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CITY AND COUNTY OF NEWCASTLE UPON TYNE

ANNUAL REPORT

OF THE


MEDICAL OFFICER OF HEALTH

ON THE

Sanitary Condition of the City

DURING THE YEAR

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**To Alderman WALTER THOMPSON, J.P., Chairman
of the Health Committee of the Corporation.**

I have the honour to submit this, the seventieth annual report of the Medical Officer of Health on the sanitary conditions of the City.

Before proceeding to narrate the events of 1942, to describe trends and tendencies, and to discuss statistical records of the year, it will be interesting to consider some of the outstanding features of the first report of this now extensive series, and to follow, even briefly, the changes which seventy years of progress have brought about.

There is an abundance of evidence to show the grievous state of Newcastle in the first thirty years of Victoria's reign. One official document after another reviewed and criticised the conditions under which life was carried on in the poorer parts of the town—the untrustworthy water supplies, the malodorous middens, the noisome hovels, the recurrent outbreaks of typhus, scarlet fever and cholera, which swept down so many victims that in 1846 the deaths for the year materially exceeded the births.

The members of the Health of Towns Commission in 1845, the Royal Commission on the Cholera in 1854, and an independent body appointed in 1866, which was composed of representatives of the Town Improvement Committee, the Board of Guardians, and the medical profession of the town, all these disinterested investigators in turn catalogued the defects of the town, enumerated the accumulation of sanitary wrongs, castigated the negligent members of the Town Council and offered suggestions for improvement, which included the appointment of a Medical Officer of Health.

The historians of Newcastle tell us, having for their authority the town's accounts, that in 1599 the Corporation appointed a town physician "to help cure the poor sick folk." The practice appears to have died out towards the end of the Civil War and the next official physicians we hear of were the Parish doctors who administered to the successors of these poor sick folk such medical relief as was necessary to satisfy the meagre requirements of the Poor Law Guardians.

In 1847, Liverpool appointed the first Medical Officer of Health in England, and a year later the City of London followed this example by taking Mr. John Simon from his surgical appointment at St.

Thomas' Hospital to become its Medical Officer of Health and, in due course, Medical Officer to the Privy Council and the Local Government Board, and the greatest public health administrator of the century.

Even though the Public Health Act of 1848 had empowered local authorities to appoint Medical Officers of Health, Newcastle had to pass a further quarter of a century under an insanitary cloud, to experience three epidemics of waterborne cholera, to survive a holocaust of scarlet fever which in 1866 attacked 9,000 persons and killed 500 of its victims, before its Council reluctantly complied with the recommendation of the Public Health Act of 1871 by appointing Mr. Henry Armstrong to the posts of Medical Officer of Health, Medical Superintendent of the Fever Hospital and (if he acquired the necessary qualifications) of Public Analyst also.

Prior to the meeting in July, 1873, at which the appointment was made, the Parish doctors had sedulously canvassed the Council with the suggestion that each of them might be regarded as the Medical Officer of Health for his district. This proposal was sponsored by one of the two medical members of the Council, and was defeated by 17 votes to 12. The medical gentlemen referred to contended that a whole-time salaried medical officer would be nothing "but a walking gentleman, who, having a nose would smell anything which was disagreeable or not." Another member recorded his protest for posterity by saying that the appointment would be of no more use to the town than an umbrella to a duck.

It is difficult in these days to realise the complacency of the general public and of the medical profession in matters relating to the healthiness of the town. Anything disagreeable was greeted with a blind eye; any inopportune statistics were explained away with an assurance both ingenious and ingenuous. Only a month after the Medical Officer had taken up his duties the question of the local death rate, which was stated at that time (September 1873) to be 38 per 1,000, was debated by the Council. Both the medical members doubted the correctness of the figure, and declared that in their experience there was very little sickness in the town, while their colleagues were at a loss to tell where the deaths came from. One explanation tendered was to the effect that there were many burial clubs, and that in order to obtain the insurance money parents registered the death of their children when they had never been born alive at all. Whatever reliance may be placed

on this statement, it cannot explain away the fact that amongst a total population of 133,246 persons, there were 3,009 deaths of individuals over the age of one year, in 1873, or an average of 58 such deaths each week.

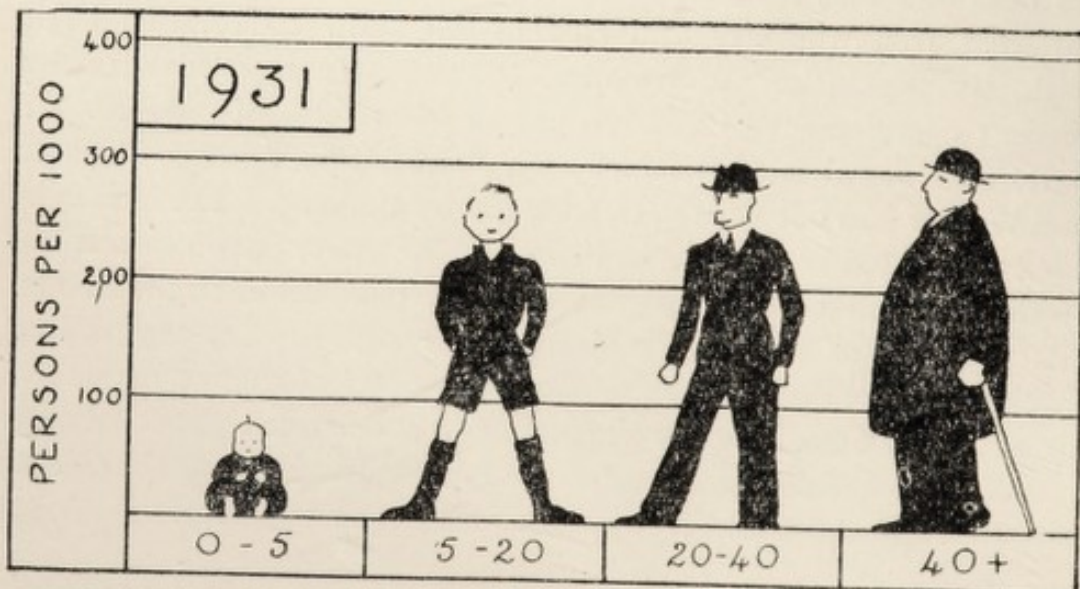
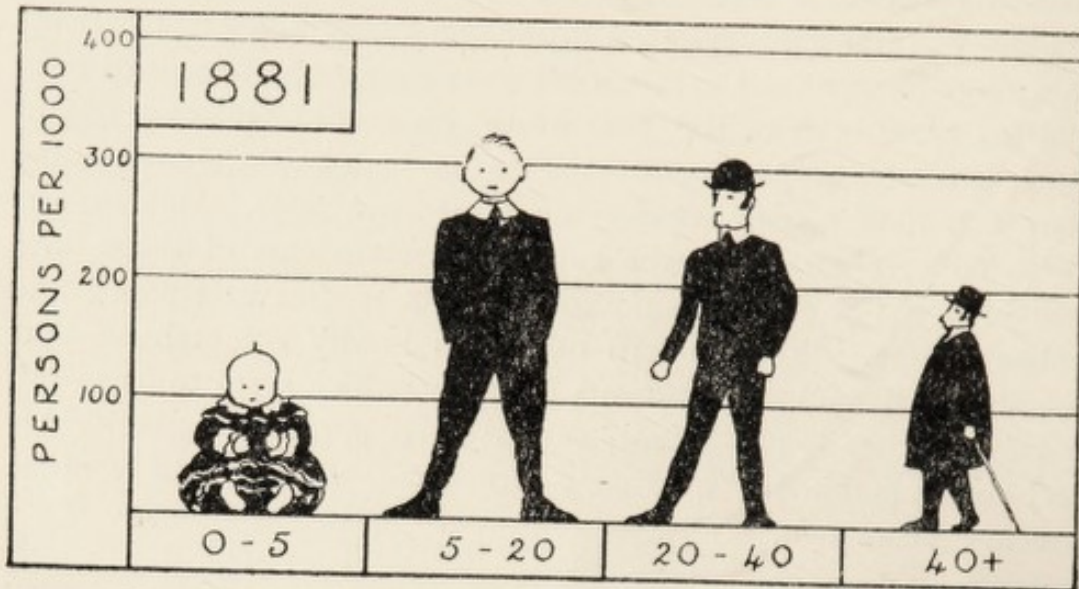
One must accept it as true that the conditions of 1873 were an improvement upon those of earlier times, that the memory of the cholera was disappearing, that typhus no longer killed 224 patients in a single year, that the infantile mortality rate had declined from 222 per 1,000 born to 186, that by the excess of births over deaths the town was adding 1,500 souls to its population annually and that 400 new houses were being built each year. But despite these minor changes for the better, the Newcastle of those days was only a few stages removed from its mediaeval squalor and unhealthiness. The modern mind can hardly comprehend that the standards and achievements of today, which seem to us to call out for further improvement, would have appeared unbelievable and unattainable to Dr. Henry Armstrong when he took office seventy years ago.

