Order. Subsequent samples of milk from this farm were reported to be free from tubercle bacilli.

Much has appeared in the press (both lay and medical) lately regarding the amount of milk going daily into London infected with tubercle bacilli. Much more harm would be done by this milk if it were not nearly all (over ninety per cent.) pasteurised before consumption. At present, and for many years to come, the only safeguard will be pasteurisation properly carried out.

Dairies,  
Cowsheds,  
and  
Milkshops

At the end of December, twenty cowkeepers, 166 retail dairymen, and seven wholesalers were on the registers. Twenty-five of these retailers live outside the Borough and their premises were inspected by officers of the rural sanitary authorities and passed as fit for the purpose before they were placed on our register. In addition, 179 persons are allowed to sell milk in bottles only, on condition the seal of the bottle is intact when it leaves the premises, in other words the contents of the bottle must not be emptied into a jug or other receptacle in the shop. These premises are places where the conditions are not considered suitable for the sale of loose milk. Thirty-two certificates of registration were issued, twenty-two being transfers. There is a considerable amount of sale or transfer of milk businesses. The inspectors paid 928 visits to registered premises, during which they found defects in twenty-four instances; these were remedied.

Sterilised  
Milk

132 retailers and three wholesalers are permitted to distribute this class of milk.

Milk  
(Special  
Designations)  
Order, 1923

At the end of 1933, the following licences under this Order were in operation:—

Dealers' licences to use the designation "Grade A (Tuberculin Tested)":—

(a) bottling establishments ..... 3  
(b) shops ..... 17

Dealers' licences to use the designation "Pasteurised":—

(a) pasteurising establishments ..... 2  
(b) shops ..... 2

These licences were held by nineteen dairymen.

There is still not sufficient demand for "Certified" milk in the Borough to induce any dealer to apply for a licence to sell this grade of milk.

Ninety samples of milk were taken for bacteriological examination, *i.e.*, bacterial count, viz:—fifteen "Grade A (Tuberculin Tested)," sixteen "Pasteurised" sold as such, four "Pasteurised" sold in bottles as ordinary milk, four "Pasteurised" sold loose as ordinary, fifteen ordinary milk in bottles, thirty-three ordinary loose milk purchased in the street or from a dairy, and three sterilised milk.

One of the designated milks failed to reach the standard prescribed in the Order, viz:—specimen No. 313, a "Grade A (Tuberculin Tested)" milk, which was found to contain coliform organisms in 0.01 c.c., whereas they should have been absent from that amount. In spite of this default the number of organisms per c.c. in this sample was only 1,400. The average bacterial count of the fifteen "Grade A (Tuberculin Tested)" samples was 1,001, the highest being 3,200 and the lowest 240 per c.c. All the sixteen "Pasteurised" milks complied with the requirements of the Order, most of them being again well within the limit, the average number of organisms per c.c. being 13,472, the highest 94,000 and the lowest 650. Three "Pasteurised" milks had coliform organisms in 0.01 c.c.

The eight "Pasteurised" sold as ordinary milk contained an average of 18,585 bacteria per c.c. As regards coliform organisms, the worst sample shewed these to be present in 0.001 c.c. The average count of the forty-eight ordinary milks was 96,246 per c.c., the highest 1,280,000 and the lowest 280. From the coliform standard the worst contained these organisms in 0.0001 c.c. The three sterilised samples were in fact sterile, as they were found to be free from bacteria.

I think these figures must be considered very good and as shewing the care with which the bulk of the Town's milk is produced and distributed.

All the thirty-one samples of designated milk were also sent to the Public Analyst for chemical examination and were reported to be genuine. The average contents were as follow:—

	MILK-FAT.	NON-FATTY SOLIDS.
"Grade A (Tuberculin Tested)" (fifteen samples)	3.97 per cent.	8.99 per cent.
"Pasteurised" (sixteen samples)	3.51 per cent.	8.87 per cent.

Five retailers were proceeded against at the local police court for offences against the Milk and Dairies (Amendment) Act, 1922, by using the designation "Pasteurised" not in accordance with a licence granted by the Local Authority. One of the defendants was also summoned for selling milk from

a car and a bicycle on which his name and address were not conspicuously displayed, and another for selling from a bicycle only not so marked. One was also summoned for failing to cause a bottle of milk to be filled and closed on registered premises.

With regard to the offence of using the designation "Pasteurised," which they were not entitled to, defendants were selling raw milk in bottles marked "Pasteurised" which were not the property of the vendor, but belonged to a firm in the Town holding a pasteurising licence. One defendant was fined £3 on summonses relating to the sale of milk and 10s. for not having his name and address on the car. The summonses relating to bicycles were withdrawn. Another defendant was fined £1 10s. on the summons relating to the sale of raw milk in a bottle marked "Pasteurised." The third defendant was fined £1 on the first charge and 10s. on the second. The fourth vendor was fined £3 2s. inclusive. In the fifth case defendant was fined 15s.

A roundsman working for one of the above was fined 10s. for removing the disc used for sealing a bottle of milk after it had left the registered premises and before it was delivered to the consumer.

At the same court, one of the above dairymen was also fined £5 for selling milk in bottles bearing the name of another firm. This action was taken by Milk Vessels Recovery, Ltd.

#### Food Inspection

No change was made in the arrangements for food inspection, which include the inspection of meat, slaughterhouses, shops, stalls, and places where food is prepared or sold, which have been found to work satisfactorily in the past. Tables 14, 15, and 16 (pages 87 and 88) give particulars of food condemned and are summaries of reports submitted by the Medical Officer of Health at the monthly meetings of the Public Health Committee.

#### Grading and Marking of Foodstuffs

The inspectors continue to carry out the duties imposed by the Merchandise Marks Act, 1926, and the Agricultural Produce (Grading and Marking) Act, 1928.

#### Slaughter- houses

Fifty-four slaughterhouses were on the register at the end of the year. Forty-six of these were registered or licensed before the adoption of Part III. of the Public Health Acts Amendment Act, 1890. The remaining eight are on licences renewable each January. Though the number of private slaughterhouses and the absence of a public abattoir increases the work, I do not think the standard of inspection is lowered thereby.

The inspectors paid 4,876 visits of inspection during the year, 4,530 during actual slaughtering. Forty-nine infringe-

ments of the bye-laws were discovered, chiefly failure to white-wash at the proper time.

A butcher was prosecuted for slaughtering a pig before it had been stunned with a mechanically operated instrument. The defendant was fined £2.

The Slaughter of Animals Act, 1933, came into force on 1st January, 1934. The chief provisions of the Act are, first, it requires that animals in slaughterhouses and knackers' yards are to be stunned before slaughter and that the stunning shall be by a mechanically operated instrument, which is defined so as to include an electrical instrument. This requirement, however, will not apply to sheep unless the local authority apply it by resolution, while goats can be excluded by resolution. The requirement applies to pigs.

Slaughter of  
Animals Act,  
1933

Secondly, the Act places on local authorities the new duty of licensing slaughtermen. A licence, once granted, is available throughout England and Wales. No licence is to be granted to any person under eighteen years of age and a licence shall be in force for a period not exceeding three years. Any licence may be revoked if the local authority is satisfied the holder is no longer a fit and proper person to hold it. A fee not exceeding two shillings may be charged by the local authority for each such licence and a fee not exceeding one shilling for every renewal thereof.

The penalty for slaughtering or stunning an animal contrary to the Act is a fine not exceeding ten pounds for the first offence, or, on a second conviction, not exceeding twenty pounds: provided that a person shall not be liable for any such contravention if he proves that by reason of an accident or other emergency the contravention was necessary in order to prevent suffering.

Due notice of the coming into force of the Act was given to butchers, and as a result 186 licences to slaughter or stun animals were issued to slaughtermen in December to operate for three years commencing 1st January, 1934. The fee charged was one shilling per licence.

These Regulations, amongst other things, impose on butchers the obligation of giving notice to local authorities of intention to slaughter out of the usual hours. One of the objects of the Regulations is to enable meat inspectors to keep a closer observation on slaughtered animals than would be possible without them. Three hours' notice must be given, except in case of accident. 446 such notices were received during the year. No prosecutions were necessary, letters being sent by the Department where any breach of the Regulations was discovered, and these were effective in all cases.

Public  
Health  
(Meat)  
Regulations  
1924

Disease in  
Meat

Table 17 (page 88) gives particulars regarding tuberculosis found in slaughtered animals. As one has remarked in previous reports, tuberculosis is in this country by far the most common disease for which carcasses, or parts of carcasses, of slaughtered animals are condemned. This is clearly shewn by the fact that 51·1 per cent. of whole and 94·5 per cent. of part carcasses of beef and pork condemned were surrendered on account of being infected with tuberculosis. 224 part carcasses of pork were condemned by the inspectors and 220 of these were affected with tuberculosis.

Section 117  
of the Public  
Health Act,  
1875

One seizure of unsound food was made by the inspector. A carcase of pork, together with the offal belonging to it, both extensively affected with tuberculosis, were found in a slaughterhouse and were seized and condemned by a magistrate. The owner of the carcase had not given notice of its condition to the local authority, as required by Section 9 of the Public Health (Meat) Regulations, 1924. The matter was reported to the Public Health Committee, who were advised that Section 9 of the Regulations did not apply where the slaughter takes place in a slaughterhouse under the management of a local authority, therefore no legal action was taken. The owner declared that he was unaware of the fact that notice of the condition of the carcase should have been given to the local authority and further stated he left such matters to the man he had employed as a slaughterman. (See Table 15, page 87).

## Bakehouses

At the end of December, 102 bakehouses were in use. The inspectors paid 381 visits of inspection and found forty-three infringements of the Act, none being serious. The chief delinquency was failure to whitewash every six months. All these defaults were rectified without legal proceedings.

Other  
Premises  
dealing  
with Food

Under this heading come premises where food is dealt with, other than those already mentioned, including those connected with the manufacture and storage of potted meats, jams, sweets, ice cream, etc. 1,391 visits of inspection were paid to these premises.

Food  
Poisoning

No case of suspected food poisoning came to the notice of the Department.

Food and  
Drugs  
(Adultera-  
tion) Act,  
1928

338 samples (including 154 informal) were taken under this Act by the sanitary inspectors and submitted to the Public Analyst. The nature of these samples is given in detail in Table 18 (page 89). Thirty-five (10·4 per cent.) were found to be not genuine. Fourteen of these having been taken informally, no legal action could be taken regarding them. The twenty-one defaulting official samples (twenty milks and one jam) were dealt with as shewn below :—

No. 11 was 8.7 per cent. deficient in milk-fat. On instructions from the Executive Committee of the Public Health Committee a warning letter was sent to the vendor.

No. 26 contained 3.3 per cent. of added water. Warned.

No. 36 (raspberry jam—full fruit standard) was found to be deficient in fruit to the extent of 34.0 per cent. A subsequent sample of the same make was taken informally and found to be genuine.

No. 74 contained 8.9 per cent. of added water. Warned.

No. 101 contained 6.0 per cent. of added water. Warned.

No. 114 was 3.7 per cent. deficient in milk-fat. Warned.

No. 116 was 10.7 per cent. deficient in milk-fat. Vendor produced a warranty. Two samples were taken informally from the producer; one was 4.0 per cent. deficient in milk-fat.

No. 118 was 5.3 per cent. deficient in milk-fat. Warned.

No. 126 contained 12.1 per cent. of added water. Proceedings were taken and the vendor was fined £2.

No. 140 was 4.7 per cent. deficient in milk-fat. Warned.

No. 141 was 3.3 per cent. deficient in milk-fat. Warned.

No. 150 was 5.0 per cent. deficient in milk-fat. Warned.

No. 165 was 29.7 per cent. deficient in milk-fat. The vendor was fined £1 10s.

No. 169 contained 8.2 per cent. of added water. Warned.

No. 208 was 13.7 per cent. deficient in milk-fat. The retailer gave statutory notice for samples to be procured from the producer at point of delivery. (See Nos. 211 and 212).

No. 211 contained 2.2 per cent. of added water and was 7.5 per cent. deficient in milk-fat, and No. 212 contained 6.6 per cent. of added water and was 7.9 per cent. deficient in milk-fat. Proceedings were taken, but the case was dismissed. (See No. 208 above).

No. 215 was 2.3 per cent. deficient in milk-fat. Warned.

No. 227 contained 3.6 per cent. of added water. Warned.

No. 229 was 15.0 per cent. deficient in milk-fat. Proceedings were taken and the vendor was fined £1.

No. 261 was 56.0 per cent. deficient in milk-fat. The vendor was fined £2.

All milks submitted to the Public Analyst were examined for the presence of preservatives, but none was detected.

The average fat content of the 195 samples of genuine milk was 3.62 per cent. and the non-fatty solids 8.87 per cent. Some of these were designated milks (see page 31).

Two samples of skim milk had fat contents of 0.27 and 0.40 per cent. respectively.

No legal proceedings were called for under the Public Health (Preservatives, etc., in Food) Regulations, 1925 to 1927, as all samples of milk examined by the Analyst were found to be free from preservatives. Preservatives, etc.

No action was taken under the Artificial Cream Act, 1929, the Public Health (Condensed Milk) Regulations, 1923 and 1927, or the Public Health (Dried Milk) Regulations, 1923 and 1927.

Chemical  
Work

All chemical analysis required by the Local Authority is performed by the Public Analyst to the Borough, Mr. A. Prideaux Davson, A.R.C.Sc.(Lond.), F.I.C., F.C.S., of Bermondsey.

Bacterio-  
logical  
Work

No bacteriological examination of food (other than milk) was carried out, as none was required. The examination of milk for bacterial count was performed at the Pathological Laboratory of the Northampton General Hospital, and for the presence of the tubercle bacillus at the Lister Institute of Preventive Medicine.

Nutrition

No work was done in connection with dissemination of knowledge regarding nutrition or the relative values of food, beyond that involved in carrying out the maternity and child welfare scheme.

## VI.—PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

“ Zymotic  
Deaths ”

During 1933, sixteen deaths were certified as due to the so-called “ zymotic diseases,” giving a “ zymotic death-rate ” of 0·17 per thousand living. Had it not been for an outbreak of enteric fever at the Mental Hospital, Duston, when eight Northampton patients died from typhoid, their deaths being credited to the Borough as “ inward transfers,” the “ zymotic death-rate ” would have been the lowest of which we have any record.

The deaths from these diseases are given below :—

	NUMBER OF DEATHS.	DEATH- RATES.
Diarrhœa (under two years) . . . .	4	0·04
Diphtheria . . . . .	1	0·01
Enteric Fever . . . . .	8	0·08
Measles . . . . .	0	0·00
Scarlet Fever . . . . .	0	0·00
Smallpox . . . . .	0	0·00
Whooping Cough . . . . .	3	0·03

Each of these diseases is dealt with separately in the next three or four pages of this report.

Measles  
and  
Whooping  
Cough

As mentioned in previous reports, these diseases not being notifiable under the Infectious Disease (Notification) Act, 1889, our knowledge of their incidence is not very precise, but from the weekly returns furnished by head teachers of public elementary

schools and information kindly supplied by Dr. Mason, the Assistant School Medical Officer, measles and whooping cough do not appear to have been at all prevalent ; in fact one might almost say measles, which is endemic in all large towns, was at its lowest ebb, the number of cases or suspected cases reported being only forty-one, of which eighteen occurred in December. No deaths were attributed to measles. The death-rate from this disease for England and Wales was 0.05. The last big outbreak of measles in Northampton was in 1915, when there were 140 deaths attributed to measles and its complications. There was a smaller outbreak in 1917, with forty deaths.

There were 111 cases or suspected cases of whooping cough reported on the school returns, with three deaths, giving a death-rate of 0.03, compared with 0.05 for the country.

We did not receive any request for cases of measles or whooping cough to be removed to the Infectious Diseases Hospital for treatment.