Let us display for a few moments the records of 1873 and 1942 in juxtaposition and contrast them one with another. Both in its buildings and its inhabitants the Newcastle of 1873 was very different from the city and citizens we know today. To begin with, its population was smaller, 133,246 as compared with our present complement of 254,100 or our 1939 total of 293,400. In part, this was due to the fact that Benwell, Scotswood, Fenham and Walker had not then been enclosed by the city. The citizen of 1942 translated backwards in time to 1873 would have commented on the youthfulness of the population he saw about him in the streets. His predecessor of 1873 projected into our present-day milieu would have wondered at the relative senescence of his new acquaintances. It is unfortunately impossible to set out the age constitutions of the populations in the two years under review, but the census data for 1881 and 1931 give us some idea of the disparity.

In 1881, out of every thousand Newcastle males 144 were under the age of 5 ; 325 were between the ages of 5 and 20 ; 319 were between 20 and 40 ; while 212 had passed their fortieth birthday. The census of 1931 shewed that the first age group only included 86 of the males, while 286 were between 5 and 20 ; 305 between 20 and 40 ; and 323 were over forty years of age. Almost certainly we would find, if the necessary data were available, that

by 1943 an even higher percentage were in the ranks of the middle aged and elderly. Sketch chart I seeks to convey this information in a graphic manner.

AGE DISTRIBUTION OF 1,000 MALES IN NEWCASTLE UPON TYNE.



The town of 1873 was more widely dispersed ; it scattered 17,581 houses over its 5,371 acres, giving 3.3 houses to the acre. The modern city has 81,176 houses and an area of 11,401 acres. The density of houses is thus 7.1 per acre. On the other hand, the citizen of 1873 was exposed to a degree of overcrowding which grossly

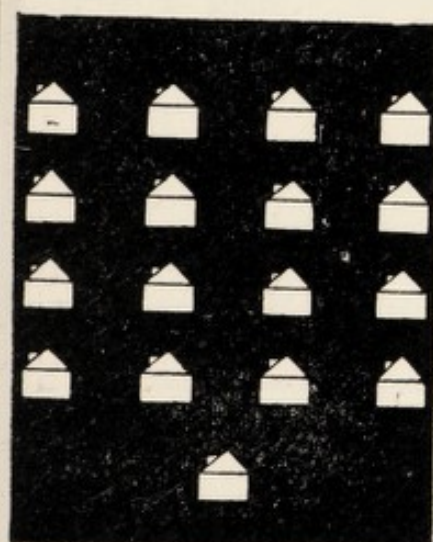
exceeded our current experience. Each house had then 7.6 residents on an average. The comparable figure for the household of 1939 (i.e., the last year with a normal population) was 3.6 persons. Sketch charts II and III illustrate these points.

AREA OF NEWCASTLE AND HOUSES.

1 HOUSE (SKETCHED) = 1,000 HOUSES.

1942

1873



17,581	5,371
HOUSES	ACRES



81,176	11,401
HOUSES	ACRES

In financial resources the mid-victorian town lagged far behind the city of today. Its rateable value was £570,000 with a penny rate producing no more than £1,957. On a rateable value of £2,737,000 a penny rate levied in 1942 yielded £10,762.































































It is when we come to consider the vital statistics that we realise in what differing ratios, natality and mortality, the inescapable phenomena of life, manifested themselves at the two periods. Though the population in 1873 was little more than half of that of

OVERCROWDING.

HOUSES PER ACRE AND PERSONS PER HOUSE IN
NEWCASTLE UPON TYNE.

1873

1942

HOUSES PER ACRE = 3·3	HOUSES PER ACRE = 7·1
        	        
        	       
        	       
   	     
PERSONS PER HOUSE = 7·6	PERSONS PER HOUSE = 3·1
PERSONS PER ACRE = 25·1	PERSONS PER ACRE = 22·0

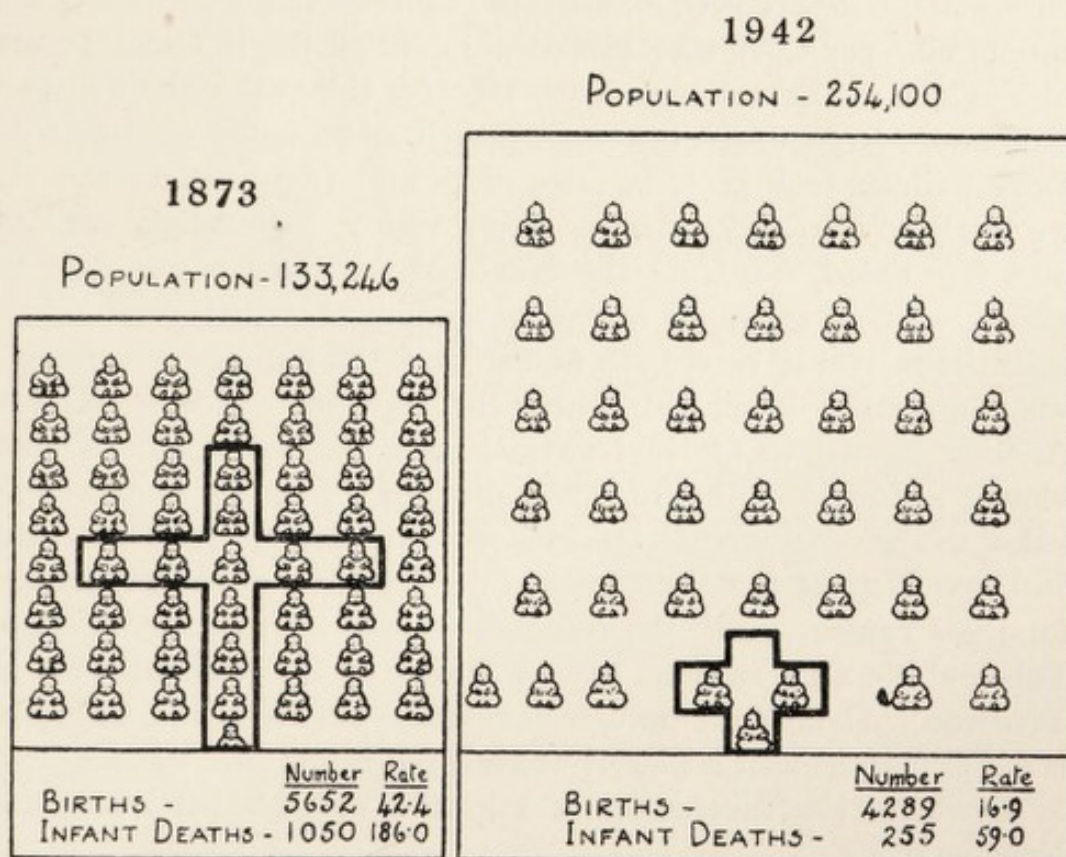
1942, its actual as well as its relative fertility was much greater. 5,652 births, equivalent to a birth rate of 42·4 per 1,000 population, was the record of 1873, beside which the tally of 1942, namely 4,289 births and a birth-rate of 16·9 seems comparatively insignificant. Fertility avails little in the absence of infant and child care, and of these in 1873 there was little evidence. Child life was a delicate plant and casualties were to be expected. One thousand and fifty died during 1873 before they had attained their first birthday—equal, as we would say today, to an infantile mortality rate of 186 per 1,000 born. And of these 1,050 victims scarlet fever, measles, diphtheria and whooping cough accounted for 63, but the greatest killer was convulsions, to which were assigned 223. That there was death in the feeding bottle is shown also by the record of 163 deaths from diarrhoea and other acute bowel disorders, and of 74 fatal cases of tuberculosis of the intestines. Between them, the several diseases which we have singled out for attention

were responsible for 512 or 50% of the total number of deaths under one year.

In 1942 there were fewer infantile deaths than in any previous year and 255 only were registered, giving us our lowest recorded infantile mortality rate of 59 per thousand births. Sketch Chart No. IV. enables us to see at a glance the comparison between 1873 and 1942.

BIRTHS AND INFANT DEATHS.

EACH FIGURE REPRESENTS 100 INFANTS.



The diseases which had played such havoc in 1873 had not succumbed themselves in 1942, but they had been shorn of much of their fatality, for between them they found but 46 victims. During the seventies, the wastage of young life extended far beyond the first year. There was no swift transition from the storm and stress and mortality of the first year of life into the relative safety and salubrity of the second year, such as we know today. Nor were the dangers dogging the child from 3 to 5 years materially reduced. Specific death rates per 1,000 children living at the particular age groups are not available, but the comparison of the actual deaths at

the various ages in 1873 and 1942 is sufficiently telling. Here are the figures :—

	1873	1942
Population	133,246	254,100
Births	5,652	4,289
Deaths in 1st year of life	1,050	255
„ 2nd „ „ 	375	29
„ 3rd „ „ 	456	54

We have already heard how the general death rate was the subject of a Council debate in the month of September, 1873. There was some cause for the discussion for by the end of 1873, Newcastle, together with Manchester, by achieving a general death rate of 30.5 per 1,000 took precedence over all the 18 Great Towns of England. The national death rate for the year was 20.8, and there were large towns like Portsmouth and smaller ones such as Dover, which took pride in rates of 18 and 15.5 respectively. If we analyse the 4,059 deaths upon which Newcastle's rate of 30.5 was based, and trace the causes of mortality which were in excess, we note at once how the association of a birth rate and an infantile mortality rate, both higher than the national experience, were important factors in giving the city its invidious repute. Another hazard to life in Newcastle was the heavy, the almost violent incidence of the infectious diseases. A group of these entitled the Seven Zymotic Diseases were responsible for 919 deaths and gave Newcastle a death rate of 6.9 per 1,000 of the population for these causes alone; the comparable rate for England being 3. Tuberculosis also, then as now, was one of the endemic evils of Tyneside. Though the difference between local and national rates is not as marked as it is now, it was fairly substantial. For England as a whole, the tuberculosis death rate was 2.9 per 1,000; for Newcastle 3.7.

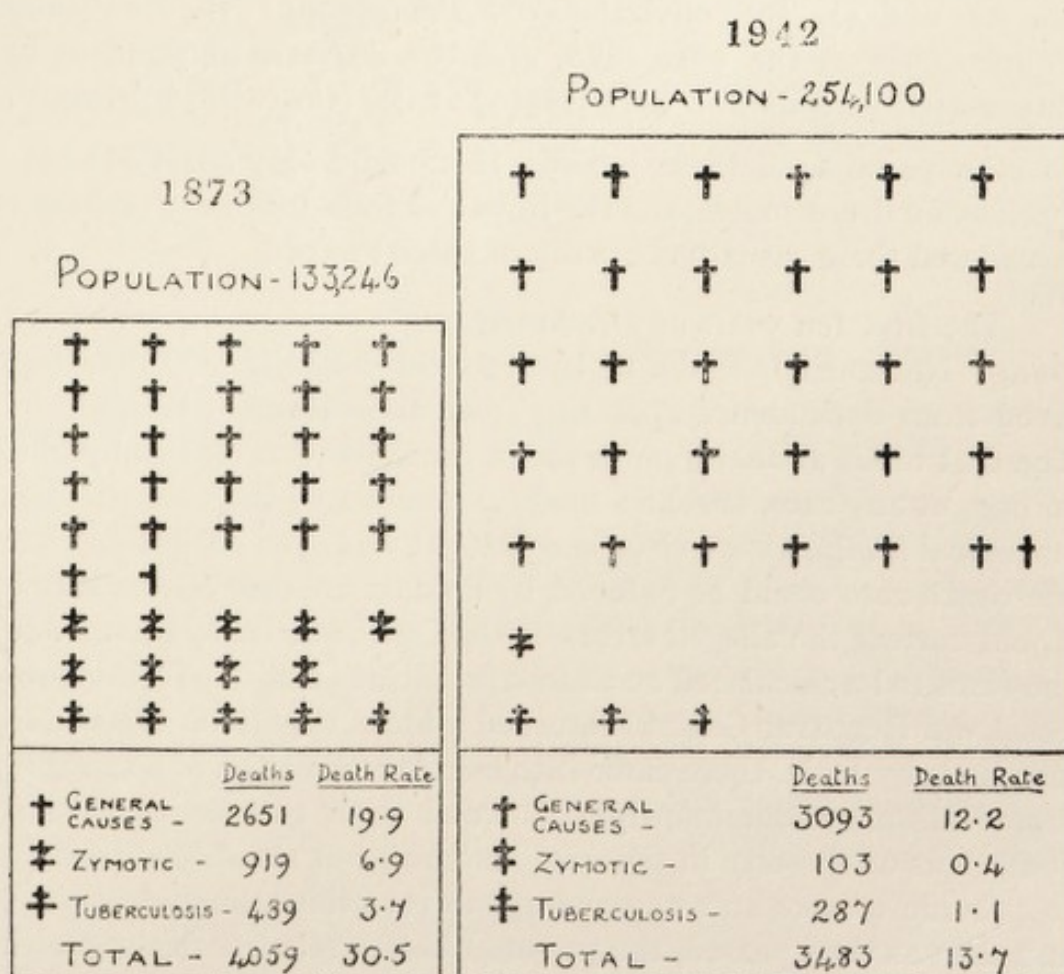
The contrast between the death rate of 1873 and 1942 is so enormous that one would almost imagine that there had been some fundamental variation in the human race or a profound modification in the aggressiveness of the common infectious diseases. During 1942 a grand total of 3,483 deaths was registered, equivalent to a general death rate of 13.7 per 1,000. The seven Zymotic Diseases were responsible for no more than 103 deaths, and two of them, Smallpox and "Fever" (under which generic title typhus, enteric and continued fevers were previously included) were not represented at all. The zymotic death rate at 0.4 per 1,000

was thus only a small fraction of the record of 1873. The victory over tuberculosis while not quite as spectacular is notable enough. In 1873, 489 children and adults died from tuberculosis, 364 from the pulmonary form of the disease, 125 from tuberculosis of other sites. The total tuberculosis death rate of 3.7 was composed of two portions—2.7 per 1,000 for the pulmonary disease and 1 per 1,000 for the non-pulmonary form of infection. The comparable returns for 1942 were a total of 277 tuberculosis deaths ; 219 being pulmonary and 58 non-pulmonary. The derived death-rates were respectively 1.1 per 1,000 of the population for all forms of the disease, made up of 0.9 for pulmonary and 0.2 for non-pulmonary tuberculosis. Over seventy years pulmonary tuberculosis has declined as a cause of death to one-third of its earlier magnitude, and the reduction in the incidence of deaths attributable to non-pulmonary tuberculosis has been even greater.

Sketch Chart No. V. makes clear these various comparisons.

DEATHS AND DEATH RATES.

EACH CROSS REPRESENTS 100 DEATHS.



Dr. Armstrong's first report is silent as to many things upon which we would covet information. The range of his office was circumscribed, and his duties lay in tracking down the location of individual cases of infectious disease, in treating a mere handful in hospital, in recording the streets where the various diseases raged most severely (for example 16 died from scarlet fever in George Street and Elswick East Terrace), in seeking to correlate the distribution of the cases of scarlet fever with the ascent of sewer gases to the more elevated portion of the town, and in surveying with meticulous care the well-nigh innumerable sanitary deficiencies which generations of neglect and complacency had left him to remedy. But Dr. Armstrong was not the bigoted sanitarian, "the walking gentleman with a nose"; he had ideas which seem strangely modern in these days when we talk of "social medicine". Towards the conclusion of his first annual report, he writes as follows :—" There are also influences powerful in the production of disease and the shortening of life which belong rather to the moral than to the physical sanitarian, and whose effects though undoubted, can be but vaguely estimated. Foremost among them are to be considered the Engineers strike of two years ago, and the prevalence of drunkenness." Some indication of the extent of drunkenness can be obtained from two sets of data—the convictions of 3,258 persons at the Newcastle Police Court in the year 1873, and the 367 case of accident to intoxicated persons who were treated at the Newcastle Infirmary.

Compared with these records, 1942 could only boast 541 convictions for drunkenness, and the Royal Victoria Infirmary no longer considered these casualties worthy of special record.

The first ten years of Dr. Armstrong's stewardship was hard going. Not until 1893 did he have a proper Sanitary Committee, freed from dependence upon the Town Improvement Committee. The cost of his annual reports was a cause of recurrent complaint to one, at any rate, and he a medical member of the council. His statistical findings were often suspect. It was even suggested that the death rate could be reduced by holding another census which would correct the alleged errors of the Census of 1871, and enable the rates to be calculated on a more propitious basis. To this proposal the Registrar General returned a blunt negative. Nevertheless, little by little, there came into being the skeleton of a sanitary organisation, predominantly concerned with the environmental conditions of the city in the first instance, but steadily extending to provide a more and more complete infectious diseases service, and then as time passed, the personal health services dealing with

Maternity and Child Welfare and Tuberculosis made their appearance. Thirty years after it had appointed its Medical Officer of Health, the Council engaged two health visitors. Ten years later again, in 1912, the original tuberculosis scheme was inaugurated. It would be tedious to recount step by step the advance of the health services over the second half of our seventy year span, because it has been filled by a steady stream of accessions. From the tabular statement which follows, however, it is possible to see the original extent of Henry Armstrong's domain and to note how its bounds were widened year by year.

FUNCTIONS OF THE HEALTH DEPARTMENT.

1873	1942
1. Routine administration of the Health Department	1. Routine administration of the Health Department
2. Collection, tabulation and interpretation of vital statistics and preparation of the Annual Report	2. Collection, tabulation and interpretation of vital statistics and preparation of the Annual Report
3. Control of Infectious Diseases	3. Control of Infectious Diseases
(a) Ascertainment of infectious disease by various methods	(a) Notification of Infectious Diseases. (1882)*
(b) Administration of Fever and Smallpox Hospital (48 beds).	(b) Administration of Infectious Diseases and Smallpox Hospitals (374 beds).
	(c) Provision of Bacteriological Services. (1907)
	(d) Vaccination. (1930)
	(e) Diphtheria Immunisation. (1934)
4. Environmental Hygiene	4. Environmental Hygiene
(a) General sanitary supervision of districts.	(a) General sanitary supervision of districts.
	(b) Slum Clearance— 1st phase, (1875) 2nd phase, (1924) 3rd phases, (1931-1939)
	(c) Inspection of Factories and Workshops. (1875)
	(d) Inspection of Common Lodging Houses. (1911)
	(e) Atmospheric Pollution. (1914)
	(f) Bacteriological supervision of Swimming Bath Waters. (1928)

*(Dates in parentheses indicate the dates of commencement of new services).

FUNCTIONS OF THE HEALTH DEPARTMENT.

1873

5. **Supervision of Food Supply**
 (a) Inspection of Meat & Provisions.