Four deaths of children under two years of age were attributed to these diseases, giving a death-rate of 3.5 per thousand live births registered, compared with 7.1 for England and Wales. Diarrhœa and Enteritis

The deaths from influenza (another non-notifiable disease), which were considerably higher than the average of recent years in 1932, were again high in 1933, forty-six being attributed to this cause, including seventeen which were certified as complicated by pneumonia. January, February, and March accounted for forty-two of the deaths and three of the remainder occurred in the last quarter of the year. The local death-rate from this cause was 0.48 and for England and Wales 0.57. Influenza

Two notifications of cerebro-spinal fever were received from the General Hospital relating to out-of-town cases brought in for treatment and not notified to the medical officer of health for the district in which they resided. Both were treated with serum and made good recoveries. Cerebro-spinal Fever

One notification of malaria was received, relating to a man infected in India in 1927. It was, of course, merely a relapse. Malaria

Two notifications of typhoid fever were received. One related to an out-of-town case, brought to the General Hospital for treatment, but not notified elsewhere. The other referred to a Borough patient who did not appear to me to be suffering from typhoid, the history also being all against the diagnosis. She was treated at home and recovered. The attack-rate was 0.02 and for England and Wales 0.04. Enterica

Though there were no deaths in the Borough from enterica,



eight Borough residents died from typhoid as a result of the outbreak at the County Mental Hospital, Berrywood, and their deaths were credited to the Borough by the Registrar-General, giving a death-rate of 0.08. The death-rate for England and Wales was 0.01.

**Erysipelas** Thirty cases of erysipelas were notified, a smaller number than usual. The attack-rate was 0.31 and for England and Wales 0.45. Two were treated at the Borough Infectious Diseases Hospital, two at the General Hospital, and one at the Public Assistance Infirmary, Wellingborough Road. One death (unnotified) was attributed to this cause.

**Chickenpox** This disease, not being notifiable in the Borough at present, our knowledge of it is not very exact, but 399 cases, or suspected cases, were reported from the public elementary schools. One child from the Scattered Homes was treated at Harborough Road Hospital.

**Vaccination** The number of successful vaccinations performed in the Borough during 1932 fell to 103, being 7.8 per cent. of the live births registered in the Town. From this it will be seen that vaccination, so far as Northampton is concerned, has become little more than a dead letter and will no doubt be allowed to remain as such until we get a return of smallpox, when more interest will be again taken in it.

The three Public Vaccinators for the Borough remain as in the previous year:—

Dr. E. Robertson, 220, Kettering Road ;

Dr. J. Cullen, 5, St. Matthew's Parade ;

Dr. H. F. Percival, 2, Spencer Parade.

These officers cover for vaccination purposes the same areas they serve for medical out-relief.

The Medical Officer of the Wellingborough Road Institution also acts as Vaccinator.

Mr. F. Taylor and Mr. R. Bennett still officiate as Vaccination Officers.

During 1933, no vaccinations were performed by the Medical Officer of Health under the Public Health (Smallpox Prevention) Regulations, 1917.

**Smallpox** No case of smallpox came to the notice of the Department during 1933. There were 631 cases in England and Wales, most of them being in the Metropolitan area, and the attack-rate (0.02) was the lowest for twelve years.

**Scarlet Fever** One hundred and sixty-three notifications relating to scarlet fever were received, an increase of thirty-nine over the figure for 1932. Seventy-seven were males and eighty-six were females. 108 were school children. The attack-rate was

1.69 and for England and Wales it was 3.21. 110 patients were removed to the Infectious Diseases Hospital, where twenty-nine were found to be not suffering from scarlet fever. One case was transferred from Harborough Road Hospital to the General Hospital for an operation. The general type of the disease remained similar to that which has been prevalent in this country for so many years.

In my last report I mentioned that the shorter isolation period of four weeks in place of the usual six did not increase the number of "return cases." This was well illustrated last year by the fact that so far as we could ascertain none of the cases discharged after an isolation of four weeks caused any "return case," but two patients who had both been detained in hospital for nine weeks, each infected a case in their own household. There is no reason to believe they would not have done so had they received a further four weeks' isolation, as they were of the type one would expect to spread such a disease as scarlet fever, where the virus is disseminated through "droplet infection."

No death from scarlet fever was recorded. The death-rate for England and Wales was 0.02.

Only thirteen notifications of diphtheria were received, giving an attack-rate of 0.13 per thousand living, the lowest rate recorded in the Borough since 1892 and lower only in the first three years after the coming into force of the Infectious Disease (Notification) Act, 1889. This Act (which was at first adoptive) became operative in Northampton on 23rd December, 1889, and for the first few years notification was probably not nearly so complete as it afterwards became and remains at present. The attack-rate taking the country as a whole was 1.18, *i.e.*, nine times as much as ours. Diphtheria

Eleven patients were removed to Harborough Road Hospital, where four were not considered to be suffering from diphtheria, either clinical or bacteriological. There was one death, a child aged five-and-a-half years (who was practically hopeless when a medical practitioner was called in), giving a death-rate of 0.01, compared with 0.06 for England and Wales.

Schick immunisation has not been practised in this Town, the marked decrease in diphtheria during recent years having come about without any artificial means; it is merely a phase in the periodicity or wave of the disease, a periodicity not confined to diphtheria but seen in other infectious diseases, especially measles, where the wave-length is a short one of two or three years as a rule. Had we practised immunisation and "protected," say, two thousand children of different ages during the last few years, we could have pointed to 1933 as a triumph for immunisation, but with how much truth? Too little stress is laid on periodicity when making claims for new preventive measures, of which time alone will be the final test.

Thirty-four phials (272,000 units) of antitoxin for curative or preventive treatment were issued free to medical practitioners on application to the Public Health Department, at a cost of about £11, this being in addition to antitoxin used at the Infectious Diseases Hospital.

Pneumonia

247 notifications of pneumonia were received, compared with 235 in 1932. The attack-rate was 2.56. Sixty-three were classified as broncho-pneumonia and thirty-six were said to have supervened on influenza. In addition, fifteen deaths were due to pneumonia (either primary or influenzal) for which no previous notification had been received, bringing the total up to 262. As usual, the age of the patients varied between wide limits. Three cases were treated at Harborough Road Hospital, twenty at the General Hospital, and seven at the Wellingborough Road Infirmary.

Eighty-three deaths were ascribed to pneumonia, of which seventeen were following influenza, while twenty-eight were classified as broncho-pneumonia, leaving thirty-eight for the lobar type, etc. The death-rate from all forms of pneumonia was 0.86.

Borough  
Hospitals

**HARBOROUGH ROAD INFECTIOUS DISEASES HOSPITAL.** A full description of this hospital appeared in my report for 1930 and further reference is made to it in this report on page 13. Table 20 (page 90) gives statistics for 1933. The hospital, owing to the small amount of infectious disease in the Town during the year, was never half full. The highest number under treatment was twenty-two on 31st October (twenty scarlet fever and two diphtheria).

**WELFORD ROAD TUBERCULOSIS HOSPITAL.** Reference should be made to the reports for 1930, 1931, and 1932, and to pages 13 and 55 of the present report. The hospital was well occupied during the whole year.

**SMALLPOX HOSPITAL.** As there was no smallpox in the Borough during 1933, this hospital remained closed, but in such a state of preparation as to be ready for the admission of patients at a few hours' notice. For description of site and accommodation my report for 1930 should be consulted.

**WELLINGBOROUGH ROAD INFIRMARY.** This institution is dealt with on page 13. 191 beds are provided and 156 of them were occupied on 31st December, 1933. The good name and popularity of the Infirmary are such that there are seldom many empty beds.

Puerperal  
Fever

Four notifications of puerperal fever were received, just a quarter of the number in 1932, when most of the notifications referred to out-of-town cases brought in for treatment. The attack-rate was 3.4 per thousand total births registered, against 3.5 for England and Wales. Three of the infections occurred

in the practices of midwives, the fourth being a doctor's patient. All were treated at the General Hospital, where all recovered.

One death (unnotified) was certified as due to this disease, giving a death-rate of 0·84 per thousand total births, the lowest of which we have any record. The corresponding figure for England and Wales was 1·75.

The Department received eleven notifications of puerperal pyrexia, one more than in 1932, giving an attack-rate of 9·2 per thousand total births registered, as against 9·6 for England and Wales. Four were doctors' cases, four were midwives', and three were institutional cases from out of town. Ten were treated at the General Hospital, where one of them died from pulmonary tuberculosis three months after admission.

Puerperal  
Pyrexia

Four notifications of ophthalmia neonatorum were received, all being midwives' cases. All were treated at home and no impairment of sight occurred. Smears from the discharge of one child were examined and found to be negative for Neisser's organism. The attack-rate was 3·5 per thousand live births.

Ophthalmia  
Neonatorum

159 residents of the Borough received treatment for the first time at the Special Clinic for venereal diseases at the General Hospital, under the combined scheme worked in conjunction with the County Councils of Northamptonshire and Buckinghamshire. The scheme was started in the second quarter of 1917 and it is interesting to note that 159, the figure for last year, is the highest number of new cases making application for treatment since 1921. The highest numbers were 222 cases in 1919, 189 in 1920, and 179 in 1921. It will be observed that these were the three years immediately following the war, when venereal disease was supposed to be more prevalent. Two interpretations can be put upon the figures for 1933; it may be there is a recrudescence of the disease, or it may be that the valuable work of the Clinic is now more widely known and appreciated, resulting in patients seeking treatment who would formerly have consulted a private practitioner or an unqualified "herbalist." The classification of the new cases was as follows:—

Venereal  
Diseases

CONDITION.	MALES.	FEMALES.	TOTAL.
Syphilis .....	32	15	47*
Gonorrhœa .....	53	19	72
Other than Venereal ....	22	18	40
Totals ..	107	52	159

\*Eleven male and seven female syphilis cases were of more than one year's standing.

From the returns furnished by the General Hospital it appears that two syphilis (one male and one female) and fifty

gonorrhœa (thirty-nine male and eleven female) patients, including persons under treatment at the commencement of the year, carried out the full courses of treatment recommended by the specialists in charge of the Clinic and were discharged after final tests of cure.

Six syphilis patients (three males and three females) and twenty-two gonorrhœa patients (all males but one) ceased attending before completion of the course and the final tests were made. It will be noted that the bulk of these defaulters (twenty-four out of twenty-eight) were men.

The total attendances made by Borough patients at the out-patient clinic were 5,756 and ninety-three days were spent in hospital by patients.

In the treatment of syphilis, 826 doses of one or other of the approved arsenobenzene compounds (stabilarsan and sulfarsenol) were administered. In connection with the scheme, 1,033 specimens were examined by the Pathologist at a cost of £217 1s. 6d. ; 765 specimens were on behalf of the Treatment Centre and 268 for local practitioners.

The Borough Council makes an annual grant of £23 to the British Social Hygiene Council for propaganda purposes. The film " Damaged Lives " was exhibited to crowded houses at a local cinema for a fortnight from 13th to 25th November.

Two deaths were certified as due to syphilis, one being congenital.

#### Anthrax

One Borough resident, aged thirty years, a raw-hide worker, was infected with anthrax, presumably at his work outside the Town. The diagnosis was confirmed bacteriologically. He was treated as an in-patient at the General Hospital and made a satisfactory recovery. The circumstances were investigated by the Certifying Surgeon and H.M. Inspector of Factories for the district. The patient first noted a pimple on his neck when washing himself and being suspicious applied for treatment at the General Hospital two days later, when he was admitted. When I saw him next day, the infected area shewed a typical anthrax pustule. He was treated with serum and the pustule excised.

#### Cancer

In my reports for 1930 and 1931 information will be found relating to the apparent increase in cancer in Northampton during the past forty years.

The number of deaths certified as due to cancer in 1933 was 175 (seventy-eight males and ninety-seven females), giving a death-rate of 1.81 per thousand living, being the highest rate on record for the Borough ; the previous highest was 1.78 in 1930. The death-rate for England and Wales was 1.53. No special work in connection with cancer has been undertaken by the Public Health Department.

The information required by the Ministry of Health will be found in the paragraph headed "Blind Persons," on page 15. Prevention  
of  
Blindness

Dr. Laughton, the Clinical Tuberculosis Officer, presents the fifteenth report of the series on the work in connection with anti-tuberculosis (*see* Appendix I., pages 50 to 63). Tuber-  
culosis

From this report it will be seen how nearly the number of new cases notified agrees with those of the previous year. In other words, there is apparently little or no decrease in the amount of the disease to be dealt with, whatever may be the final result of treatment. The increased use of the X-ray apparatus may to some extent account for this, by bringing to notice cases which without it would not have been considered to be suffering from this disease. If this means the earlier treatment of tuberculosis it is a hopeful sign.

The total tuberculosis death-rate in Northampton for 1933 was 0.77 (respiratory 0.65, other forms 0.12), this being the lowest rate ever recorded for the Borough, but for practical purposes the same as in 1932. The corresponding figures for England and Wales were 0.82 (respiratory 0.69, other forms 0.13). It is satisfactory to know that the trade depression of the last few years has had no adverse influence on tuberculosis in Northampton.

A point of special interest in connection with this work is the apparent drop in the amount of pulmonary tuberculosis amongst children of the age-group five to fifteen years, in fact one may say at all ages up to fifteen years. On page 45 of this report will be found particulars referring to pulmonary tuberculosis in infants, which now seems to be a thing of the past, if it really ever existed. Turning to older children we find that no child amongst the twelve thousand on the school registers was notified as suffering from tuberculosis of the lungs and no death occurred from this cause. It is interesting to examine the Medical Officer of Health's Report for 1915-1918, where we find that eighty-five children in the age-group five to fifteen years were notified as suffering from pulmonary tuberculosis during the four years. Why were all these children diagnosed as tuberculous? The answer probably is because it was the custom in those days to look upon any abnormality in the lungs as tuberculous. That many were not suffering from tuberculosis is shewn by the after-histories of these children as given below :—

Year of Notification.	No. of Cases Notified.
1915 .....	16
1916 .....	14
1917 .....	27
1918 .....	28
	—
Total .....	85
	—

On recent investigation we found that eleven cases had left the Town and the whereabouts of seven were unknown. Inquiries into the records of the remaining sixty-seven cases revealed the following facts :—

Deleted from the Register .....	36
(Diagnosis not established .....	35
Recovered .....	1)
Died .....	29
(From pulmonary tuberculosis ..	23
From other tuberculous causes ..	2
From other causes .....	4)
Still on the Register .....	2

Of the two cases still on the register, one has a positive sputum ; the other is now in the Dispensary records as a spinal case.

Doubtless there has been some fall in phthisis amongst children of the age-group now under review, but not so much as would be suggested by the figures twenty-eight notifications for 1918 and none in 1933.

Another point worth bearing in mind is the frequency with which tuberculosis is mentioned on the death certificate of a person once notified as suffering from that disease, though tuberculosis was not the actual cause of death, yet by the rules of the Registrar-General it has to take precedence over many other diseases when assigning the cause of death, as given in Table C at the end of this report.

Again I have to say there is little or no fault to find with the way notification of tuberculosis is carried out in Northampton (*see* footnote to Table T8 on page 63). The few deaths which occur unnotified are chiefly cases of meningitis, where the end comes quickly or the presence of the disease is revealed on post-mortem examination, and I have to thank the medical practitioners of the Borough for the whole-hearted way they co-operate with the Department in combating the disease.

Bacterio-  
logy

The table giving particulars of clinical bacteriology, etc., will be found on page 91. The general arrangements for bacteriological work, outlined on page 12 of the report for 1930, still hold good.

Disinfection,  
etc.

Table 21 (page 90) shews the number of articles stoved each month at the Disinfecting Station, St. Andrew's Road.

No special provision is made for the cleansing and disinfection of verminous persons, other than those existing at the Institution, Wellingborough Road, which, I understand, is chiefly used by vagrants passing through the Town.

No anti-mosquito work has been performed and I do not consider any is necessary at present, as we do not receive complaints of these insects and no cases of locally infected malaria have been brought to the notice of the Department.

## VII.—MATERNITY AND CHILD WELFARE.

The thirteenth annual report of the Assistant Medical Officer for Maternity and Child Welfare on the work of that Department will be found in Appendix II., pages 64 to 74, and is on the same lines as its predecessors.

General  
Remarks

No change was made in the whole-time staff of the Maternity and Child Welfare Department, but owing to the additional clinics held the part-time services of Dr. Lilian M. Blake and Nurse E. Thomas were utilised as from 23rd May.

The Town has usually shewn a low figure for infant mortality, but the one for 1933, viz :—45·1 per thousand live births registered, is easily the lowest on record. The corresponding figure for England and Wales was 64. It is difficult to say why the rate was so low in 1933. For once the predominant cause of infant deaths was not prematurity and coincidentally, as pointed out by Dr. Bebbington, there was a marked decrease in premature births. The very fine weather enjoyed for a large part of the twelve months may have had some beneficial effect on infant life, as well as on that of older persons. Table A (column 11) on page 92 gives the infant mortality rates since 1901.