1942

5. **Supervision of Food Supply**
 (a) Inspection of Meat & Provisions.
 (b) Food & Drug Sampling. (1892)*
 (c) Supervision of Milk Production. (1907)
 (d) Bacteriological control of Water and Milk supply. (1907)
 (e) Rats & Mice Destruction. (1920)
6. **Diagnosis & Treatment of Tuberculosis**
 (a) Tuberculosis Dispensary. (1912)
 (b) Beds for advanced cases. (1916)
 (c) Barrasford Sanatorium acquired. (90 beds) (1921)
7. **Maternity & Child Welfare Service**
 (a) Appointment of Health Visitors. (1901)
 (b) Institution of Child Welfare Clinics. (1920)
 (c) Provision of beds—Princess Mary Maternity Hospital. (1920)
 (d) Institution of Pre-natal Clinics. (1920)
 (e) Municipal Midwives Scheme. (1936)
 (f) Maternity Unit, Newcastle General Hospital opened. (1939)
8. **Venereal Diseases Scheme** (1917)
9. **General Hospital Scheme**
 (a) Transfer of Newcastle General Hospital to Corporation. (1930)
 (b) Neurosurgical Department established. (1934)
 (c) Thoracic Surgery Department established. (1936)
 (d) Paediatric Department opened. (1938)
 (e) Radium & Deep Therapy Department opened. (1938)
 (f) Department of Prostatic Surgery opened. (1939)

* (Dates in parentheses indicate the dates of commencement of new services).

FUNCTIONS OF THE HEALTH DEPARTMENT.

1873

1942

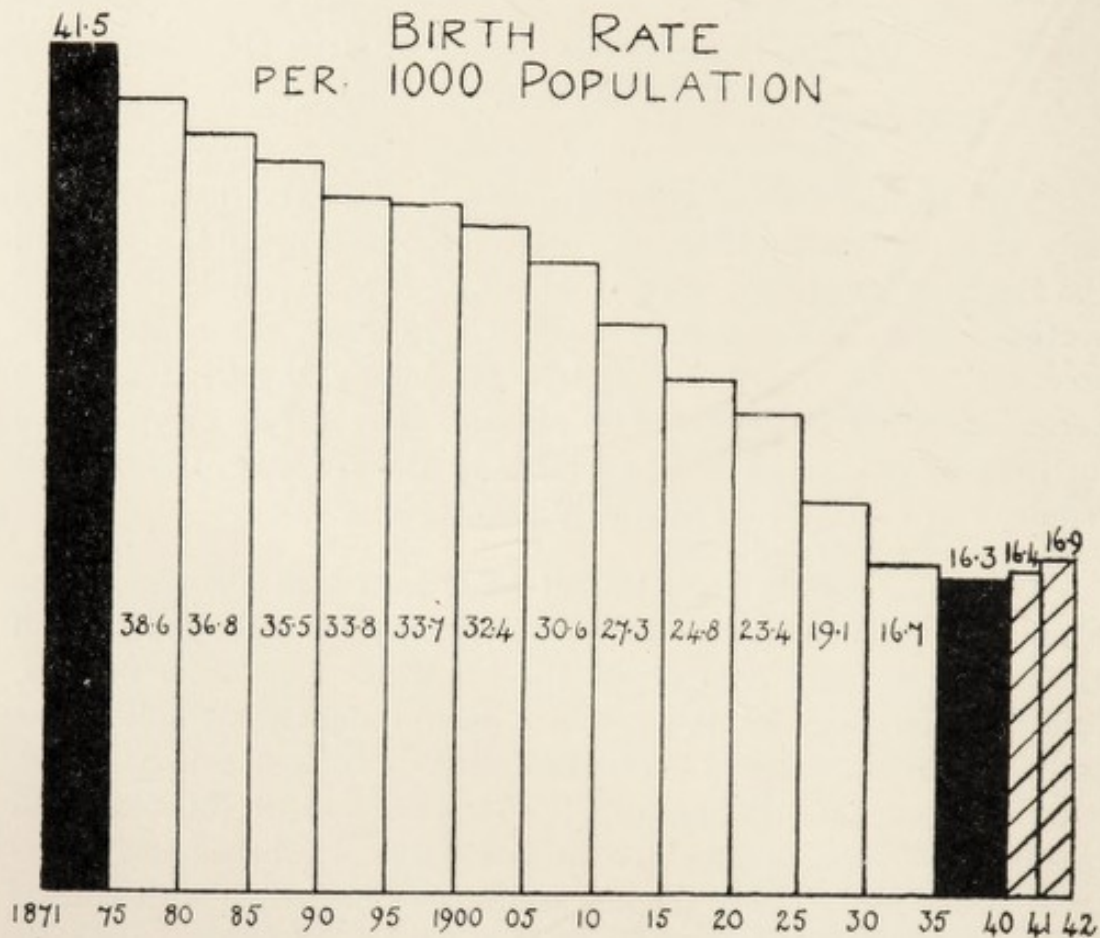
10. **Domiciliary Medical Service**
 (a) Open choice system
 inaugurated. (1933)*
11. **Educational Functions**
12. **Civil Defence and Emergency
 Hospital Service** (1939)

*(Dates in parentheses indicate the dates of
 commencement of new services).

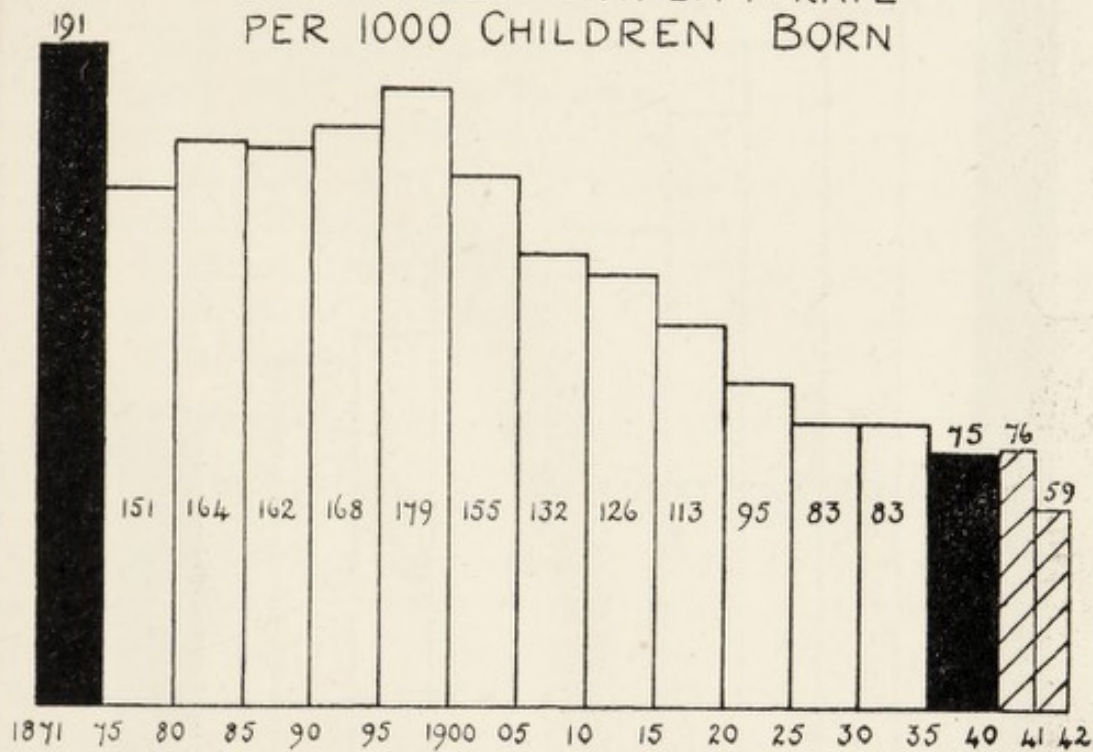
Two further factual comparisons will close this list. In 1873 only about a dozen individuals were employed upon the work of the Health Department. The cost of the department to the Corporation was in the region of £2,200. In 1942, the officers and servants of the Health Committee (excluding the Civil Defence personnel) were an army 1,600 strong. The public services and institutions concerned in the health of the citizens of Newcastle required an expenditure of nearly £600,000.

Seventy years in their transit have seen vast changes in the scientific content of medicine. Bacteriology has enlarged beyond all knowledge our control of the infectious diseases. Surgery, calling bacteriology to its assistance, has brought the whole of the body within its orbit of cure, alleviation or reconstruction. Medicine has won its triumphs by the introduction of physical and chemical methods of precision in diagnosis. In the field of treatment, Diabetes has been made a condition compatible with normal existence. The arseno-benzol remedies have not banished Syphilis, but they have mitigated its ravages, and the sins of the parents need no longer descend upon the children. A new group of remedies, developed within the past ten years has already brought a number of the major killing infections—pneumonia, cerebro-spinal meningitis, erysipelas, puerperal fever—within the ranks of diseases normally amenable to treatment. The male child born in 1871 had an expectation of 41.35 years of life; the female 44.62 years. The comparable figures for 1931 (doubtless exceeded by now) were 58.7 years for the boy and 62.8 for his sister. And though statistics in support of the statement are not readily available, there can be no question that these longer life-times are also freer of disease and should be fuller of health and happiness.