Infant  
Mortality

Another interesting point in connection with infantile mortality is the fall in the deaths attributed to pulmonary tuberculosis amongst children under one year of age. When we examine the death records of forty to forty-five years ago, we find that every year four or five deaths of children under twelve months old assigned to tuberculosis of the lungs. In 1898 six infant deaths were credited to this cause, after which they fell away to two and one with an occasional blank year and the last infant death certified as due to pulmonary tuberculosis occurred as far back as 1911. Since 1900, although 3,364 deaths in Northampton have been certified as due to pulmonary tuberculosis, only five (0·15 per cent.) related to infants less than a year old. What is the cause of this change in certification? In my opinion it is not due to any change in the infants or in the disease, but to a change in the medical outlook; in other words, it is no longer the fashion to attribute infantile deaths to phthisis.

Pulmonary  
Tuber-  
culosis in  
Infants

One of the greatest achievements of modern preventive medicine has been the remarkable decline in infant mortality since the commencement of the present century. When the century opened the infantile death-rate for England and Wales was 151 per thousand live births registered, but it has steadily fallen until last year it reached 64; in other words, the rate had fallen fifty-seven per cent. A large amount of this reduction was no doubt due to the inauguration of the child welfare movement.

Neo-natal  
Mortality



When we look closer into the figures we find there is little improvement in the death-rate for the first four weeks of life, *i.e.*, the neo-natal mortality. The Northampton figures for infantile mortality and neo-natal mortality shew that, although the former rate has decreased from 137.2 in 1903 to 45.1 in 1933 (a reduction of sixty-seven per cent.), the neo-natal mortality-rate has only fallen from 43.3 in 1903 (the first year of which we have a local record of neo-natal deaths) to 28.6 in 1933 (a drop of only thirty-two per cent.), and similar findings are met with in all parts of the country.

The deaths during the first four weeks of life have decreased very little compared with the fall during the first twelve months. To carry this matter a little further, the deaths during the first twenty-four hours after birth are greater than at any other period of life and they remain high for the first week. After the first four weeks they gradually decrease month by month, so that at the end of the first year they are now less than half what they were thirty years ago. Why have the neo-natal deaths not fallen at the same rate as the infantile deaths? There are various reasons. In the first place, it is very difficult to assign the exact cause for many of these deaths which occur so soon after birth. Many of them are put down to prematurity and to conditions operating before birth. During the first twenty-four hours the premature death-rate is high. In other words, a premature baby has a poor chance of survival; if it lives through the first week its chances materially improve.

For the last twenty years investigations have been taking place as to the relations of maternal syphilis and foetal mortality and also how far intra-cranial injuries, hæmorrhages, asphyxia, etc., are factors in neo-natal mortality. The general causes leading to neo-natal death may be divided into maternal states and foetal and infantile states. It is with the object of preventing or discovering and remedying these abnormal conditions, while there is yet time, that ante-natal work was established and is being pushed as far as possible by all local authorities. If we could reduce the neo-natal deaths as much as we have reduced them during the later eleven months of infancy, the declining birth-rate would not be viewed with so much apprehension as it is at present by some statisticians and social workers.

#### Maternal Mortality

Only one death was attributed to maternity (puerperal sepsis) giving a rate of 0.84 per thousand total births registered, the lowest of which we have any record. The corresponding figure for England and Wales was 4.32 (sepsis 1.75; other causes 2.57).

It is not to be expected that we shall be able to maintain this low rate from year to year, for as previously mentioned where the numbers involved are small a very few deaths make a considerable difference in the rate. That notwithstanding,

it is hoped that all the agencies at work—pre-natal clinics, health visiting, etc.—will keep maternal mortality within reasonable limits, but that there will always be deaths attributed to this cause is almost a certainty.

In conformity with the wishes of the Ministry of Health, who some time ago emphasised the fact that a gap occurs in early life between the ages of one and five years, during which the child is not under any medical supervision, a special clinic was inaugurated at Dychurch Lane in May and conducted once a month by Dr. Lilian M. Blake to deal with these children. For convenience this is called the "toddlers' clinic," to distinguish it from the other infant clinics. It is hoped by means of these monthly examinations to bring to light any latent physical defects which may be present and have them treated before the commencement of school life, as it is well known that at present a large proportion of entrants are found to require some form of medical treatment which should have been received earlier.

Toddlers'  
Clinic

No midwife is subsidised by the Local Authority and no practising midwife is employed by the Authority beyond those on the staff at the Institution, Wellingborough Road. Thirty midwives gave notice of intention to practise during 1933. This number is adequate for the needs of the Borough. (See also paragraph in Appendix II., page 68).

Midwifery  
and  
Maternity  
Services

No change was made and none found necessary in the institutional provision for unmarried mothers, illegitimate infants, and homeless children, described on page 18 of the report for 1930.

Institutional  
Provision  
for Mothers  
and  
Children

There are two private maternity homes and one mixed home in the Borough. The Local Authority, having no maternity home, has an arrangement with Northampton General Hospital for the admission of abnormal cases certified by the Assistant Medical Officer for Maternity and Child Welfare as requiring institutional treatment.

No tangible progress had been made up to the end of 1933 with the scheme for building a maternity home on the Kings-thorpe Road by the Local Branch of the Queen's Institute of District Nursing.

There are five whole-time health visitors and the part-time nurse engaged for the toddlers' clinics, etc., also gives some time to health visiting. (See also paragraph on "Home Visitation" on page 66).

Health  
Visitors

It will be remembered that Part I. of the Children Act, 1908, relating to infant life protection, which has hitherto dealt with these duties, was transferred to the Maternity and

Infant Life  
Protection

Child Welfare Committee by the Local Government Act, 1929.

Part V. of the Children and Young Persons Act, 1932, came into operation on 1st January, 1933, and made several alterations to the old Act. First, the age under which the reception of children for reward must be notified is raised from seven to nine years. Secondly, notification of the reception of a child, instead of being given within forty-eight hours after the reception, must be given in the case of the first child not less than seven days before its reception, and in case of any other child not less than forty-eight hours before reception, and in the case of a child already received without reward, within forty-eight hours after the undertaking to receive reward. Thirdly, it is made an offence to publish any advertisement for children which does not state truly the name and residence of the advertiser. The time limit for prosecutions for failure to notify is extended.

From the above it will be seen that the alterations or amendments of clauses in the old Act by those in the new one, though important, were not of such a nature as to cause much additional work in carrying out the provisions of the Act.

No action was taken against any foster-mother, nor had we any reason for serious complaint against any of them. The health visitors paid frequent visits to the children and the Medical Officer of Health received copies of the reports of the inspector who periodically visited the homes where children are boarded out by the authorities who conduct Dr. Barnardo's Homes in London.

#### Orthopædic Treatment

Particulars relating to the provision of specialist orthopædic treatment at Manfield Hospital were given in the report for 1930, page 20. Close contact with the hospital is maintained by the Medical Officer of Health in conjunction with the Medical Officers of the School Clinic, Maternity and Child Welfare, and Tuberculosis Departments.

Dr. Bebbington deals with the cases treated under the maternity and child welfare scheme on page 66.

#### Voluntary Work

Again one has to pay tribute to the excellent work performed by the Voluntary Association, who, to their former laurels mentioned in last year's report, secured in 1933 the first place in the annual competition for the silver shields offered by the National Baby Week Council amongst the towns for which the Astor (1931) Shield is reserved. As Northampton, having won this Shield for 1932, is ineligible under the regulations governing the competition to hold it for two successive years, it will be held for the present year by Rothwell (Yorks.), the next in merit. The success of Northampton was recognised by the presentation of a special certificate of merit. Only those who have practical experience of the work can have any idea of the labour involved in the successful entry into these

competitions, and I feel a great honour is conferred on the Borough by the ladies who take such a prominent position in infant welfare work year after year.

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*See Appendix III. (page 75) for the usual statistical tables in connection with the Medical Officer of Health's report.*

*Appendix I. (page 50) deals with the work of the Tuberculosis Department and Appendix II. (page 64) with the Maternity and Child Welfare Department.*

## APPENDIX I.

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 REPORT OF THE CLINICAL TUBERCULOSIS  
 OFFICER FOR THE YEAR 1933.
 

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TUBERCULOSIS DISPENSARY,  
 MARCH, 1934.

*To the Medical Officer of Health and Chief Tuberculosis  
 Officer.*

SIR,

I beg to submit herewith my report on the anti-tuberculosis  
 scheme for the year 1933.

Your obedient Servant,

N. B. LAUGHTON.

Notifications      During the year, 135 cases were notified as suffering from  
 tuberculosis. Of these, 106 were pulmonary and 29 non-  
 pulmonary. The corresponding numbers notified in these two  
 groups in the previous year were 101 and 31 (*i.e.*, a total of  
 132). The classification of new cases with respect to the site  
 of the disease is given in detail in Table T1 (page 58).

The disposal of these patients is shewn in Table T7 (page  
 62). The main feature of this table is an increase of 11 per  
 cent. in the number who received residential treatment, due  
 chiefly to more beds being occupied in Welford Road Hospital.

Table T8 (page 63) shews the age groups for new cases.  
 It will be noted that the incidence of lung disease was highest  
 for both males and females in the 25-35 year period.

Revision of  
 Register

Under the Public Health (Tuberculosis) Regulations, 1930,  
 the names of forty-six notified persons were removed from the  
 register in 1933, made up as follows:—

- (a) Twenty-nine in which the diagnosis had not been  
 established, and
- (b) Seventeen in which the patient had attained a con-  
 dition which might be regarded as recovered.

Particulars of cases thought to be suitable for deletion were  
 submitted to the Medical Officer of Health, who obtained the  
 assent of the practitioner notifying or at present in charge,  
 where possible.

On 31st December, 1933, there were 568 cases on the  
 Medical Officer of Health's register, 401 being pulmonary and  
 167 non-pulmonary.

The number of deaths, and the death-rates from tuberculosis per thousand of the population in 1933, are tabulated below :—

RESPIRATORY.		OTHER FORMS.		TOTAL.	
NO.	RATE.	NO.	RATE.	NO.	RATE.
63	0·65	12	0·12	75	0·77

The death-rates for pulmonary and other forms of tuberculosis in the previous year were 0·64 and 0·14 respectively, so there is practically no change in the rate for 1933.

In December, 1933, the number of tuberculous patients living in Council houses was 110. This is a very satisfactory figure. It may be emphasised again how important a part is played by housing in the control of tuberculosis. When a case of active disease occurs in a family, all in the household are open, more or less, to infection. If the living conditions are good, with adequate air and light, the chances of their escaping the disease are much increased. It is for this reason that preventive measures should be directed as much towards the family as the patient. Contacts are examined at the Dispensary as far as possible, and instructions are given to them individually as to how to live hygienically and to safeguard themselves as far as circumstances allow. In this they have practical assistance from the tuberculosis health visitor, who investigates and reports upon the home conditions when notification of a new case is received, and pays visits periodically afterwards.

In general it may be said that response to this preventive effort is good, and that enlightenment is accompanied by co-operation. Unfortunately, in many instances, this education comes too late, the disease having been progressive for some time before notification, and ignorance has led to a massive infection sufficient to turn the balance against another member of the family. It is noteworthy that in certain families where safeguards have been deliberately ignored, the ravages of the disease have been correspondingly heavy.

Increasing use has been made of the X-ray plant. During the year, 306 screen examinations were made and 194 photographs taken, a total of 500 examinations. X-ray investigation has been found of the greatest value in the diagnosis of tuberculosis from other conditions simulating it, in the detection of disease at an early stage, in the control of pneumothorax treatment and in assessing the type and degree of tuberculous invasion. In numerous instances it has shewn a well-marked tuberculous

Deaths

Housing and Hygiene

X-ray Examination

infiltration when clinical signs were absent. In others it has revealed the presence of other conditions such as cancer, bronchiectasis and heart affections. In many it has enabled an immediate decision to be made excluding the presence of tuberculosis.

That the value of X-rays is recognised by doctors is shewn by the increase in the numbers of patients sent for examination since the plant was installed. There is still room, however, for more use as a diagnostic aid in doubtful conditions where the possibility of tuberculosis exists, and especially in the diagnosis of non-pulmonary lesions, such as bone and joint conditions.

Artificial  
Pneumo-  
thorax, etc.

As anticipated in last year's report, there has been an increase in treatment by this means. The number of inductions and refills carried out was 74. Patients under treatment at Welford Road Hospital are brought to the Dispensary at intervals for X-ray examination. Those who have ceased institutional treatment (at Welford Road Hospital or elsewhere) are given the necessary refills at the Dispensary.

In two cases under treatment at Creton Sanatorium phrenic evulsion was carried out.

Other therapeutic measures carried out at the Dispensary and Welford Road Hospital included treatment by gold salts, lipiodol, and pneumodine.

Difficulties  
in  
Prevention

In reviewing the cases of tuberculosis notified each year one is struck by the part played by family and social contact as a causal factor in the spread of the disease. In investigating the habits and conditions existing during that varying period prior to notification, when the patient, in most cases of pulmonary disease, is a source of danger to others, one wonders that the damage is not even more widespread and disastrous than it is. Undoubtedly there are many mild clinical cases that suffer from early, but not incapacitating, disease, who do not come upon the notification register. Every person does not seek medical advice if he feels "run down," and even if he does, the early signs of pulmonary disease may not be clinically evident. A careful history taken of tuberculous patients when notified often reveals a record of previous ups and downs in health, and an X-ray photograph corroborates the story of past attack and recovery.

The following instance shews the difficulties that arise in opposition to the measures taken to combat tuberculosis :—

Four persons living in one house, and a close relative who visited it very often, were notified with tuberculosis within a period of five months. Three of these were adults suffering from active pulmonary disease; the remaining two were young children with recent bone lesions. The three adults were able to go about, but nevertheless the disease was well-marked and appeared to have been actively progressive for about two years in each case. Two of them had been in

contact with active cases elsewhere. The home conditions were very bad.

When the household first came under notice by the notification of one of the children and investigation was made, information was withheld with respect to those suffering from cough and other suggestive symptoms. The last case to be notified was suspected of lung disease when the family first came under notice, but evaded examination for five months. One of the adults refused institutional treatment, and considerable pressure had to be exercised before two of the other cases, one a child, were admitted to hospital.

This is an extreme example, but it illustrates what may happen and the obstacles that thwart the endeavour to prevent the occurrence and spread of the disease, namely, poverty, bad home conditions, ignorance and lack of co-operation amounting to opposition. The obvious indications are good housing and education. But enlightenment is of little use where there is lacking a sense of moral obligation to the community in preventing ill-health, especially of so serious and incapacitating a disease. Oddly enough, one commonly meets with an attitude whereby people deliberately choose to shut their eyes and entertain the spectre of tuberculosis when they are offered every facility to lay it low. To take shelter in ignorance is the surest means to further disaster in a tuberculous household.

Present-day circumstances undoubtedly tend to make for delay in notification. Most of all, the fear of losing his job makes a patient postpone any move, even that of seeking medical advice, which might be the first step towards unemployment. There may be the additional fear that his symptoms are due to consumption, and even if aware of the vital importance of its early detection, this fear is too often sufficient to upset his perspective. Fatalities are remembered but recoveries easily forgotten. To the dreaded association of the disease is added the vision of a family bereft of a breadwinner. It is natural that these anxieties should obsess the mind to an exaggerated degree when the bodily condition is lowered.

Not to recognise and deal with the special difficulties resulting from the depression of the times is to evade an important aspect of tuberculosis work. It is becoming more and more recognised that the problem is not one of the individual patient, but of his family and home. If assured that in the event of losing his job his family will be properly looked after, he will be more willing to have his complaint investigated and to accept the treatment that is advised.

The mental factor is of great importance both at the onset of the disease and during the period of recuperation. Yet fears for the family security too often hover ominously in the background, preventing the quietude which is so beneficial in recovery. Apart from this particular cause of anxiety, mental conflict is evident to a more or less extent in every case. An essential part of institutional treatment consists in trying to

The Mental  
Factor



correct a patient's attitude towards his condition, and giving him a more balanced and far-sighted outlook. The success of this education depends greatly on individual temperament, but there is nothing more striking than the change for the better that often occurs, even in advanced cases, as anxiety is replaced by a clear recognition of the existing circumstances and limitations, and a hopeful determination to make the best of them.

## After-care

It is unfortunate that this outlook cannot always be maintained later on. After-care constitutes a very weak spot in the career of the tuberculous patient. He is encouraged to attend the dispensary regularly for supervision and advice, and may do so conscientiously. He is given preference in obtaining a good house, granted extra nourishment if required, given, perhaps, light work on the Corporation parks. But withal, difficulties arise in connection with his home life which too often tend to annul the benefits of hospital and sanatorium treatment. There is no doubt that village settlement presents a solution to this problem and has proved to be a practical success, but there are difficulties against its application to cases in general.

Extra  
Nourishment

The provision of extra nourishment is an after-care measure intended to help maintain the condition of patients and prevent the relapse which might follow poor nutrition and a lowered resistance. The tuberculous person suffers from a wasting disease and so needs more than the sustenance sufficient to keep others in good health. During the past year, 25 grants were made of butter, milk and eggs for periods of three months.

Park  
Workers

Under the existing scheme men do light work in the Corporation parks for 25 hours a week, and women are employed in the transport parcels department. At the beginning of the year, five women and fourteen men were so employed. Three of the women broke down in health, necessitating admission to Welford Road Hospital; one of these was later transferred to Papworth Colony with a view to permanent settlement there. One man was admitted to hospital, one died, and one had to give up work on account of his condition. Eleven men were off work for varying periods. During the year two additional men were given work under the scheme.

Tuberculosis  
Dispensary

As already noted, the work here shewed an increase in X-ray examinations and in treatment by artificial pneumothorax. The work in general is summarised below:—

Total number of attendances of patients, etc.	1,148
Number of patients, etc., attending:—	
Males .....	295
Females .....	266

561

195 examinations of "contacts" were made, and of the 129 individuals examined 3 were subsequently notified. 172 examinations were made at the request of general practitioners for diagnosis, and of the 121 persons examined 33 were subsequently notified. These figures are included in the above totals.

The average number of attendances per patient was 2.0.

In addition to examinations at the Dispensary, the Tuberculosis Officer made 276 visits to the homes of patients, either at the request, or with the permission, of general practitioners.

The visits made by the nurse from the Dispensary were:—

Investigations after notification in the case of:—

Pulmonary Tuberculosis .....	94
Other Forms of Tuberculosis .....	27
Deaths from Tuberculosis .....	5
	126
Re-visits, etc. ....	1,294
Total .....	1,420

535 specimens of sputum, urine, etc., in connection with 434 cases or suspected cases, were examined at the bacteriological laboratory attached to the Dispensary. 137 were found to be positive and 398 negative.

Increasing use is being made of the beds in Welford Road Hospital. The average number occupied during 1933 was 28.7 (the corresponding figures for the period 1930-1932 were 17.1 ; 21.6 ; 25.2). From the data below it will be noted that 57 patients were admitted during the year, as compared with 37 in 1932. The average length of treatment was approximately 7 months. Weight was recorded whenever possible, and the average gain was 17 lbs. Of the patients discharged, 29, or 78 per cent., were quiescent or improved. Six were transferred to Creton Sanatorium and one to Papworth Village Settlement.

Welford  
Road  
Hospital

Below are given particulars with respect to those treated in the hospital:—

	MALES.	FEMALES.	TOTAL.
Remaining at end of 1932 .....	10	11	21
Admitted during 1933 .....	31	26	57
Discharged during 1933 .....	22	15	37
Died during 1933 .....	5	3	8
Remaining at end of 1933 .....	14	19	33

Of the 57 cases admitted, 46 were insured persons. All were admitted for isolation and treatment.

Condition on discharge:—

Quiescent .....	8
Much improved .....	17
Improved .....	4
No material improvement .....	5
Declining .....	3

Hospital  
Improvements

Certain needful alterations were carried out at the hospital during the year and the benefit of these has been greatly appreciated. The hot water supply to the wards, which was inadequate before, was made ample and efficient by the provision of new coke boilers. Gas-heated plate ovens were installed. The wards were re-decorated throughout, and wardrobe lockers were provided for the patients. In the administrative block a front room was furnished as a sitting-room for the staff nurses.

The composition of the nursing staff was changed early in the year, so as to include more fully trained nurses. The rates of pay of staff nurses and probationers were raised at the same time and brought into line with those recommended by the General Nursing Council for such posts. At the time of writing almost a year has elapsed without any change in the staff, and the nursing in the hospital has been more efficient than at any time in my experience. Hitherto the hospital had always suffered, like others similarly situated, by its size and isolation, and in consequence there was a continuous succession of changes in the staff. The undermining effect of this was harmful and disheartening, and it is satisfactory to know, especially with increasing numbers under treatment, that the nursing is now on a sounder basis.

Creaton  
Sanatorium

Below are the data with reference to the patients treated at Creaton Sanatorium :—

	MALES.	FEMALES.	TOTAL.
Remaining at end of 1932 . . . . .	13	7	20
Admitted during 1933 . . . . .	13	8	21
Discharged during 1933 . . . . .	14	8	22
Remaining at end of 1933 . . . . .	12	7	19
Condition on discharge :—			
Quiescent . . . . .		2	
Much improved . . . . .		14	
Improved . . . . .		5	
Worse . . . . .		1	

The beds at the sanatorium remained well occupied throughout the year, and the effectiveness of treatment is indicated by the fact that in roughly 95 per cent. of those discharged the disease was quiescent or improved.

Manfield  
Orthopædic  
Hospital

Particulars of cases treated at Manfield Orthopædic Hospital are as follow :—

	MALES.	FEMALES.	TOTAL.
Remaining at end of 1932 . . . . .	4	3	7
Admitted during 1933 . . . . .	6	5	11
Discharged during 1933 . . . . .	2	—	2
Died during 1933 . . . . .	1	1	2
Remaining at end of 1933 . . . . .	7	7	14

Condition on discharge :—

Quiescent .....	1
Improved .....	1

The lesions treated in these cases were those of the spine, knee and hip.

In addition to the above, one patient was admitted for treatment to the Shipman Convalescent Home, Dallington.

Cases treated at other institutions were as follow :—

	MALES.	FEMALES.	TOTAL.	Other Institutions
Remaining at end of 1932 .....	1	—	1	
Admitted during 1933 .....	—	2	2	
Discharged during 1933 .....	1	1	2	
Remaining at end of 1933 .....	—	1	1	

In the treatment of these cases the following institutions were utilised :—

St. Anthony's Hospital, Cheam, Surrey ;  
National Sanatorium, Benenden, Kent ; and  
Papworth Village Settlement.

In addition, one went privately to the Royal National Hospital, Ventnor.

There was no case of compulsory removal to hospital under Section 62 of this Act. Public Health Act, 1925

It was not necessary to take any action under these Regulations, which deal with tuberculous employees in the milk trade. Public Health (Prevention of Tuberculosis) Regulations, 1925

TABLE T1. NORTHAMPTON, 1933.

## TUBERCULOSIS. CLASSIFICATION OF NEW CASES.

CLASSIFICATION.	NOTIFIED CASES.			DEATHS OF CASES NOT NOTIFIED.		
	M.	F.	TOTAL.	M.	F.	TOTAL.
Pulmonary :—						
Lung and Pleura . . . . .	59	47	106	5	1	6
Larynx . . . . .	—	—	—	—	—	—
	59	47	106*	5	1	6*
Meninges and Brain . . . . .	—	2	2	1	1	2
Peritoneum and Intestines	3	—	3	—	1	1
Bones and Joints . . . . .	8	6	14	—	—	—
Cervical Glands . . . . .	4	3	7	—	—	—
Other Organs . . . . .	1	2	3	—	—	—
Totals . . . . .	75	60	135	6	3	9

\*A total of 112 fresh cases of pulmonary tuberculosis.

TABLE T2. NORTHAMPTON, 1933.

## PULMONARY TUBERCULOSIS INVESTIGATIONS. DURATION OF ILLNESS.

PERIOD.	NOTIFIED CASES.	DEATHS OF CASES NOT NOTIFIED.	TOTAL.
Under 6 months . . . . .	20	—	20
Over 6 months and under 1 year	31	—	31
Over 1 year and under 2 years	15	1	16
Over 2 years and under 3 years	13	—	13
Over 3 years and under 4 years	9	—	9
Over 4 years and under 5 years	1	—	1
Over 5 years . . . . .	7	1	8
Unascertained . . . . .	10	4	14
Totals . . . . .	106	6	112

TABLE T3. NORTHAMPTON, 1933.

PULMONARY TUBERCULOSIS INVESTIGATIONS. SEX AND STATE.

	MALES.	FEMALES.	TOTAL.
Single .....	25	29	54
Married .....	31	19	50
Widowed .....	2	—	2
Unascertained .....	6	—	6
Totals .....	64	48	112

TABLE T4. NORTHAMPTON, 1933.

PULMONARY TUBERCULOSIS INVESTIGATIONS. DEGREE OF HOME  
ISOLATION FOUND.

	MALES.	FEMALES.	TOTAL.
Number having separate Bedrooms	23	21	44
Number having separate Beds (only)	4	—	4
Number having no Isolation .....	27	15	42
Number in Institutions .....	7	8	15
Unascertained .....	3	4	7
Totals .....	64	48	112

TABLE T5. NORTHAMPTON, 1933.

TUBERCULOSIS DEATHS. PERIOD ELAPSING BETWEEN NOTIFICATION  
AND DEATH.

PERIOD BETWEEN NOTIFICATION AND DEATH.	MALES.	FEMALES.	TOTAL.
(1) PULMONARY TUBERCULOSIS :—			
Not notified .....	5	1	6
One month .....	6	3	9
1—6 months .....	3	7	10
6—12 months .....	3	3	6
12—18 months .....	2	4	6
18—24 months .....	1	3	4
2—3 years .....	3	3	6
3—4 years .....	1	3	4
4—5 years .....	1	2	3
5 years and over .....	5	4	9
Totals .....	30	33	63
(2) TUBERCULOSIS OTHER THAN PULMONARY :—			
Not notified .....	1	2	3
One month .....	1	2	3
6—12 months .....	—	1	1
12—18 months .....	1	—	1
18—24 months .....	1	1	2
3—4 years .....	1	—	1
5 years and over .....	—	1	1
Totals .....	5	7	12

*See footnote to Table T8.*

TABLE T6. NORTHAMPTON, 1933.

## PULMONARY TUBERCULOSIS. OCCUPATIONAL INCIDENCE AND MORTALITY.

OCCUPATION.	New Cases.	Deaths Registered	OCCUPATION.	New Cases.	Deaths Registered
Shoe Operatives :—					
(a) Clicker . . . . .	10	2	Horse Dealer . . . . .	1	—
(b) Laster . . . . .	4	1	Hosiery Packer . . . . .	—	1
(c) Finisher . . . . .	10	6	Housewife . . . . .	16	19
(d) Roughstuff and Pressman	1	2	Insurance Agent . . . . .	1	—
(e) Warehouse and General . . . . .	5	3	Labourer . . . . .	2	1
(f) Female Worker	11	8	Leather Coat Machinist . . . . .	—	1
	41	22	Leather Dresser . . . . .	4	1
Bank Guard . . . . .	—	1	Loco Fireman . . . . .	1	—
Barmaid . . . . .	1	—	Mechanic . . . . .	1	1
Baths Attendant . . . . .	1	1	Metal Worker . . . . .	2	—
Blouse Machinist . . . . .	1	—	Milk Roundsman . . . . .	1	—
Box Maker . . . . .	1	—	Minister of Religion	1	1
Bricklayer . . . . .	1	—	Motor Driver . . . . .	2	—
Café Manageress . . . . .	1	—	Newsagent . . . . .	1	—
Cardboard Box Maker	—	2	Nurse . . . . .	1	—
Celluloid Worker . . . . .	1	—	Park Attendant . . . . .	—	1
Charwoman . . . . .	2	—	Pavior . . . . .	1	—
Clerk . . . . .	5	1	Printer . . . . .	—	1
Collector . . . . .	1	—	School Teacher . . . . .	1	—
Dressmaker . . . . .	3	1	Shop Assistant . . . . .	4	—
Errand Boy . . . . .	2	—	Stationary Engine Driver . . . . .	1	—
Ex-soldier . . . . .	2	1	Tramp . . . . .	1	—
Fish Frier . . . . .	1	—	Upholsterer . . . . .	—	1
General Dealer . . . . .	1	1	Wooden Heel Maker	1	—
General Outfitter . . . . .	1	—	No Occupation . . . . .	2	4
Hairdresser . . . . .	1	1	Totals . . . . .	112	63



TABLE T7. NORTHAMPTON, 1933.

PULMONARY TUBERCULOSIS.

DISPOSAL OF NOTIFIED CASES.

CLASSIFICATION.	NUMBER.	PER CENT.
Received Residential Treatment :—	68	64·2
At Creaton Sanatorium .....	14	
Welford Road Hospital .....	42	
Both Creaton Sanatorium and Welford Road Hospital .....	6	
Public Assistance Institution .....	2	
General Hospital .....	3	
St. Andrew's Hospital .....	1	
Refused Residential Treatment .....	17	16·0
Residential Treatment not considered necessary	7	6·7
Too ill for removal .....	5	4·7
Not seen (at request of doctor or patient) .....	3	2·8
Making own arrangements for treatment .....	3	2·8
Not suitable for Residential Treatment .....	1	1·0
Left the area soon after notification .....	1	0·9
Died before receipt of notification .....	1	0·9
Totals .....	106	100·0

TABLE T8. NORTHAMPTON, 1933.

## TUBERCULOSIS. AGE GROUPS FOR NEW CASES AND DEATHS.

AGE PERIODS.	NEW CASES.				DEATHS.			
	PULMONARY.		NON-PULMONARY.		PULMONARY.		NON-PULMONARY.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	—	—	—	—	—	—	—	—
1-5 years . . . .	—	—	3	4	—	1	—	2
5-10 years ..	—	—	8	4	—	—	1	1
10-15 years ..	—	—	1	1	—	—	—	—
15-20 years ..	8	6	1	2	1	3	1	1
20-25 years ..	9	14	1	2	5	5	—	1
25-35 years ..	14	15	2	—	6	15	1	—
35-45 years ..	13	7	—	—	6	3	—	—
45-55 years ..	14	4	1	—	7	6	1	2
55-65 years ..	5	2	—	2	4	—	—	—
65 and upwards	1	—	—	—	1	—	1	—
Totals . . . .	64	48	17	15	30	33	5	7

Six (9·5 per cent.) of the sixty-three deaths from tuberculosis of the respiratory system and three (25·0 per cent.) of the twelve deaths from other forms of tuberculosis were of cases not notified. Reference should also be made to Table T5.

*See also remarks of Medical Officer of Health on pages 43 and 44.*

## APPENDIX II.

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**REPORT OF THE ASSISTANT MEDICAL OFFICER FOR  
MATERNITY AND CHILD WELFARE FOR THE YEAR 1933.**


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*To the Medical Officer of Health.*

SIR,

I beg to submit herewith my report on the maternity and child welfare work in the Borough for the year 1933.

Your obedient Servant,

E. F. BEBBINGTON.

INFANT WELFARE CENTRE,  
DYCHURCH LANE,  
MARCH, 1934.

Infant  
Mortality

The number of infant deaths shews a marked decrease during 1933. The infant mortality rate was 45.1, against 64.3 in 1932. This is the lowest figure ever recorded in Northampton. Fifty-two children died before reaching the age of one year, against eighty in 1932. From Table M. & C.W.1 (page 72) it will be seen that the infant mortality-rate is 18.9 below that for England and Wales.

Hitherto, premature birth has usually been the cause of the greatest number of infant deaths, but in 1933 this was not so. Only ten infants, one of which was illegitimate, died owing to premature birth, as against twenty-three in 1932. This small number may be partly accounted for by the fact that there was a corresponding decrease in the number of premature births. Bronchitis and pneumonia again account for a large number of deaths (eleven). The same number (eleven), however, died from marasmus and debility.

Notification  
of Births

The birth-rate for 1933 was 11.9, compared with 13.0 for 1932.

1,152 live births and thirty-eight stillbirths were registered. 1,175 live births and forty-seven stillbirths were notified, making a total of 1,222 (*see* Table M. & C. W. 3, page 72). Table M. & C. W. 4 shews the sources of notification.

1,130 births were investigated by the health visitors; thirty-seven of these were non-notified. The remaining births occurred either in larger houses, or the mothers, resident outside the Borough, came into the Town for their confinements and later returned home.

Investigation discloses that sixty-five babies were born prematurely. This number shews a decrease of twenty on that for 1932.