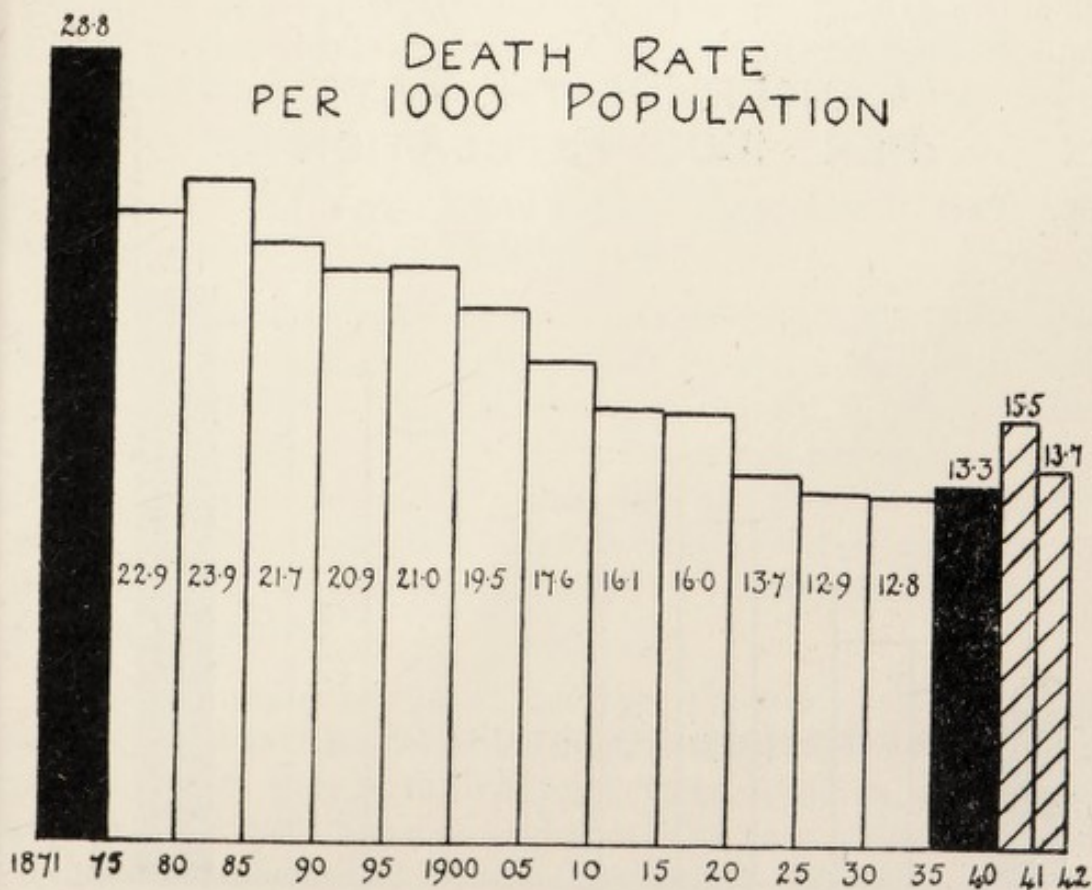
The movements and trends of the phenomena of life, disease and death, particularly as they are experienced over long periods of years, are best and most understandably demonstrated in graphic form. A series of diagrams, each of which covers 72 years, has been prepared. These diagrams (Nos. 1 - 5) show the fall, and in one instance the rise, of the more important statistical and mortality rates.

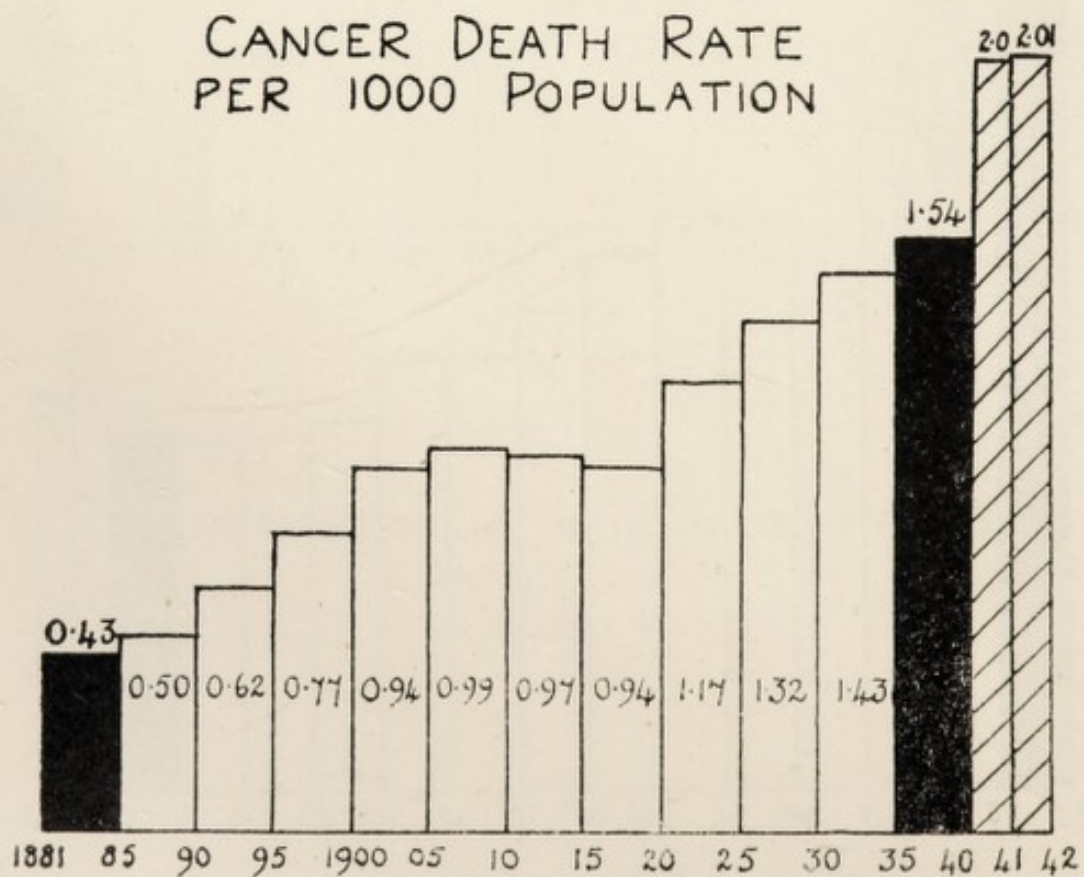
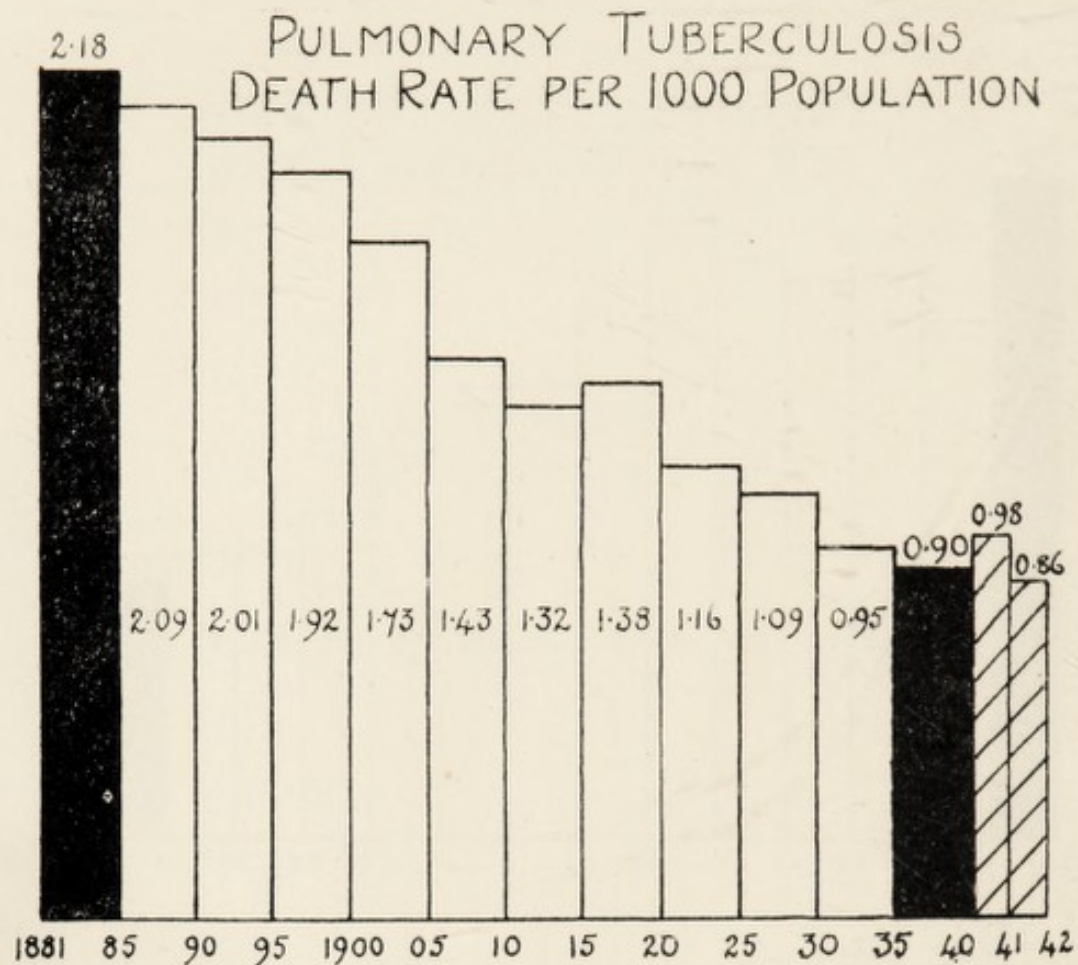


INFANTILE MORTALITY RATE PER 1000 CHILDREN BORN



DEATH RATE PER 1000 POPULATION





The Year 1942.