The number of stillbirths notified was forty-seven, three Stillbirths less than last year. Thirty-five of these were investigated by the health visitors. Eleven only of the investigated stillbirths were first babies, who normally have a higher mortality. More than two-thirds were born of multiparæ. The following table classifies the causes of stillbirth (foetal and maternal) as far as can be ascertained :—

## PRIMIPARÆ.

PREMATURE BIRTH .....	7
Causes of Stillbirth :—	
(a) Prematurity .....	1
(b) Albuminuria .....	1
(c) Albuminuria (Twin Pregnancy) ..	1
(d) Cord Round Neck .....	1
(e) Hydrocephalus and Spina Bifida ..	1
(f) Cause Unknown .....	2
FULL TERM INSTRUMENTAL LABOUR .....	3
Causes of Stillbirth :—	
(a) Dystocia .....	2
(b) Kidney Disease .....	1
FULL TERM NON-INSTRUMENTAL LABOUR .....	1
Cause of Stillbirth :—	
(a) Cause Unknown (Illegitimate) .....	1

—

11

—

## MULTIPARÆ.

PREMATURE BIRTH .....	10
Causes of Stillbirth :—	
(a) Prematurity .....	3
(b) Ante-partum Hæmorrhage .....	1
(c) Hydrocephalus .....	1
(d) Eclampsia .....	1
(e) Dystocia .....	1
(f) Influenza .....	1
(g) Placenta Prævia .....	1
(h) Hydramnios .....	1
FULL TERM INSTRUMENTAL LABOUR .....	4
Causes of Stillbirth :—	
(a) Dystocia .....	3
(b) Breech .....	1

## FULL TERM NON-INSTRUMENTAL LABOUR ..... 10

## Causes of Stillbirth :—

(a) Dystocia .....	2
(b) Ante-partum Hæmorrhage .....	1
(c) Postmaturity .....	1
(d) Pyelitis .....	1
(e) Cord Round Neck .....	1
(f) Shock .....	1
(g) Anencephaly .....	1
(h) Cause Unknown (Illegitimate) .....	2

—  
24  
—Home  
Visitation

## Visits to Expectant Mothers :—

First Visits .....	200
Total Visits .....	505

## Visits to Children under One Year of Age :—

First Visits .....	1,148
Total Visits .....	5,733

## Visits to Children from One to Five Years of Age :—

Total Visits .....	7,788
--------------------	-------

The health visitors paid 15,008 visits in 1933. This number includes all the visits enumerated above and also extra visits, viz :—to houses where a stillbirth had occurred or a baby under one year had died, and to all cases of puerperal fever, puerperal pyrexia, ophthalmia neonatorum, pneumonia, etc., in women and children.

Ultra-  
violet Ray  
Treatment

Ultra-violet ray treatment was continued during the year with the usual exception of the summer months. Children under five, contrary to adults or school children, can make full use in summer of natural sunlight, which is to be preferred, in most cases, to artificial light treatment. Twelve children were on the books at the beginning of 1933 and ten were still under treatment at the end of the year. Twenty-one children ceased treatment during the year. Nineteen new cases were admitted to the clinic during 1933. These, together with the twelve children on the books at the beginning of the year, made a total of 658 attendances (against 375 in 1932). They were chiefly cases of rickets and marasmus. Most cases benefited from the treatment.

Manfield  
Orthopædic  
Hospital

Four beds are maintained, when occupied, at Manfield Hospital (*see* pages 67 and 68, 1931 report). The two cases admitted were suffering from general orthopædic conditions (infantile paralysis and torticollis). Four patients were under treatment at the beginning of 1933 and four at the end. Two were ad-

mitted and two were discharged. The average length of stay in hospital was 243 days, against 137 in 1932.

There was a slight decrease in the total number of children under one year of age who attended at the centres for the first time. There was, however, an increase in the total number of attendances, and hence, also, in the average attendance of children per session (*see below*). Table M. & C. W. 5 (page 73) gives the number of average attendances and consultations at the nine centres in the Town. The total average attendance in 1933 of mothers was 473, of babies and toddlers 542, and of consultations 180. In 1932 the corresponding figures were 465, 527, and 188. An extra centre was added in May, when a toddlers' clinic was opened at Dychurch Lane for children one to five years of age. The total number of children who attended was 73, and they made 149 attendances. Sessions were held once monthly only.

Welfare  
Centres

The total number of attendances at all centres during the year was as follows:—

(a) By Children under One Year of Age . . . . .	11,690
(b) By Children between the Ages of One and Five Years . . . . .	12,488

The average attendance of children per session at all centres during 1933 was 60. In 1932 the figure was 59.

The total number of children who attended at the centres for the first time during the year was:—

(a) Children under One Year of Age . . . . .	585*
(b) Children between the Ages of One and Five Years . . . . .	152

(\*The figure 585 represents a percentage of 49.8 of the notified live births).

The total number of children who were in attendance at the centres at the end of the year was:—

(a) Children under One Year of Age . . . . .	463
(b) Children between the Ages of One and Five Years . . . . .	1,103

The ladies of the Northampton Maternity and Infant Welfare Voluntary Association continue to do their excellent work on the social side. In the Astor Shield Competition amongst the great towns they again secured first place, with Rothwell (Yorks.) second, and Sunderland third. Their programme specialised in:—

1. Child welfare exhibitions at each of the nine centres.
2. Mother's health during pregnancy.
3. Nutrition for the toddler—good and bad diet sheets.
4. Parents' responsibility for the development of their children's character.
5. Competitions in mothercraft, fathercraft, and for school children.
6. Market stall on two market days for propaganda work.

This programme was a valuable demonstration of the work carried on at the centres throughout the year.

#### Toddlers' Clinic

The clinic, which was opened in May, was organised specially for toddlers (one to five years). Sessions were held at the Central Building on the fourth Tuesday of each month.

Attendances at this clinic are included in the figures under the (b) headings in the preceding paragraph. Cases were referred to this clinic only by doctors and health visitors. Debilitated and under-nourished children attending this clinic were granted free milk, in accordance with the scale in operation for the Borough, on medical grounds only.

Dr. Blake was appointed Medical Officer for the toddlers' clinic. She also conducted a toddlers' session once a month at Abington Avenue centre in addition to the ordinary sessions held there every Thursday.

A part-time health visitor was appointed for the new toddlers' clinic sessions.

#### Midwives

Thirty midwives notified their intention to practise. The Queen's Institute of District Nursing employed seven of these at different times and four were attached to the Wellingborough Road Institution. The Inspector of Midwives paid forty-four visits to midwives practising independently for the purposes of inspection. She also paid two visits of inspection to the Queen's Institute of District Nursing. Medical aid was summoned by a midwife under Section 14 (1) of the Midwives Act, 1918, in 184 cases.

The Queen's Nurses attended 593 cases (as maternity nurses or midwives) in 1933.

#### Maternity Homes

There are seven nursing homes in the Town ; three of these may admit maternity cases only. One, St. Matthew's Nursing Home, is registered for maternity, medical, and surgical cases. Thirty-one visits of inspection were paid to the nursing homes by the Assistant Medical Officer.

The Local Authority maintains no maternity home. An arrangement is in operation whereby expectant mothers, who are found to require institutional treatment at the time of confinement, are treated in the General Hospital. Nine cases were admitted in 1933.

#### Pre-natal Work

The Council provides and maintains one pre-natal clinic at the Central Building. There is in addition a pre-natal clinic held fortnightly at the Queen's Institute of District Nursing.

The number of sessions at the Central Building clinic was fifty-eight and the number of attendances 434. The total number of new expectant mothers was 179. The total number of expectant mothers (including those still attending from 1932) was 199. Thus from the attendances for the year and the num-

ber of expectant mothers it will be seen that each patient averaged 2.2 attendances. The percentage of total notified births (live and still) which the figure 199 represents is 16.3. This figure is lower than in reality, as County births occurring at the General Hospital and nursing homes are included in the total notified births and County women are excluded from the Borough clinic.

The number of attendances at the Queen's Institute of District Nursing during the year was 139 and the number of sessions was 22. The number of expectant mothers who attended was 115. The percentage of notified births represented by this figure is 9.4 (includes County cases).

The percentage of total notified births represented by cases attending all pre-natal clinics is 25.7. This is in marked contrast to the percentage of children under one year of age attending centres for the first time during 1933, viz:—49.8. This figure, 25.7, would be still lower if new cases only were taken into account. Cases attending the Borough clinic from 1932 are included in the 25.7 figure.

117 patients who attended the Borough clinic (1932-1933) had babies born in 1933. These births include seven stillbirths and two deaths of infants under one year, *see* tables below:—

CAUSES OF STILLBIRTH—MATERNAL AND FŒTAL:—

PREMATURE .....	3
(a) Eclampsia .....	1
(b) Hydrocephalus .....	1
(c) Influenza .....	1
FULL TERM .....	4
(a) Dystocia .....	3
(b) Cause Unknown .....	1
	—
	7
	—

CAUSES OF DEATH—MATERNAL AND FŒTAL:—

PREMATURE .....	1
(a) Catarrhal Jaundice .....	1
FULL TERM .....	1
(a) Icterus Neonatorum .....	1
	—
	2
	—

One birth was not traceable as the patient had removed to another district.

Doctors and midwives send their patients to the pre-natal clinic generally by appointment and in each case a report is sent to the doctor or midwife concerned.

Cases in which operative measures may be thought neces-



ary are seen by a consultant by appointment and in emergency. Three cases under this category were dealt with during 1933.

Pregnant women were also seen and advised at the welfare centres.

Doctors' Bills

The Maternity and Child Welfare Committee undertakes the payment of doctors' and midwives' bills in certain cases (*see* page 71, 1931 report). The outstanding debts in connection with these bills are now collected by a member of the staff of the Housing Department.

Dental Treatment

As in previous years, children under school age and pregnant and nursing mothers may be treated by the School Dental Officer. Two evenings each week are set apart for this. Payment for treatment is made to the Dental Clinic direct or later by instalments at the Central Building or at the welfare centres.

The cost of material was approximately £29. Bills amounting to just under £44 were sent to thirty-six patients. Over £33 was collected on these accounts and those outstanding from previous years. Nearly £20 was collected in small fees for which no bills were issued. Table M. & C. W. 6 (page 74) shews the numbers dealt with and the forms of treatment.

Milk

Applications for free milk are considered each week by the Milk Sub-Committee. Milk is granted to pregnant and nursing mothers and children under one year of age, and in special cases to children aged one to five years, for two months on medical grounds (*see* "Toddlers' Clinic," page 68). 25,503 pints of "Pasteurised" milk were supplied under contract with local firms at a cost of over £261. 587 applications were considered by the Committee, of which 558 were granted. Twenty-nine applications were refused.

"Cow and Gate" dried milk is sold at cost price at the Central Building. 5,159 pounds were sold to 200 separate customers. The cost of this was over £365, all of which was paid at the time of purchase.

Puerperal Fever and Pyrexia

Four cases of puerperal fever occurred. All were treated at the General Hospital; none of them died.

Eleven cases of puerperal pyrexia, including three County cases, were notified. Ten were removed to the General Hospital and one was treated at home. One patient died from pulmonary tuberculosis three months later in the General Hospital.

Maternal Deaths

Only one maternal death occurred in 1933. This patient died from puerperal sepsis following miscarriage at twenty-four weeks (illegitimate).

Four cases of ophthalmia were notified. All were mid-wives' cases and were treated at home. A swab was taken in one case only, with negative result. Table M. & C. W. 7 (page 74) shews details of these cases.

Ophthalmia  
Neonatorum

In one instance the discharge commenced during the first week, and in the other three during the second week. In three cases there was a history of the mother having had a vaginal discharge. No impairment of vision resulted in any notified case of ophthalmia.

Four babies under the age of two years died from diarrhoea and enteritis. The corresponding figure for 1932 was three. The rate of 3.5 per thousand live births registered is only half that for England and Wales.

Diarrhoea  
and  
Enteritis

The Maternity and Child Welfare Department administers Part I. of the Children Act, 1908, as amended by the Children and Young Persons Act, 1932, relating to foster-children. These children are now supervised until they reach the age of nine years. The number of persons receiving children for reward on the register at the end of the year was thirty-five; these had charge of fifty-one children. No legal order was made under the Acts during 1933.

Infant Life  
Protection

TABLE M. & C.W. 1. ENGLAND AND WALES AND NORTHAMPTON, 1924-1933.  
INFANT MORTALITY IN EACH YEAR OF THE DECENNium.

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
England and Wales . . . . .	75	75	70	70	65	74	60	66	65	64
Northampton . . . . .	52.1	66.6	55.0	60.9	53.5	52.8	56.4	70.6	64.3	45.1

TABLE M. & C.W. 2. NORTHAMPTON, 1929-1933.  
INFANT MORTALITY. CAUSES OF DEATH\*.

CAUSES OF DEATH.	1929	1930	1931	1932	1933
Atrophy, Debility, and Marasmus	8	7	11	2	11
Bronchitis and Pneumonia . . . . .	12	15	9	22	11
Congenital Malformations . . . . .	2	3	8	5	5
Convulsions . . . . .	3	2	5	3	1
Diarrhoea, Enteritis, and Gastritis	7	5	7	2	4
Measles . . . . .	—	—	1	—	—
Premature Birth . . . . .	20	24	22	23	10
Tuberculous Diseases . . . . .	—	—	3	1	—
Whooping Cough . . . . .	1	5	1	4	2
All Other Causes . . . . .	13	8	20	18	8
TOTAL DEATHS . . . . .	66	69	87	80	52
TOTAL LIVE BIRTHS . . . . .	1249	1224	1233	1244	1152
INFANT MORTALITY . . . . .	52.8	56.4	70.6	64.3	45.1

\*See also Table D at end of Report.

TABLE M. & C.W. 3. NORTHAMPTON, 1933.  
LIVE BIRTHS AND STILLBIRTHS REGISTERED AND NOTIFIED.

	MALES.	FEMALES.	TOTAL.
Number of Live Births Registered . . . . .	583	569	1152
Number of Stillbirths Registered . . . . .	18	20	38
Total Number of Births Notified . . . . .	609	613	1222
Number of Live Births Notified . . . . .	585	590	1175
Number of Stillbirths Notified . . . . .	24	23	47

TABLE M. & C.W. 4. NORTHAMPTON, 1933.  
NOTIFICATION OF BIRTHS. SOURCES OF NOTIFICATION.

	NUMBER.	PER CENT.
Medical Practitioners .....	404*	33.1
Certified Midwives .....	790	64.6
Parents and Others .....	28	2.3
Totals .....	1222	100.0

\*Includes 134 also notified by Midwives.

TABLE M. & C.W. 5. NORTHAMPTON, 1933.  
MATERNITY AND INFANT WELFARE CENTRES. STATISTICS.

CENTRE.	DAY OF MEETING (2.30 TO 4.30 P.M.).	AVERAGE ATTENDANCE PER WEEK.				Average Number consulting Doctor per Fortnightly Session.
		Mothers (incl. Expectant Mothers).	Babies.	Toddlers.	Total Babies and Toddlers.	
Abington Avenue ..	Thursdays ..	73	41	39	80	21
Broadmead .....	Mondays ..	52	28	33	61	20
Central Building ..	Wednesdays	46	27	26	53	20
Central Building ..	Thursdays ..	54	33	27	60	20
Doddridge Memorial .....	Tuesdays ....	55	23	40	63	20
Far Cotton .....	Fridays ....	40	26	21	47	19
Kingsthorpe .....	Tuesdays ....	46	24	32	56	20
St. Edmund's ....	Fridays ....	63	36	31	67	21
St. Sepulchre's ....	Wednesdays	44	25	30	55	19
	Totals ....	473	263	279	542	180

A Toddlers' Clinic was also held monthly at the Central Building, commencing in May (see "Toddlers' Clinic" paragraph, page 68).

TABLE M. &amp; C.W. 6. NORTHAMPTON, 1933.

## SUMMARY OF DENTAL OPERATIONS.

NATURE OF OPERATION, ETC.	MOTHERS.	CHILDREN.	TOTALS.
Number seen .....	38	155	193
Number treated .....	35	146	181
Number of attendances .....	241	253	494
Number of teeth extracted .....	139	261	400
Number of administrations of local anæsthetic .....	52	154	206
Number of fillings .....	31	—	31
Number of linings .....	20	—	20
Number of teeth treated with nitrate of silver .....	5	324	329
Number of dressings .....	16	—	16
Number of scalings .....	6	—	6
Number of artificial plates ....	22	—	22
Number of plate repairs .....	5	—	5
Number of teeth on plates and repairs .....	232	—	232
Number of other operations ....	27	9	36
Number completed .....	22	56	78
Number partly completed, continued to 1934 .....	15	1	16

TABLE M. &amp; C.W. 7. NORTHAMPTON, 1933.

OPHTHALMIA NEONATORUM. ANALYSIS OF CASES NOTIFIED, WITH  
ULTIMATE RESULT.

CASES NOTIFIED.	TREATED.		ULTIMATE RESULT.			
	AT HOME.	IN HOSPITAL.	VISION UN- IMPAIRED.	VISION IMPAIRED.	TOTAL BLINDNESS.	DIED.
4	4	—	4	—	—	—

See also Section VII. of Medical Officer of Health's Report (pages 45 to 49).

## APPENDIX III.

## STATISTICAL TABLES.

TABLE 1. NORTHAMPTON, 1801-1931.  
CENSUS POPULATIONS SINCE 1801.

DATE OF CENSUS.	ENUMERATED POPULATION.	INTERCENSAL INCREASE.
1801, March 9/10 .....	7,020	—
1811, May 26/27 .....	8,427	1,407
1821, May 27/28 .....	10,793	2,366
1831, May 29/30 .....	15,349	4,556
1841, June 6/7 .....	21,242	5,893
1851, March 30/31 .....	26,657	5,415
1861, April 7/8 .....	32,813	6,156
1871, April 2/3 .....	41,168	8,355
1881, April 3/4 .....	51,881	10,713
1891, April 5/6 .....	61,012	9,131
1901, March 31/April 1 .....	87,021	26,009
1911, April 2/3 .....	90,064	3,043
1921, June 19/20 .....	90,895	831
1931, April 26/27 .....	92,341	1,446

TABLE 2. NORTHAMPTON, 1931.  
CENSUS STATISTICS RELATING TO MUNICIPAL WARDS.

Wards (as existing before Extension).	POPULATION, 1931.			Com- pared with 1921.	Area in Acres.	Persons per Acre.	Separate Dwell- ings Occupied.	Persons per Room.
	Males.	Females.	Total.					
Abington .....	2,846	3,415	6,261	— 127	298	21·0	1,764	0·59
Castle .....	4,218	4,235	8,453	—1,569	145	58·3	1,939	0·84
Delapre .....	3,559	3,709	7,268	+ 2,017	382	19·0	1,746	0·77
Kingsley .....	5,096	6,002	11,098	+5,042	454	24·4	3,013	0·67
Kingsthorpe ..	4,445	4,934	9,379	+2,307	584	16·1	2,410	0·75
North .....	4,060	4,073	8,133	—1,291	99	82·2	1,913	0·74
St. Crispin's ..	2,828	3,107	5,935	—1,448	79	75·1	1,513	0·67
St. Edmund's..	2,759	3,214	5,973	— 877	98	60·9	1,633	0·64
St. James' .....	4,681	4,943	9,624	+ 411	398	24·2	2,373	0·72
St. Lawrence's	3,013	3,577	6,590	— 736	277	23·8	1,672	0·69
St. Michael's ..	3,366	3,978	7,344	—1,254	103	71·3	1,924	0·61
South .....	2,874	3,409	6,283	—1,029	552	11·4	1,241	0·77
County Borough	43,745	48,596	92,341	+1,446	3,469	26·6	23,141	0·70

TABLE 3. NORTHAMPTON, 1931.

CENSUS STATISTICS RELATING TO AGE AND SEX AND MARITAL CONDITIONS.

QUINQUENNIAL AGE-GROUPS.	NUMBERS.			PERCENTAGES.*		
	Males.	Females.	Total.	Males.	Females.	Total.
0—4 .....	2,859	2,921	5,780	6·5	6·0	6·3
5—9 .....	3,516	3,523	7,039	8·0	7·3	7·6
10—14 .....	3,568	3,253	6,821	8·2	6·7	7·4
15—19 .....	3,704	4,009	7,713	8·5	8·3	8·4
20—24 .....	3,671	4,197	7,868	8·4	8·6	8·5
25—29 .....	3,639	3,953	7,592	8·3	8·1	8·2
30—34 .....	3,416	3,940	7,356	7·8	8·1	8·0
35—39 .....	3,174	3,824	6,998	7·3	7·9	7·6
40—44 .....	2,995	3,515	6,510	6·9	7·2	7·0
45—49 .....	2,812	3,300	6,112	6·4	6·8	6·6
50—54 .....	2,666	3,049	5,715	6·1	6·3	6·2
55—59 .....	2,465	2,667	5,132	5·6	5·5	5·6
60—64 .....	1,937	2,148	4,085	4·4	4·4	4·4
65—69 .....	1,480	1,676	3,156	3·4	3·4	3·4
70—74 .....	970	1,276	2,246	2·2	2·6	2·4
75—79 .....	562	788	1,350	1·3	1·6	1·5
80—84 .....	225	393	618	0·5	0·8	0·7
85—89 .....	76	125	201	0·2	0·3	0·2
90—94 .....	9	37	46	0·0	0·1	0·0
95 and over .....	1	2	3	0·0	0·0	0·0
All Ages .....	43,745	48,596	92,341	100·0	100·0	100·0
Marital Condition :—						
Single .....	20,825	23,018	43,843	47·6	47·4	47·5
Married .....	21,064	21,186	42,250	48·1	43·6	45·7
Widowed .....	1,820	4,354	6,174	4·2	8·9	6·7
Divorced .....	36	38	74	0·1	0·1	0·1

\*Sex Percentages—Males 47·4 ; Females 52·6

TABLE 4. NORTHAMPTON, 1931.

CENSUS, 1931. AGE AND CONDITION DISTRIBUTION, COMPARED WITH FIGURES FOR 1921.

Sex and Census Year.	Age Distribution per 1,000 of each Sex.				Marital Condition per 1,000 of each Sex.		
	0—4	5—19	20—39	40—	Single.	Married.	Widowed and Divorced.
MALES							
1931	65	247	318	370	476	482	42
1921	86	270	309	335	511	448	41
FEMALES							
1931	60	222	327	391	474	436	90
1921	70	256	341	333	512	405	83

TABLE 5. NORTHAMPTON, 1931.

DATA FROM CENSUS VOLUME, COMPARED WITH FIGURES FOR 1921.

	1931	1921
(a) Enumerated Population .....	92,341	90,895
(b) Intercensal Increase .....	1,446	831
(c) Rate of Increase per cent. ....	1·6	0·9
(d) Number of Males .....	43,745	42,871
(e) Number of Females .....	48,596	48,024
(f) Number of Females per 1,000 Males	1,111	1,120
(g) Average Age of Males (years) .....	33·4	31·1
(h) Average Age of Females (years) ..	34·7	31·9
(i) Persons per Acre .....	26·6	26·2
(j) Parliamentary Electors .....	62,577	44,306
(k) Private Families .....	24,966	21,979
(l) Separate Dwellings Occupied .....	23,141	19,893
(m) Excess of Families over Private Dwellings Occupied .....	1,825	2,086
(n) Population in Private Families ....	89,139	88,179
(o) Percentage of Population in Private Families .....	96·6	97·0
(p) Rooms Occupied by Private Families .....	127,222	112,410
(q) Average Number of Persons per Room .....	0·70	0·78
(r) Average Size of Occupied Dwelling (rooms) .....	5·50	5·65
(s) Average Family Occupation (rooms)	5·10	5·11
(t) Families per Occupied Dwelling ..	1·08	1·10
(u) Average Size of Private Family (persons) .....	3·57	4·01
(v) Population in Private Families living more than two per room Density .....	1,784	2,393
(w) Percentage of Population in (v) ..	2·00	2·71
(x) Dwellings Occupied by one Private Family .....	21,395	17,891
(y) Dwellings Occupied by two Private Families .....	1,686	1,925
(z) Dwellings Occupied by three or more Private Families .....	60	77



TABLE 6. NORTHAMPTON, 1932.  
CHANGES IN AREAS BY EXTENSION OF BOROUGH ON 1ST APRIL, 1932.

AREAS DIMINISHED.	ACREAGE (LAND AND INLAND WATER).	CENSUS POPULATIONS.	
		1921	1931
BRIXWORTH R. D. :— Part of Boughton C.P. Part of Moulton Park C.P.	606	130	220 (59) (161)
HARDINGSTONE R. D. :— Part of Hardingstone C.P.	202	5	3 (3)
NORTHAMPTON R. D. :— Part of Dallington C.P. Part of Duston C.P. Part of Weston Favell C.P.	1,924	983	3,982 (293) (324) (3,365)
Added to Northampton C.B.	2,732	1,118	4,205

TABLE 7. NORTHAMPTON, 1932.  
SEX AND AGE DISTRIBUTION OF POPULATION AT CENSUS, 1931, IN AREA  
TRANSFERRED TO THE BOROUGH ON 1ST APRIL, 1932.

QUINQUENNIAL AGE-GROUPS.	MALES.	FEMALES.	TOTAL.
0-4 .....	224	203	427
5-9 .....	250	235	485
10-14 .....	196	175	371
15-19 .....	148	212	360
20-24 .....	123	208	331
25-29 .....	159	210	369
30-34 .....	204	227	431
35-39 .....	177	198	375
40-44 .....	127	148	275
45-49 .....	116	108	224
50-54 .....	77	107	184
55-59 .....	67	63	130
60-64 .....	49	42	91
65-69 .....	35	38	73
70-74 .....	21	19	40
75-79 .....	8	16	24
80-84 .....	4	3	7
85 and over .....	3	5	8
All Ages .....	1,988	2,217	4,205

MONTH.	RAINFALL.				TEMPERATURE.						DIRECTION OF WIND.				BRIGHT SUNSHINE.	
	Total inches.	Greatest in 24 hours.		Days on which 0.01 in. or more fell.	Mean.	Maximum.		Minimum.		No. of Nights at or below 32 deg.	S.W. Quadrant including W. Days.	S.E. Quadrant including S. Days.	N.E. Quadrant including E. Days.	N.W. Quadrant including N. Days.	Hrs.	Mins.
		Depth.	Date.			Deg.	Date.	Deg.	Date.							
				Deg.	Date.	Deg.	Date.	Deg.	Date.							
January ..	1.26	0.34	15	17	36.95	53.5	2	22.0	23	19	11	2	11	7	56	10
February	2.31	†	†	18	39.82	56.5	8	25.0	20	13	10	4	1	13	116	5
March .....	2.52	0.40	16	15	46.08	61.2	28	30.5	27	3	13	9	6	3	147	0
April .....	0.72	0.27	25	8	50.53	70.0	8	32.0	19	1	12	2	6	10	131	45
May .....	1.44	0.46	4	14	55.41	77.0	22	41.5	1	—	5	10	8	8	240	3
June .....	2.46	0.82	20	15	62.43	88.0	5	44.0	12	—	4	9	6	11	216	30
July .....	1.50	†	†	15	67.44	88.0	27	50.0	1	—	16	1	4	10	247	30
August ..	0.90	0.45	22	8	66.87	87.0	6	49.0	31	—	13	1	7	10	235	15
September	1.41	†	†	13	60.67	78.0	3	43.0	16	—	8	3	17	2	140	15
October ..	1.89	0.41	10	19	50.61	64.0	( 8 10	33.0	28	—	14	2	7	8	77	35
November	1.62	0.41	15	17	42.78	53.5	7	28.5	13	3	—	5	9	16	34	45
December	0.50	0.11	28	9	35.40	44.5	22	24.0	6	15	8	2	16	5	42	10
Year 1933	18.53	?	?	168	51.25	88.0	June 5 July 27	22.0	Jan. 23	54	114*	50	98	103	1685	3

\*Includes three "calm" days (one each in January, September, and October).  
†0.96 inches fell in the two days February 25-26, 0.47 on July 8-9, and 0.72 on September 23-24.

TABLE 9. NORTHAMPTON, 1933.

## SUMMARY OF ROUTINE WORK CARRIED OUT BY THE SANITARY INSPECTORS.

	Number of Inspections, etc.	No. at which Nuisances, Defects, etc., were Found.
1.—Total Number of Inspections and Visits . . . . .	22037	
2.—Number of Premises at which Nuisances were Found . . . . .		1648
3.—Total Number of Houses Inspected . . . . .	2064	1398
4.—Number of these Houses Repaired . . . . .		1051
5.—Number of these Houses Cleansed and Whitewashed . . . . .		872
6.—Number of Houses Cleansed after Certificate of M.O.H. (Sec. 46, P.H.A. 1875) . . . . .		1
7.—Number of First Visits made in consequence of Complaints by Residents . . . . .	511	308
8.—Notices Served . . . . .	1387	
9.—Drains :—		
Tested by Smoke Test . . . . .	32	20
Tested by Volatile Test . . . . .	36	11
Tested by Water Test . . . . .	21	0
Exposed under Sec. 41, P.H.A. 1875 . . . . .	3	3
Drains reported choked . . . . .		90
Drains reconstructed . . . . .		51
Drains repaired . . . . .		22
Bath, lavatory, or sink waste pipes disconnected from drains . . . . .		0
New pans fixed to closets . . . . .		64
Indoor soil pipes abolished . . . . .		0
Closets supplied with flushing apparatus . . . . .		8
10.—Contraventions of Bye-laws :—		
Animals kept so as to be a nuisance . . . . .		1
Animals kept in contravention of Bye-laws . . . . .		1
Accumulations of manure, etc., at :—		
(a) Houses . . . . .		6
(b) Other premises . . . . .		29
Other contraventions . . . . .		3
11.—Other Nuisances :—		
Overcrowding in houses . . . . .		17
Yard pavings re-laid or repaired . . . . .		258
Spoutings repaired or renewed . . . . .		193
New slop sinks fixed . . . . .		164
Inspections of courts and alleys . . . . .	38	7
Houses supplied with town water . . . . .		40
Chimney observations . . . . .	36	12
Miscellaneous nuisances . . . . .		274

Continued on next page.

TABLE 9.—*continued.*

	Number of Inspections, etc.	No. at which Nuisances, Defects, etc., were Found.
12.—Factories and Workshops :—		
Number of Factories Inspected .....	238	32
Number of Workshops Inspected .....	191	17
Number of Workplaces Inspected .....	178	21
Number of Outworkers' Premises Inspected ..	153	5
13.—Dairies, Cowsheds, and Milkshops :—		
Number of Inspections .....	928	24
Number of New Registrations .....	32	
14.—Bakehouses—Number of Inspections .....	381	43
15.—Slaughterhouses :—		
Number of Inspections while Slaughtering was in Progress .....	4530	44
Number of Other Inspections .....	346	5
16.—Other Premises where Food is Manufactured, Stored, or Exposed for Sale—Number of Inspections .....	1391	37
17.—Food and Drugs (Adulteration) Act—Number of Samples sent to Public Analyst .....	338	35
18.—Infectious Diseases—Visits to Infected Houses :—		
(a) First visits for investigation .....	297	
(b) Weekly visits to secure isolation .....	129	
(c) Visits to control disinfection .....	231	
Visits to Smallpox Contacts .....	0	
19.—Number of Visits for Inspection of :—		
(a) Schools .....	28	1
(b) Public Lavatories .....	202	0
(c) Van-dwellers .....	34	3
(d) Cinemas, etc. ....	44	5
(e) Restaurant Kitchens, Teashops, etc. ....	28	3
20.—Houses Inspected under Housing Consolidated Regulations, 1925 and 1932 :—		
Number of Houses Inspected .....	1458	1083
Defective Houses Repaired .....		916
Houses Cleansed and Whitewashed .....		773
21.—Houses Unfit for Human Habitation reported to M.O.H. under Housing Act, 1930 :—		
(a) Section 17 .....	2	2
(b) Section 19 .....	128	128
(c) Section 20 .....	0	0

TABLE 10. NORTHAMPTON, 1933.  
RECONSTRUCTION OF DRAINS.