We must turn now from this retrospect of seventy years to consider the events of 1942, the third full year of the second world war. The present report is framed on the same lines as its immediate predecessors in the war-time series. The more important data and observations contained in the reports of the constituent sections of the Health Committee's organization will be the subject of elucidation, comment and recommendation. The reports themselves, which have been prepared with the customary interest and thoroughness of the officers responsible, will be published in full at the end of the war.

Let us consider briefly some of the salient features of the Vital Statistics of the city. Its population remained at the war-time level of a little over a quarter of a million. The actual figure for 1942 was 254,100, or approximately 40,000 less than the estimate for 1939. The causes of this reduction have been the subject of comment in previous reports; its effects upon the pattern of the age distribution of the population have also been noted. Generally speaking there are two outstanding features in the make-up of our present population—the increased proportion of women of child-bearing age, and the steady accumulation of persons over the age of fifty. The two features bring in their train amongst other interesting developments, an increase in the birth rate and an enhanced mortality rate from certain diseases, notably cancer, which are the special risk of the elderly.

Amongst the population of 254,100, there were in 1942; 2,768 marriages, 4,289 births and 3,483 deaths.

The high water mark for marriages was reached in 1940, when 3,361 were recorded in the city. 1941 showed a diminution with a total of 2,817, and the total for 1942, namely, 2,768, is smaller still. The war-time impetus is obviously not yet exhausted for 1942's tally is considerably higher than the average for the five years immediately preceding the war, and in comparison with the first great war the rate of decline in the number of marriages has been much slower.

It has already been explained that there is a relatively high proportion of women of child-bearing age in the population. These women in 1942 gave birth to 4,289 children, which in terms of the population of 254,100 persons, gives a birth rate of 16.9 per 1,000. Actually the number of births is the second smallest recorded in

the seventy years of which we have reasonably accurate knowledge, while the birth-rate, at 16.9, is higher than for any year of the past ten—1940 alone excepted. There were 113 more births in 1942 than in 1941, equivalent to an increase of 2.7%. In 1941, the number of births registered in England & Wales was 587,228, the smallest total (with the exception of 1933) since 1874. For 1942, the national total was 654,579, or an increase of 11.4% over 1941. This increase in its turn is reflected in the improvement in the national birth rate from 14.2 in 1941 to 15.8 in 1942. The City has always maintained a substantial difference between its own and the national birth rate. That difference is beginning to lessen to the disadvantage of the city.

Enough has been said in the earlier pages of the present report to underline the effect of a diminishing birth-rate, and these effects, widespread and cumulative, will not be the subject of any further digression here. There are signs that at last some endeavour is to be made to give encouragement to the family as an economic entity. The Beveridge Report, published in the last days of 1942, has assumed that one of the forms of encouragement will be the payment of family allowances. It is to be hoped that the financial remedy will not be the only form of therapeutics. The family is a social as well as an economic unit.

In 1942, the number of deaths recorded, namely, 3,480, was 471 fewer than in the previous year, when 3,951 were registered. The actual reduction in deaths from natural causes is somewhat less, if account be taken of the deaths from air-raid casualties which numbered 16 in 1942 as compared with 115 in 1941. The reduction nevertheless is material in lowering the death rate (less air raid casualties) from 15 in 1941 to 13.6 in the year under review. Though far from approaching the record low rate of 12.4 per 1,000 which was achieved in 1927, 1932 and 1938, the rate of 13.6 is the lowest for the three full war years, and having regard to the age-distribution of the population which undoubtedly increases our liability to a high mortality, it is a tribute to the steadfast good health of the community. Search how we may through the morbidity and mortality returns for the earliest indications of possible deterioration in the health of the population, or for the florid signs of disease increasing in our midst, there is nothing to sustain the earlier forebodings, and everything to indicate that the weaknesses in the defence particularly as regards tuberculosis and the infectious diseases, have been adequately strengthened.

The individual causes of deaths, or rather the groupings of deaths of similar causation or affecting the same system, are set out in order of ranking in Table I. Since 1940 it has not been possible to give a fair comparison of these causes of deaths over three consecutive years. This was due to the introduction of a revised method of classification in 1940. The passage of time now permits us to compare 1940, 1941 and 1942, on equal terms. It will be seen that the order of ranking has remained the same throughout the period, though the variations in the respective contributions of the separate causes to the total mortality are clearly apparent. The predominance of the cardio-vascular diseases is still considerable. Within this group one particular form of fatal heart disease, namely, coronary thrombosis, has become relatively more frequent. In 1940 it was responsible for 21% of all heart deaths; in 1942 the percentage has risen to 30. Whether there is an actual increase in the condition, or merely a more frequent usage of the term is difficult to determine. In this connection the admission to the Newcastle General Hospital of patients suffering from this disease may give some guidance, as they have advanced from 33 in 1940, and 43 in 1941, to 75 in 1942. Obviously we have not yet a full picture of the incidence of the disease and its importance as a cause of impaired efficiency and invalidity. This would only be available if the cases treated at the Royal Victoria Infirmary, in private nursing homes, and in domiciliary practice, were brought within the statistical net. Here again we are confronted with the gap in our knowledge of the natural history of coronary thrombosis and many other similar diseases, which can only be filled when there is an adequate registration of sickness and accident, their distribution, duration and results. Happily, there are signs that this suggestion made by Charles Dickens seventy years ago is likely to be pursued in the near future.

The deaths from Cancer were the same in 1942 as in 1941, but the total of 510 constitutes a greater proportion of the complete mortality and the rate per 1,000 of the population, namely, 2.01, is the highest recorded. Figure 5 shows the steady rise of the cancer death rate from the years when apparently (but no more than apparently) it was a negligible cause of death, until the present time. It will be noted that the increase since 1940 has been somewhat abrupt. This should be correlated with the elderly age pattern of the population.

Towards the end of 1942 the first somewhat halting steps were taken to fashion a scheme which should provide in a compre-

hensive way for the diagnosis and treatment of cases of cancer occurring amongst the inhabitants of the administrative counties and county boroughs which are located within the geographical boundaries of Cumberland, Northumberland, Durham and the North Riding of Yorkshire. A wideflung organization, including the University teaching hospital, the major voluntary and municipal hospitals and the National Radium Centre was contemplated and the preliminary draft prepared at the instance of yourself, as Lord Mayor of Newcastle. Such a scheme, or one of a similar kind, is needed both to co-ordinate and to improve the arrangements now existing in the region.

The next member of the list—Diseases of the Nervous System is somewhat a misnomer as it conjures up thoughts of locomotor ataxia, disseminated sclerosis, encephalitis, as well as the common mental disorders.

In point of fact 385 of the 474 deaths attributed to this group were certified as being due to the results of haemorrhage into the brain. The true causation of these cerebral catastrophies should be sought in the diseases which bring about the degenerative changes in the blood vessels, predisposing to their rupture or closure.

Bronchitis and Pneumonia, despite the availability of the newer form of drug treatment still remain as important factors of mortality, particularly in the elderly. Practically one-half (i.e. 195) of the 399 deaths caused by Bronchitis and Pneumonia occurred in men and women over 65 years of age. It is in patients in this age group that the modern remedies are least successful, though even here there are notable examples and famous patients to prove the opposite.

Finally, we arrive at Pulmonary Tuberculosis, and find that it is to be credited with the lowest mortality ever recorded in our City. From Table I the trend of the deaths can be seen, 251 and 249 in 1940 and 1941 respectively, followed in 1942 by the minimum total, so far, of 219. This reduction in the mortality from the pulmonary form of the disease was not counterbalanced by any material change in the number of deaths assigned to the non-respiratory forms of the disease, of which Tuberculosis of the Central Nervous System is unquestionably the most formidable. Compared with 1941 when out of a total of 56 deaths from non-respiratory tuberculosis, 31 were due to Tuberculous Meningitis, the figures for 1942 were 58 and 31 respectively.

TABLE I.

SHEWING THE RELATIVE POSITIONS OF THE FIVE CHIEF CAUSES OF DEATH IN
NEWCASTLE DURING THE YEARS 1940, 1941 AND 1942.

	1940.	No.	Percentage of Total Mortality.	1941.	No.	Percentage of Total Mortality.	1942.	No.	Percentage of Total Mortality.
1.	Diseases of the Cardio-vascular System	859	22.9	Diseases of the Cardio-vascular System	778	19.6	Diseases of the Cardio-vascular System	692	19.9
2.	Cancer.....	474	12.6	Cancer.....	510	12.9	Cancer.....	510	14.6
3.	Diseases of the Nervous System	420	11.2	Diseases of the Nervous System	496	12.5	Diseases of the Nervous System	474	13.6
4.	Bronchitis and Pneumonia	364	9.7	Bronchitis and Pneumonia	481	12.1	Bronchitis and Pneumonia	399	11.5
5.	Tuberculosis of the Respiratory System	251	6.7	Tuberculosis of the Respiratory System	249	6.3	Tuberculosis of the Respiratory System	219	6.3

The cold records of Tuberculosis mortality are for once almost encouraging, but having regard to the circumstances under which we are all working and living, it would be a little premature to assume the regression of Respiratory Tuberculosis as a factor of importance in the production of ill-health and economic instability. As has been explained in previous reports, the deaths from Tuberculosis are indicative of the conditions which some years previously predisposed the unfortunate victims to infection, or stirred a quiescent disease into perilous activity. The live records of the Tuberculosis Dispensary which will be considered in due course, bring us nearer to the patients and to the events and conditions, stress of overwork, domestic overcrowding, exposure to sputum-positive sufferers from the disease, which were concerned in their infection or re-infection.