SITUATION OF PREMISES.	NO. OF HOUSES.
Aberdeen Terrace, 13 .....	1
Albion Place, 10, 11 .....	2
Burleigh Road, 36, 38, 40 .....	3
Clare Street, 24 .....	1
Compton Street, 42, 44, 46, 48 .....	4
Craven Street, 64, 66, 68, 70 .....	4
Earl Street, 69, 71, 73, 75 .....	4
Lower Priory Street, 12, 14, 16, 18, 20, 22, 24, 26 .....	8
Marefair, 43 .....	1
Newland, 83, 85, 87 .....	3
Overstone Road, 2, and Synagogue .....	2
Regent Street, 5, 7, 9 .....	3
St. Edmund's Road, 147, 149, 151 .....	3
St. Michael's Road, 38 .....	1
Shakespeare Road, 52, 54 .....	2
Somerset Street, 11, 13, 15, 17 .....	4
Spencer Street, 28 .....	1
Wellingborough Road, 77, 79, 81 .....	3
Woolmonger Street, 37 .....	1
Total .....	51

TABLE 11. NORTHAMPTON, 1933.  
DRAIN EXAMINATION UNDER SECTION 41 OF THE PUBLIC HEALTH ACT, 1875.

SITUATION OF PREMISES.	RESULT OF EXAMINATION.	REMARKS.
Langham Place, 8 .....	Defective .....	Repaired.
Regent Street, 7 and 9 .....	Defective .....	Reconstructed.
Number of Drains Examined .....		3

TABLE 12. NORTHAMPTON, 1933.

HOUSING ACT, 1930. HOUSES REPRESENTED DURING THE YEAR.  
SUBSEQUENT ACTION AND CONDITION AT THE END OF THE YEAR.

HOUSES.	DATE OF		REMARKS.
	Representations.	Demolition Orders.	
Bearward Street, 27	22-2-33	6-3-33	Demolished. (New house erected on site).
Bell Barn Street, 19	12-7-33	*	Occupied.
Bell Barn Street, 21 and 23	12-7-33	*	Both occupied.
Black Lion Place, 1, 2, 3, 4, 5, and 6	14-6-33	4-12-33	All occupied.
Bridge Street, Court 10 (Maycock's Row); 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10	12-4-33	12-6-33	Nos. 1, 3, 5, 9, and 10 vacant; rest occupied.
Green Street, 64, 66, 68, 70, 72, and 74	12-7-33	—	Action deferred.
Horseshoe Street, 5, 7, 9, and 11	17-5-33	3-7-33	No. 5 occupied; rest vacant.
Kettering Road, 6 and 8	12-4-33	12-6-33	Both vacant.
Lower Cross Street, 2 and 4	17-5-33	3-7-33	Both occupied.
Lower Cross Street, 6	17-5-33	*	Occupied.
Manor Road, 11, 13, and 15	14-6-33	4-12-33	All occupied.
Manor Road, 17 and 19	14-6-33	4-12-33	Both occupied.
Manor Road, 32 (re- numbered 36)	14-6-33	4-12-33	Occupied.

TABLE 12.—*continued.*

HOUSES.	DATE OF		REMARKS.
	Representations.	Demolition Orders.	
St. Andrew's Gardens, 1, 3, and 5	12-7-33	*	All occupied.
St. Katherine's Street, 3, 5, 7, and 9	17-5-33	31-7-33	No. 7 vacant ; rest occupied.
St. Katherine's Street, 11 and 13	17-5-33	3-7-33	Both demolished.
St. Mary's Street, 16	12-4-33	31-7-33	Occupied.
Scarletwell Street, 29 and 31	12-7-33	*	Both occupied.
Scarletwell Street, Court 2 ; 1, 2, and 3	12-7-33	*	All occupied.
Silver Street, 18 and 20	17-5-33	31-7-33	No. 18 vacant ; No. 20 occupied.
Silver Street, 22 and 24	17-5-33	3-7-33	Both vacant.
Silver Street, 26 and 28	17-5-33	3-7-33	No. 26 vacant ; No. 28 occupied.
Silver Street, 30	17-5-33	3-7-33	Vacant.
Silver Street, 32	17-5-33	3-7-33	Vacant.
Silver Street, 42 and 44	15-3-33	12-6-33	Both vacant.
Silver Street, 46, 48, and 50	15-3-33	31-7-33	All occupied.
Silver Street, 52, 54, and 56 ; and Mayorhold, 1, 2, and 3	15-3-33	12-6-33	All vacant.
Tanner Street, 30 ; and Tanner Row, 1, 2, 3, 4, 5, 6, 7, and 8	14-6-33	—	Action deferred.

TABLE 12.—*continued.*

HOUSES.	DATE OF		REMARKS.
	Representations.	Demolition Orders.	
Tanner Street, 44	12-7-33	4-12-33	Occupied.
Upper Mounts, Court 3 (Green's Yard); 1, 2, and 3	14-6-33	4-12-33	No. 1 occupied; Nos. 2 and 3 vacant.
Vicarage Lane, 11a and 11b	12-4-33	12-6-33	No. 11a occupied; No. 11b vacant.
Vicarage Lane, 13, 15a, 15b, and 15c	12-4-33	12-6-33	No. 15b vacant; rest occupied.
Vicarage Lane, "Charing Cottage"	12-4-33	12-6-33	Vacant.
Wellingborough Road, 5, 7, 9, 11, 13, 15, 17, 19, and 21	12-4-33	12-6-33	All vacant.
Wellingborough Road, 29 and 33	12-7-33	*	Both vacant.
Wellington Place, Court 1 (Marble Arch); 1, 2, 3, 4, 5, and 6	17-5-33	3-7-33	Nos. 1 and 2 occupied; rest vacant.
Wellington Street, Court 1; 1	15-3-33	—	Action deferred.
Wellington Street, Court 1; 2, 3, and 4	15-3-33	12-6-33	All vacant.
Wellington Street, Court 3; 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10; and Welling- ton Street, 16 and 18	15-3-33	12-6-33	No. 16, Wellington occupied; rest vacant.

\*Signifies that the making of Demolition Orders was under consideration at the end of 1933.



TABLE 13. NORTHAMPTON, 1933.

HOUSING ACTS, 1909-1930. HOUSES REPRESENTED PREVIOUS TO 1933, BUT NOT FINALLY DEALT WITH BEFORE THIS YEAR BEGAN. ACTION TAKEN DURING 1933, AND CONDITION AT THE END OF THE YEAR.

HOUSES.	DATE OF			REMARKS.
	Representations.	Closing Orders.	Demolition Orders.	
Bath Terrace, 1, 2, 3, and 4	10-9-30	—	1-6-31	All vacant. Undertaking given by owner that houses would not be used again for human habitation.
Bearward Street, 23 and 25	12-10-32	—	6-3-33	Both demolished. (Two new houses erected on site).
Castle Street, 55, 57, 59, 61, 63, and 65	11-5-32	—	3-10-32	All demolished.
Church Way (West Side), Weston Favell, four cottages	14-9-32	—	2-1-33	All demolished.
Elm Street, " Bakehouse Cottage "	14-12-32	1-5-33	—	Vacant. (Closing Order under Section 20, H.A., 1930).
Riding, 25, 26, 27, 28, and 32	20-9-22	4-12-22	—	No. 32 vacant; remainder used as stores (not altered structurally).
Riding, 33, 34, and 36	20-9-22	1-1-23	—	No. 33 vacant; No. 34 occupied; No. 36 altered and used as store.
St. Andrew's Gardens, 7 and 9	13-4-32	—	—	Both vacant. Undertaking given by owner that houses would not be used again for human habitation.
St. Andrew's Gardens, 11	13-4-32	—	4-9-33	Occupied.
St. Andrew's Gardens, 13, 15, and 17	13-4-32	—	—	All occupied. Houses reconditioned by owner.
Silver Street, 31, 33, 35, 37, and 39	11-3-31	—	—	Education Committee asked to demolish property. (All five houses vacant).

TABLE 14. NORTHAMPTON, 1933.

## UN SOUND FOOD VOLUNTARILY SURRENDERED AND DESTROYED.

NATURE OF FOOD.	WEIGHT.			
	TONS.	CWTS.	QRS.	LBS.
Beef, home killed .....	16	10	1	3
Beef, imported .....	—	2	2	6
Mutton, home killed .....	1	10	1	19
Mutton, imported .....	—	—	2	6
Offal, home killed .....	2	15	0	9
Pork, home killed .....	6	2	2	15
Veal, home killed .....	—	5	2	10
Bacon .....	—	—	1	11
Fish .....	2	3	0	6
Goat .....	—	—	1	4
Ham .....	—	—	2	12
Total .....	29	11	1	17

Also 6,449 tins of food, 49 jars of pickles, 3 ducks, 202 rabbits, and 4 turkeys.  
There were 863 surrenders ; also one seizure (*see* below).

TABLE 15. NORTHAMPTON, 1933.

## UN SOUND FOOD SEIZED, CONDEMNED BY A MAGISTRATE, AND DESTROYED.

NATURE OF FOOD.	WEIGHT.			PLACE OF SEIZURE.	REMARKS.
	Cwts.	Qrs.	Lbs.		
Pork, home killed.	2	2	17	Cattlemarket Slaughterhouse.	No legal action taken.

TABLE 16. NORTHAMPTON, 1924-1933.

UN SOUND FOOD. AMOUNT DEALT WITH BY THE DEPARTMENT IN  
EACH OF THE LAST TEN YEARS.

YEAR.	WEIGHT.			
	TONS.	CWTS.	QRS.	LBS.
1924 .....	41	19	3	7
1925 .....	35	13	0	5
1926 .....	44	12	3	6
1927 .....	35	3	2	18
1928 .....	31	13	1	25
1929 .....	36	6	2	18
1930 .....	37	14	1	25
1931 .....	34	1	3	12
1932 .....	34	14	2	18
1933 .....	29	14	0	6*

\*This is the total of the amounts shewn in Tables 14 and 15.

TABLE 17. NORTHAMPTON, 1933.

UN SOUND FOOD. STATEMENT OF CARCASSES OF MEAT CONDEMNED,  
SHEWING NUMBER AFFECTED WITH TUBERCULOSIS.

NATURE OF FOOD.	MEAT CONDEMNED.		MEAT FOUND TO BE TUBERCULOUS.	
	WHOLE CARCASSES.	PART CARCASSES.	WHOLE CARCASSES.	PART CARCASSES.
Beef .....	66	47	39	36
Mutton .....	82	0	0	0
Pork .....	75	224	33	220
Veal .....	8	0	1	0

TABLE 18. NORTHAMPTON, 1933.  
FOOD AND DRUGS. SAMPLES TAKEN FOR ANALYSIS.

NATURE OF SAMPLE.	INFORMAL SAMPLES.		OFFICIAL SAMPLES.	
	TOTAL NUMBER.	NO. NOT GENUINE.	TOTAL NUMBER.	NO. NOT GENUINE.
Ammoniated Tincture of Quinine .....	—	—	2	—
Arrowroot .....	2	—	—	—
Butter .....	1	—	13	—
Camphorated Oil .....	2	—	2	—
Cocoa .....	5	—	—	—
Coffee .....	1	—	2	—
Cream of Tartar .....	2	—	—	—
Custard Powder .....	1	—	—	—
Dripping .....	—	—	6	—
Fruit (bottled) .....	1	—	—	—
Ground Almonds .....	4	—	—	—
Ground Ginger .....	2	—	—	—
Jam .....	1	—	4	1
Lard .....	—	—	7	—
Lime Juice .....	1	—	—	—
Liquorice Powder .....	4	—	—	—
Margarine .....	—	—	4	—
Milk .....	93	13	135	20
Milk (condensed) .....	2	—	—	—
Milk (skim) .....	—	—	2	—
Mint Sauce .....	1	1	—	—
Olive Oil .....	2	—	—	—
Orange Quinine Wine ..	2	—	—	—
Pepper .....	4	—	—	—
Rice .....	5	—	2	—
Sausages .....	8	—	—	—
Sugar .....	6	—	—	—
Tea .....	4	—	—	—
Vinegar .....	—	—	5	—
Totals .....	154*	14	184*	21

\*A total of 338 samples, 35 of which (10·4 per cent.) were found not to be genuine.

TABLE 19. NORTHAMPTON, 1933.  
ENTERICA, SCARLET FEVER, AND DIPHTHERIA.

Disease.	Notifica- tions.	Attack- rates per 1,000.	Deaths.	Death- rates.	Fatality.	Numbers removed to Hospital.	Removal rates per cent.
Enterica	2	0·02	8*	0·08	—	1†	50·0
Scarlet Fever	163	1·69	0	—	—	110‡	67·5
Diphtheria	13	0·13	1	0·01	7·7	11§	84·6

\*These eight deaths occurred at Berrywood Mental Hospital and were received as "inward transferable deaths."

†This was a County case, notified for the first time when under treatment at the General Hospital.

‡One was admitted to the Infectious Diseases Hospital, Harborough Road, and was transferred two days later to the General Hospital for operation.

§One was transferred to the General Hospital for operation after twelve days' treatment at the Infectious Diseases Hospital.

TABLE 20. NORTHAMPTON, 1933.  
BOROUGH INFECTIOUS DISEASES HOSPITAL, HARBOROUGH ROAD.  
CASES UNDER TREATMENT.

	Scarlet Fever.	Diph- theria.	Erysip- elas.	Pneu- monia.	Chicken- pox.	Totals.
Remaining at end of 1932 ..	2	1	1	—	—	4
Admitted during 1933 .....	109	12	2	3	1	127
Discharged during 1933 .....	100	10	3	2	1	116
Died during 1933 .....	—	1	—	1	—	2
Remaining at end of 1933 ..	11	2	—	—	—	13

TABLE 21. NORTHAMPTON, 1933.  
NUMBER OF ARTICLES DISINFECTED BY STEAM MONTH BY MONTH AT  
THE DISINFECTING STATION, ST. ANDREW'S ROAD.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
307	377	407	309	366	185	294	250	417	495	396	503	4306

TABLE 22. NORTHAMPTON, 1933.  
 CLINICAL BACTERIOLOGY. NUMBER OF SUSPECTED CASES IN WHICH EXAMINATION WAS  
 MADE AND THE NUMBER AND NATURE OF THE REPORTS RECEIVED IN CONNECTION WITH THESE.

DIPHtheria— Throat and Nose Secretions.	TYPHOID AND PARATYPHOID FEVERS— Dreyer's Tests, etc.			TUBERCULOSIS— Sputum, Urine, etc.			OTHER CONDITIONS.			TOTALS.					
	No. of Suspected Cases.	Reports received.			No. of Suspected Cases.	Reports received.			No. of Suspected Cases.	Reports received.					
		Positive.	Negative.	Total.		Positive.	Negative.	Total.		Positive.	Negative.	Total.			
194	14	229	243	9	9	435	138	398	536	1	1	639	154	635	789

The above Table does not take into account the reports made in connection with the venereal diseases scheme.

TABLE A.  
 COUNTY BOROUGH OF NORTHAMPTON.  
 Vital Statistics during 1933 and Previous Years.

Year.	Total Population estimated to Middle of each Year.	Births.			Total Deaths registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.		Number.	Rate.	Non-residents registered in the District.	Residents not registered in the District.	Under One Year.		At all Ages.	
			Number.	Rate.					Number.	Rate per 1,000 Live Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1901	87096	2345	2345	26.9	1269	14.6	62	9	335	142.9	1216	14.0
1902	87397	2272	2272	26.0	1358	15.5	75	11	301	132.5	1294	14.8
1903	87699	2194	2194	25.0	1307	14.9	88	10	301	137.2	1219	13.9
1904	88002	2102	2102	23.9	1293	14.7	108	9	279	132.7	1185	13.5
1905	88306	1937	1937	21.9	1243	14.1	84	8	239	123.4	1159	13.1
1906	88610	1985	1985	22.4	1108	12.5	77	22	240	120.9	1061	12.0
1907	88915	1956	1956	22.0	1209	13.6	98	37	235	120.1	1151	12.9
1908	89223	2043	2043	22.9	1192	13.4	93	32	198	96.9	1131	12.7
1909	89534	1957	1957	21.9	1332	14.9	84	46	215	109.9	1294	14.5
1910	89843	1900	1900	21.1	1177	13.1	84	36	209	110.0	1129	12.6
1911	90152	1930	1931	21.4	1240	13.8	86	46	250	129.5	1200	13.3
1912	90467	1932	1935	21.4	1172	13.0	120	45	140	72.4	1097	12.1
1913	90793	1868	1868	20.6	1233	13.6	114	61	175	93.7	1180	13.0
1914	91123	1854	1857	20.4	1331	14.6	133	55	164	88.3	1253	13.8
1915	91123	1748	1754	19.2	1562	17.3	109	83	236	134.5	1536	17.0
1916	93709	1883	1893	20.2	1206	14.0	116	58	127	67.1	1148	13.3
1917	91932	1466	1471	16.0	1217	14.8	128	86	128	87.0	1175	14.2
1918	90884	1316	1313	14.4	1426	17.6	122	81	121	92.2	1385	17.1
1919	92653	1432	1411	15.2	1301	14.6	137	54	116	82.2	1218	13.7
1920	92950	2318	2248	24.2	1137	12.3	130	40	166	73.8	1047	11.3
1921	92300	1924	1881	20.4	1022	11.1	123	65	124	65.9	964	10.4
1922	92950	1697	1646	17.7	1108	11.9	116	54	86	52.2	1046	11.3
1923	93230	1723	1662	17.8	1177	12.6	140	49	95	57.2	1086	11.6
1924	93800	1591	1534	16.4	1143	12.2	149	42	80	52.1	1036	11.1
1925	93970	1531	1471	15.6	1229	13.1	167	54	98	66.6	1116	11.9
1926	93740	1393	1309	14.0	1163	12.4	174	75	72	55.0	1064	11.4
1927	93260	1362	1281	13.7	1248	13.4	170	46	78	60.9	1124	12.0
1928	94270	1366	1308	13.9	1204	12.8	207	63	70	53.5	1060	11.3
1929	94180	1332	1249	13.3	1269	13.5	226	50	66	52.8	1093	11.6
1930	93460	1334	1224	13.1	1217	13.0	193	48	69	56.4	1072	11.5
1931	92970	1307	1233	13.3	1243	13.4	205	53	87	70.6	1091	11.8
1932	96730	1326	1244	13.0	1265	13.2	207	50	80	64.3	1108	11.6
1933	96630	1236	1152	11.9	1277	13.2	236	50	52	45.1	1091	11.3

This Table is arranged to shew the gross births and deaths in the district and the births and deaths properly belonging to it, with the corresponding rates.

From 1915 to 1931 the death-rates are calculated on the estimated civil populations supplied by the Registrar-General for that purpose.

The birth-rate and death-rate for 1932 are calculated on a mean population of 95,670, owing to the Borough extension on 1st April, 1932.

**TABLE B.**  
**COUNTY BOROUGH OF NORTHAMPTON.**  
**Cases of Notifiable Diseases during the Year 1933.**

NOTIFIABLE DISEASES.	NUMBER OF CASES NOTIFIED.													CASES NOTIFIED IN EACH WARD.										Cases Admitted to Borough Hospitals.	Total Deaths (see Table C).				
	ALL AGES.	AGES (IN YEARS).												Castle.	Delapre.	Kingsley.	Kingsthorpe.	St. Crispin's.	St. Edmund's.	St. George's.	St. James'.	St. Michael's.	South.			Spencer.	Weston.		
		0-	1-	2-	3-	4-	5-	10-	15-	20-	35-	45-	65-																
Cerebro-spinal Fever .....	2	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—		
Diphtheria .....	13	—	2	1	2	—	4	2	1	—	—	1	—	1	1	—	7	—	1	1	1	—	1	—	—	—	—	11	1
Enterica .....	2	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	8
Erysipelas .....	30	—	—	—	—	—	1	—	3	7	8	9	2	2	4	2	3	2	3	5	2	2	3	1	1	1	1	2	1
Malaria (contracted abroad) ..	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum .....	4	4	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1	1	—	—	—	—	—	—	—	—
Pneumonia .....	47	10	13	14	8	3	31	12	14	40	33	42	27	44	27	11	13	30	18	16	24	19	11	24	10	3	83*	—	
Puerperal Fever .....	4	—	—	—	—	—	—	—	—	—	4	—	—	—	1	—	1	—	—	1	1	—	—	—	—	—	—	—	1
Puerperal Pyrexia .....	11	—	—	—	—	—	—	1	10	—	—	—	—	1	—	2	1	—	—	—	—	2	4	1	—	—	—	—	—
Scarlet Fever .....	163	—	2	10	11	16	90	17	9	6	2	—	—	13	23	18	12	21	9	15	8	17	6	12	9	110	—	—	—
Tuberculosis :— Respiratory .....	106	—	—	—	—	—	—	—	13	51	19	22	1	19	4	10	6	12	9	7	9	9	6	10	5	60†	63	—	
Other Forms .....	29	—	1	2	3	1	10	2	3	4	—	3	—	12	1	2	3	3	2	3	—	1	2	—	—	11‡	12	—	
Totals .....	612	14	18	27	24	20	136	33	45	125	62	78	30	93	61	45	46	68	43	50	46	51	36	48	25	197	169	—	

\*Seventeen of these were from influenzal pneumonia.

†Forty-five to Welford Road Hospital and fifteen to Creaton Sanatorium.

‡Nine to Manfield Orthopaedic Hospital, one to Creaton Sanatorium, and one to Shipman Convalescent Home.

The above figures take no account of corrections in diagnosis. (See Section VI. of this Report for further information).

- INSTITUTIONS :—(1) Harborough Road Infectious Diseases Hospital (85 beds, allowing 144 sq. ft. per bed) ;  
(2) Smallpox Hospital, near Hardingstone (48 beds, allowing 144 sq. ft. per bed) ;  
(3) Welford Road Tuberculosis Hospital (32 beds) ;  
(4) Creaton Sanatorium, Northampton (15 beds reserved for Northampton County Borough) ;  
(5) Manfield Orthopaedic Hospital, Northampton (20 beds available for surgical tuberculosis cases).





TABLE C.

COUNTY BOROUGH OF NORTHAMPTON.

Causes of Death at Different Periods of Life during the Year 1933.

CAUSES OF DEATH.	NETT DEATHS AT THE SUBJOINED AGES (IN YEARS) OF " RESIDENTS "														Total Deaths whether of Residents or Non-Residents in Institutions in the District.
	ALL AGES.			0-	1-	2-	5-	15-	25-	35-	45-	55-	65-	75-	
	Total.	M.	F.												
ALL CAUSES (Certified ..... Uncertified .....	1088 3	551 3	537 —	52 —	6 —	9 —	13 —	45 —	44 —	68 —	101 1	165 —	280 2	305 —	505 —
1. Typhoid and Paratyphoid Fevers	8	7	1	—	—	—	—	—	2	4	1	1	—	—	—
2. Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Whooping Cough	3	2	1	2	1	—	—	—	—	—	—	—	—	—	—
5. Diphtheria	1	—	1	—	—	—	1	—	—	—	—	—	—	—	1
*6. Influenza	46	22	24	—	—	—	—	4	1	6	11	5	8	11	5
7. Encephalitis Lethargica	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8. Cerebro-spinal Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
9. Tuberculosis of Respiratory System	63	30	33	—	—	1	—	14	21	9	13	4	1	—	11
*10. Other Tuberculous Diseases	12	5	7	—	—	2	—	3	1	—	3	—	1	—	20
11. Syphilis	2	1	1	1	—	—	—	—	—	—	—	—	1	—	1
12. General Paralysis of the Insane, Tabes Dorsalis	4	2	2	—	—	—	—	—	—	1	—	1	2	—	1
13. Cancer, Malignant Disease	175	78	97	—	—	—	1	—	1	13	20	36	67	37	78
14. Diabetes	17	7	10	—	—	—	1	1	—	1	—	6	4	4	17
15. Cerebral Hæmorrhage, etc.	63	21	42	—	—	—	—	—	—	1	7	17	20	18	14
16. Heart Disease	271	133	138	—	—	—	—	2	4	6	13	47	96	103	61
17. Aneurysm	2	1	1	—	—	—	—	—	—	—	1	—	—	1	—
*18. Other Circulatory Diseases	38	22	16	—	—	—	—	—	—	—	2	4	8	24	17
19. Bronchitis	43	20	23	2	—	—	—	2	—	1	1	—	7	30	19
*20. Pneumonia (all forms)	66	42	24	9	1	5	2	1	6	7	7	11	8	9	39
21. Other Respiratory Diseases	14	8	6	—	—	—	—	2	—	3	2	1	3	3	8
22. Peptic Ulcer	10	6	4	—	—	—	—	—	—	2	1	5	2	—	14
23. Diarrhœa, etc.	6	4	2	4	—	—	—	—	—	—	1	—	1	—	3
24. Appendicitis	6	5	1	—	—	—	—	—	—	—	1	2	2	1	16
25. Cirrhosis of Liver	3	2	1	—	—	—	—	—	—	—	1	1	—	1	1
26. Other Diseases of Liver, etc.	2	2	—	1	—	—	—	—	—	—	—	—	1	—	2
27. Other Digestive Diseases	13	7	6	—	2	—	—	1	2	—	—	2	2	2	22
28. Acute and Chronic Nephritis	26	14	12	—	—	—	—	1	1	1	4	3	10	6	14
29. Puerperal Sepsis	1	—	1	—	—	—	—	1	—	—	—	—	—	—	2
30. Other Puerperal Causes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
31. Congenital Debility, Premature Birth, Malformations, etc.	31	22	9	30	—	1	—	—	—	—	—	—	—	—	9
32. Senility	39	16	23	—	—	—	—	—	—	—	—	1	4	34	11
33. Suicide	12	9	3	—	—	—	—	—	—	2	2	6	2	—	2
34. Other Violence	32	19	13	1	1	—	3	8	1	3	1	4	3	7	29
*35. Other Defined Causes	78	43	35	2	1	—	3	4	4	6	9	8	27	14	83
36. Causes Ill-defined or Unknown	4	4	—	—	—	—	—	1	—	—	1	—	2	—	2
Totals	1091	554	537	52	6	9	13	45	44	68	102	165	282	305	505
*Sub-entries included in above figures															
6 (a) Influenzal Pneumonia	17	9	8	—	—	—	—	1	1	4	5	1	1	4	2
10 (a) Tuberculous Meningitis	6	2	4	—	—	2	2	2	—	—	—	—	—	—	9
18 (a) Arterio-sclerosis	33	20	13	—	—	—	—	—	—	—	1	4	7	21	13
20 (a) Broncho-pneumonia	28	16	12	8	1	3	1	1	—	2	3	1	5	3	14
35 (a) Erysipelas	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2
(b) Rheumatic Fever	2	1	1	—	—	—	—	1	—	—	1	—	—	—	3
(c) Meningitis	1	—	1	—	—	—	1	—	—	—	—	—	—	—	4

NETT DEATHS REGISTERED.

	M.	F.	TOTALS.	DEATH-RATES.
First Quarter	192	189	381	15.8
Second Quarter	103	102	205	8.5
Third Quarter	103	92	195	8.1
Fourth Quarter	156	154	310	12.8
Totals (52 weeks)	554	537	1091	11.3



TABLE D.  
COUNTY BOROUGH OF NORTHAMPTON.  
INFANT MORTALITY DURING THE YEAR 1933.

Nett Deaths from stated Causes at various Ages under One Year.

CAUSES OF DEATH.		Under 1 week.	1 week and under 2 weeks.	2 weeks and under 3 weeks.	3 weeks and under 4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year.
ALL CAUSES	Certified .....	24	5	3	1	33	4	7	5	3	52
	Uncertified .....	—	—	—	—	—	—	—	—	—	—
1.	Smallpox .....	—	—	—	—	—	—	—	—	—	—
2.	Chickenpox .....	—	—	—	—	—	—	—	—	—	—
3.	Measles .....	—	—	—	—	—	—	—	—	—	—
4.	Scarlet Fever .....	—	—	—	—	—	—	—	—	—	—
5.	Whooping Cough .....	—	—	—	—	—	—	1	—	1	2
6.	Diphtheria .....	—	—	—	—	—	—	—	—	—	—
7.	Erysipelas .....	—	—	—	—	—	—	—	—	—	—
8.	Tuberculous Meningitis .....	—	—	—	—	—	—	—	—	—	—
9.	Abdominal Tuberculosis .....	—	—	—	—	—	—	—	—	—	—
10.	Other Tuberculous Diseases .....	—	—	—	—	—	—	—	—	—	—
11.	Meningitis ( <i>not Tuberculous</i> ) .....	—	—	—	—	—	—	—	—	—	—
12.	Convulsions .....	1	—	—	—	1	—	—	—	—	1
13.	Laryngitis .....	—	—	—	—	—	—	—	—	—	—
14.	Bronchitis .....	1	1	—	—	2	—	—	—	—	2
15.	Pneumonia (all forms) .....	—	—	—	—	—	—	4	4	1	9
16.	Diarrhoea .....	—	—	—	—	—	—	—	—	—	—
17.	Enteritis .....	—	1	—	—	1	2	—	1	—	4
18.	Gastritis .....	—	—	—	—	—	—	—	—	—	—
19.	Syphilis .....	—	—	—	—	—	1	—	—	—	1
20.	Rickets .....	—	—	—	—	—	—	—	—	1	1
21.	Suffocation, overlaying .....	—	—	—	—	—	—	—	—	—	—
22.	Injury at Birth .....	—	—	—	—	—	—	—	—	—	—
23.	Atelectasis .....	2	—	—	—	2	—	—	—	—	2
24.	Congenital Malformations .....	4	—	—	—	4	—	1	—	—	5
25.	Premature Birth .....	8	—	1	—	9	1	—	—	—	10
26.	Atrophy, Debility, and Marasmus ..	6	2	2	1	11	—	—	—	—	11
27.	Other Causes .....	2	1	—	—	3	—	1	—	—	4
Totals .....		24	5	3	1	33	4	7	5	3	52

	Live Births Registered.				Nett Deaths Registered.				Infant Death-rates.		
	M.	F.	Total.		M.	F.	Total.		M.	F.	Total.
Legitimate ..	564	553	1117	..	31	19	50	..	55.0	34.4	44.8
Illegitimate ..	19	16	35	..	1	1	2	..	52.6	62.5	57.1
Totals ..	583	569	1152	..	32	20	52	..	54.9	35.1	45.1



TABLE E. NORTHAMPTON, 1933.

REPORT ON THE  
Administration of the FACTORY and WORKSHOP ACT, 1901, in connection with  
**Factories, Workshops, Workplaces, and Homework.**

1.—INSPECTION.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
FACTORIES (Including Factory Laundries and Bakehouses)	238	32	—
WORKSHOPS (Including Workshop Laundries and Bakehouses)	191	17	—
WORKPLACES (Other than Outworkers' Premises)	178	21	—
OUTWORKERS' PREMISES	153	5	—
Totals	760	75	—

2.—DEFECTS FOUND.

Particulars. (1)	Number of Defects.			Number of Prosecutions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of Cleanliness	12	12	—	—
Want of Ventilation	—	—	—	—
Overcrowding	—	—	—	—
Want of Drainage of Floors	—	—	—	—
Other Nuisances	11	11	—	—
Sanitary Accommodation	4	3	—	—
	3	3	—	—
(insufficient)	—	—	—	—
(unsuitable or defective)	—	—	—	—
(not separate for sexes)	—	—	—	—
<i>Offences under the Factory and Workshop Acts :—</i>				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	42	42	—	—
Other Offences (Excluding offences relating to outwork which are included in Part 3 of this Report)	3	—	3	—
Totals	75	71	3	—

\*Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

3.—HOMEWORK.

NATURE OF WORK. (1)	OUTWORKERS' LISTS, SECTION 107.							OUTWORK IN UNWHOLE-SOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.				
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists. (8)	Prosecutions.		Instances. (11)	Notices served. (12)	Prosecutions. (13)	Instances. (14)	Orders made. (S. 110). (15)	Prosecutions. (Sections 109, 110). (16)
	Sending twice in a year.			Sending once in the year.				Failing to keep or permit inspection of lists. (9)	Failing to send lists. (10)						
	Lists. (2)	Con-tractors. (3)	Work-men. (4)	Lists. (5)	Con-tractors. (6)	Work-men. (7)									
WEARING APPAREL :— (1) Making, etc.	4	—	4	4	2	159	—	—	—	—	—	—	—	—	—

There are no Outworkers in any of the other trades usually shown in the above Table.

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year. (1)	Number. (2)
Number of Workshops (including Bakehouses)	159
Number of Outworkers' Premises on Register	163
TOTAL Number of Workshops on Register	322

5.—OTHER MATTERS.

Class. (1)	Number. (2)
<b>MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES :—</b>	
Failure to affix abstract of Factory and Workshop Act (s. 133)	3
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 8)	Notified by H.M. Inspector
	Reports (of action taken) sent to H.M. Inspector
Other	—
Underground Bakehouses (s. 101) in use at the end of the year	1

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
FACULTY OF DIVISION OF PHYSICAL SCIENCES

RESEARCH REPORT  
NO. 1000  
BY  
J. H. GOLDSTEIN  
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