Table II has been prepared to demonstrate how the various causes of death, in accordance with our common knowledge, are distributed unequally over the several age groups. The heavy incidence of the infectious diseases at earlier ages, and of cancer, heart disease and nephritis from 45 onwards are readily seen.

Maternal Mortality.

There is no section of our vital statistics which has shown the same determined and persistent improvement in recent times as Maternal Mortality. Gone are the years of the pre-sulphanilamide era, such as 1935 and 1936 when 25 and 28 maternal deaths were reported. During 1940, 1941 and 1942 respectively, 11, 12 and 12 maternal deaths were recorded. For 1942 this was equivalent to a maternal mortality rate of 2.71 per 1,000 live and still births, a rate which though an improvement on the 2.82 of the previous year, was certainly inferior to the national maternal mortality rate of 2.01. During 1940 and 1941 we were able to congratulate ourselves that puerperal sepsis had been overcome as a cause of death, for during these two years only 2 out of 23 maternal deaths were due to sepsis. In 1942, there were 4 deaths from septic abortion or sepsis of the puerperium amongst the 12 maternal deaths. This should serve to remind us that the elimination of puerperal sepsis is not merely a matter of using the appropriate sulphanilamide preparations in the appropriate way. The conditions under which the case arises, the epidemiological background, the adequacy of the obstetrical care, the facilities for consultation and specialist assistance—all these are matters for consideration and for organ-

TABLE II.

DEATHS FROM CERTAIN DISEASES IN AGE GROUPS 1942.

DISEASE.	0-5		5-15		15-25		25-45		45-65		Over 65	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Diphtheria	47	100	20	42.5	3	6.4	...	...	...	...	...	...
Measles	9	100	...	...	...	...	...	...	...	...	...	...
Whooping Cough	5	100	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	9	100	...	...	...	...	...	...	...	...	...	...
Influenza	13	100	...	...	1	11.1	...	...	...	...	2	22.2
Pulmonary Tuberculosis	219	100	...	...	1	7.7	...	...	...	...	6	46.1
Non-pulmonary Tuberculosis	58	100	...	...	54	24.6	...	...	...	...	10	4.6
Cancer	510	100	13	22.4	20	34.5	...	...	...	...	...	...
Diabetes	24	100	1	0.2	2	0.4	...	...	...	...	...	...
Heart Disease	692	100	...	...	1	4.2	...	...	...	...	243	47.7
Bronchitis	201	100	2	0.3	6	0.9	...	...	...	...	14	58.3
Primary Pneumonia	41	100	2	1.0	2	1.0	...	...	...	...	438	63.3
Syphilis	41	100	3	7.3	...	...	...	...	...	...	119	59.2
Nephritis	104	100	...	...	...	...	...	...	...	...	16	39.0
Road Accidents	47	100	2	1.9	4	3.8	...	...	...	...	12	29.3
Air Raids	16	100	7	14.9	5	10.6	...	...	...	...	48	46.2
			...	...	2	12.5	...	...	...	...	13	27.7
		
Deaths from all causes	3,480	100	69	2.0	144	4.1	313	9.0	999	28.7	1,614	46.4

ization. It has been the aim of the Health Committee to provide an organization, closely co-ordinated and integrated, which neglects nothing and seeks to anticipate everything. We must continue to strive for higher standards of maternal care, before, during and after the confinement, for improved treatment of obstetrical emergencies, for the use of the most modern methods in the combating of shock, for the elimination of avoidable errors, and for the better education in their various spheres of patient, midwife and doctor alike.

Infantile Mortality.

Infantile mortality has been one of the major problems of Newcastle for as long as vigilant sanitarians have recognised the death-rates of infant and child as indices of the health-consciousness of the community. Our record is not one which reflects glory, though it cloaks the magnitude of the efforts which, for the past twenty years, have been made to effect improvement. Admittedly the trend has been downwards, as can be seen from Diagram 2, but the five year averages smooth out the fluctuations which have encouraged and depressed in turn. Other towns of similar size have escaped the irregularity of our variations and have been able to show a steady and continuing advance. There would appear to be something either in the economic background of the working classes in Newcastle, or in the environmental set-up, which predisposes to these explosions of infantile mortality. In previous reports one after another of the possible factors as displayed in the actual causes of death (vide the Special report of Dr. Miller and Dr. Spence in 1940) or in the excessive incidence of prematurity, have been discussed and remedies suggested. The whole problem requires a comprehensive approach and attack, but for these we will probably have to wait for the opportunities of the post-war era when, it is to be hoped, the resources of the Department of Child Health at King's College may be called upon to assist us in the final assault upon an age-old dragon.

The foregoing may appear to be unduly pessimistic in tone, when it is realised that in company with the national infantile mortality rate which attained its lowest figure so far, namely, 49 per 1,000 births, the Newcastle rate was also a record breaker; the rate of 59 per 1,000, being the best we have yet known. Nevertheless, the national rate is itself a check to any complacency we might feel. How much more so are the achievements of the great

cities of America, where, for example, New York with a rate of 30 per 1,000 births sets us a standard and demonstrates the size of the victory we may yet win.

Infectious Diseases.

As factors of mortality the infectious diseases (excluding tuberculosis) had the following order of importance in 1942.

	1942	1941	1940
Pneumonia	198	196	192
Diphtheria	45	19	9
Diarrhoea	27	24	21
Influenza	13	38	42
Cerebro-spinal Fever	9	15	9
Measles	9	6	10
Whooping Cough	5	29	7
Erysipelas	4	.....	.....
Scarlet Fever	1	.....	.....

Let us first mark the favourable features in this list by noting that the enteric group of diseases are absent, and that there have been diminished returns in Influenza, Cerebro-spinal Fever and Whooping Cough. On the other hand, there are small increases of no significance in Pneumonia, Diarrhoea and Measles. Scarlet Fever after an absence of four years returns and with it comes the other streptococcal infection, Erysipelas. The increased mortality from these two diseases is in accordance with the extension of their prevalence during the year. The striking and serious entry in the table is the record of Diphtheria which was credited with the highest mortality since 1909.

Before discussing the problem presented by Diphtheria, let us rapidly review the frequency of the various diseases as shown by notification. Here is the table for 1942.

	1942	1941	1940
Measles	4,424	2,713	3,794
Scarlet Fever	871	270	148
Pneumonia	763	637	532
Diphtheria	598	344	155
Whooping Cough	341	1,564	284
Erysipelas	141	98	128
Dysentery	38	75	38
Cerebro-spinal fever	31	81	73
Enteric Group	2	31	11

It will be seen that the first four diseases in the list, Measles, Scarlet Fever, Pneumonia and Diphtheria all record more or less substantial increases, and that thereafter only Erysipelas shows any advance. In so far as Measles, Scarlet Fever and Diphtheria are concerned,

the increased incidence could be described as attaining the dimension of an epidemic; a mild one as regards mortality in the case of Measles and Scarlet Fever; a severe one of Diphtheria.

There have been years in the past decade, e.g. 1935 and 1936, when 1942's total of 598 cases of Diphtheria has been exceeded, but only in three years during the last quarter of a century, 1918, 1926 and 1933, has the case-mortality rate of the epidemic (which measures the severity of the infection) been greater than the 7.5% which was reached in 1942.

Research into the causation of Diphtheria has demonstrated that three types of diphtheria bacillus are concerned; that the prevalence of these several types varies from time to time and from place to place and that two of the types—the gravis and intermedius types—are associated with severe diphtheria, whereas the third or milder type is a less lethal organism. During 1942 approximately three-quarters of the cases met with were due to gravis type of diphtheria bacillus, and these cases produced 80% of the deaths.

The typing of the various strains of diphtheria bacillus has been carried out in Newcastle since 1933.

The tale of Diphtheria is undoubtedly disappointing in the light of the considerable efforts which have been made to popularise diphtheria immunisation. The record of 1941 when 14,684 children were immunised was surpassed in 1942. At first sight it might seem that immunisation had failed to achieve the results proclaimed for it, and the increased incidence and mortality might be claimed as evidence. But there is another aspect from which this matter may be viewed. The virulent, deathly strain of gravis diphtheria bacillus was prevalent and predominantly so in our midst in 1942. There were 44 deaths amongst non-immunised children under the age of 15; in immunised children there were 65 cases of the disease but in this group there were no deaths.

Much remains to be done before we can feel satisfied that Diphtheria has been reduced to negligible dimensions as a cause of child mortality. There is sufficient in the history of diphtheria in Newcastle in 1942 to maintain, even to strengthen our confidence in immunisation. If it does not invariably prevent, and in the presence of gravis type of organism that does not seem to be always possible, it does at any rate mitigate the severity of the disease, and obviate some considerable proportion of its potential mortality.

Indifference and ignorance are still the enemies of immunisation and the friends of one of the most hideous diseases that destroy young life. Perseverance and improved methods of organising the attack are all that we can rely upon at present, but employed with the vigour and determination which has characterised the American and Canadian efforts, they will ultimately help us to relegate Diphtheria to the limbo of rare diseases.

The Child Welfare Services.

In the Annual Report for 1941 emphasis was laid on the fact that while infantile mortality had increased throughout England & Wales, and to an even greater extent in the 126 Great Towns, the measure of deterioration was still more marked in Newcastle. The returns of 1942 show the exact opposite. In the two countries, the Great Towns and the City alike, infantile mortality was reduced and in the comparison Newcastle comes off best of all. Here are the actual figures :—

	1941	1942	% Decrease of 1942 on 1941
England & Wales	59	49	17.
126 Great Towns	71	59	17.
Newcastle upon Tyne	76	59	22.4

The infantile mortality rate of 59 is the lowest ever recorded for the City and though it would be premature to regard it as a definite indicator of even better things to come, Dr. Miller and his colleagues both in the Medical and in the Health Visiting services, are entitled to congratulations and praise. The difficulties, and in a way the discouragements which were born of the National Milk Scheme were tackled with energy and determination. The counter-attack was in the main educational, but those unwearying paratroops of the Child Welfare Service, the Health Visitors, were also prominent. The concentration of attention on the "toddler" group was maintained, and the visits paid to the homes of its members advanced from 28,536 in 1941 to 35,602 in 1942. One must also bear in mind that other dietary supplements—rose hip syrup, cod liver oil—also became available under the aegis of the Ministry of Health during the year, and no doubt played their part in maintaining the health of the child population.

Reference must be made to the provision which was instituted during 1942 for the infants and toddlers of mothers employed in the war industries. Five war-time day nurseries were opened in

suitable parts of the city and proved their usefulness in practically every instance.

Maternity Services.

One outcome of the war has been the diversion of midwifery to the services organised by the Corporation for this purpose. Fortunately the latter have proved capable of meeting such claims as have been made upon them, and in so doing have given assistance to the fully extended Princess Mary Maternity Hospital, and the over-worked general practitioner.

A timely and provident decision of the Ministry of Health in the summer of 1941, brought about the re-opening of the Gilsland Convalescent Home as a maternity home and hospital under the administration of the Health Committee. Between July, 1941 and the end of 1942 more than 1,600 expectant mothers had passed through the home, which throughout has been supervised by Mr. Linton Snaith, F.R.C.S., the City Obstetrician and Gynaecologist. The routine care of patients in the Home has been in the hands of Dr. Herbert Hofmann, a Czechoslovakian obstetrician of proved ability and wide experience.

The distribution of births as set out in Table III shows that domiciliary and institutional confinements are very evenly balanced, and that in the absence of Gilsland the tendency would still be for the expectant mother to be treated at home. There are those who decry this tendency, and steadily advocate the advantages of the maternity home; there are others again who stoutly maintain the psychological benefits which accrue to mother and child when the confinement takes place in the ordinary home surroundings. That does not mean that domiciliary confinements are to be encouraged in the appalling housing accommodation which is becoming the most serious of our sanitary deficiencies. Until we can look forward to an extensive inroad upon the housing arrears of the past, and can visualise the provision which is to be made for the Newcastle of 1960, it will be necessary to think in terms of additions to, and a re-organisation of the existing maternity hospital accommodation, both municipal and voluntary.

The scope of the Health Committee's maternity scheme can also be gauged from Table III. Three out of every four confinements are now conducted either in one or other of the municipal

institutions or are dealt with by the energetic corps of municipal midwives.

TABLE III.

% of total
Confinements

Domiciliary Cases :

Attended by Doctors	....	....	18	0.4
Attended by Doctors and Municipal Midwives	....	....	311	7.2
Attended by Municipal Midwives	....	....	1,651	38.1
Princess Mary Maternity Hospital	....	....	186	4.3

Hospital Cases :

Princess Mary Maternity Hospital	....	....	300	6.9
Newcastle General Hospital	....	....	596	13.8
Gables Maternity Home	....	....	116	2.7
Other Maternity Homes	....	Doctors	97	2.3
		Midwives	37	0.8
Gillsland Emergency Maternity Home	903	20.8
Other extra-mural Maternity Homes	117	2.7

Grand Total	4,332	100.0
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Percentage treated under Municipal organization 72.7

NOTE : Heavy type indicates the work of the Municipal organization.

Mention should be made of the fact that from September 1st, 1942, the Gillsland Emergency Maternity Home and a number of the municipal midwives operating the districts were constituted and approved by the Central Midwives Board as a Part II Midwifery Training School.

Tuberculosis Services.

The improvement in the tuberculosis death rate must not allow us to regard the outlook as regards tuberculosis to be entirely satisfactory. There is some evidence that the reverse is the case, and the most significant indication in this direction is the increase in the proved new cases of pulmonary tuberculosis which have passed through the Dispensary. The number of such cases jumped from 369 in 1941 to 404 in 1942. Further analysis shows that while the adult male cases were 216 in the earlier year and 201 in the latter, the adult female cases rose from 135 to 184. This is a portent which cannot be overlooked. Many of these cases are indirectly attributable to the war and the conditions which it has engendered. Some are undoubtedly early cases, brought to notice by the modern method of mass radiography, which has been extensively applied in the Services. But the increase is relatively greater in the more serious types of the disease. Fortunately there has been no dearth of accommodation for the treatment of those suffering from the disease, and the tuberculosis services are complete in that they provide the widest possible

range of therapeutic measures, sanatorium treatment, artificial pneumothorax, and thoracic surgery.

Towards the end of the year it was known that one of the new Mass Radiography Units which were being produced under the auspices of the Ministry of Health was to be allocated to the City for employment both here and on Tyneside. Its arrival and installation will enable a comprehensive investigation to be carried out in a variety of industrial, social and age groups of the population, and the earlier diagnosis of pulmonary tuberculosis thus obtained, while causing administrative problems at the outset, will ultimately prove of benefit not only to the patient, where disease has been recognised and treated at the earliest possible moment, but to the community as a whole.

Other methods of attack upon tuberculosis were also foreshadowed towards the end of 1942, but their description and discussion is a matter for the next annual report.

Venereal Diseases.

The general question of the increase in venereal disease was discussed at length in the Annual Report for 1941. The year 1942, particularly in its later stages, showed an even more definite extension of early syphilis. The figures for the first three war years are sufficient evidence of the enormously increased incidence, and are explanatory of the alarm which has been caused in many circles. The facts are as follow :—

Early Syphilis:

	1940	1941	1942
Males	112 (2)	213 (12)	378 (10)
Females	57	73	133 (2)

(Figures in brackets indicate Service cases)

Admittedly 193 of the 378 males were foreign seamen, but the increase in the native cases, both male and female, is still noteworthy.

It is not surprising that in the circumstances the Joint Committee, which administers the V.D. Clinic and acts as an unofficial Venereal Diseases Committee for a considerable tract of territory, both north and south of the River Tyne, should consider what means were available to it to limit the ravages of this group of diseases. From their deliberations emerged an experimental scheme which comprised three main elements—(a) the serological testing of expectant mothers ; (b) education ; and (c) contact tracing. Here again, the plans and ideas of 1942 were brought into effective action in the following year and are therefore outside the scope of the present report.

Comparisons of 1914-1918 and 1939-1942.

In each of the war-time Annual Reports on the Health of the City, comparisons have been made between the present war and its forerunner, and again the relevant data have been collected and are set out in Table IV.

TABLE IV.
COMPARISON OF 1914-1918 AND 1939-1942

	1914	1915	1916	1917	1918	1939	1940	1941	1942
Population....	271523	278107	278107	278107	278107	293400	255900	254960	254100
Birth Rate....	27.8	27.8	26.2	23.4	23.3	15.8	17.6	16.4	16.9
Births	7538	7545	7284	6495	6468	4646	4519	4176	4289
Marriages	2717	3264	2620	2389	2544	3125	3361	2817	2768
Death Rate	17.2	17.2	15.9	15.0	17.3	12.9	14.6	15.5	13.7
Deaths	4660	4771	4427	4174	4816	3661	3733	3951	3483
Infantile Mortality Rate....	137	133	123	113	107	62	64	76	59
Deaths under 12 months	1029	1007	899	732	692	289	284	315	255
Pulmonary Tuberculosis									
Mortality Rates	1.38	1.37	1.50	1.48	1.41	0.82	0.98	0.98	0.86
Deaths	375	380	417	411	393	232	251	249	219
Cases of Typhus Fever	2	1	...	...	...	...	...	...	...
" " Enteric Fever	102	100	76	25	29	4	11	31	2
" " Cerebro-spinal	1	27	43	32	16	5	73	81	31
" " Fever	362	275	272	226	250	243	155	344	598
" " Diphtheria									
Deaths from—									
Influenza	22	22	36	27	680	36	42	38	13
Cancer	265	270	266	252	225	457	474	510	510
Syphilis (in 1st year of									
life)	13	9	14	13	11	1	1	...	2
Air Raid Deaths	...	1	...	...	...	...	9	115	16

The differences wrought by two decades of social changes and public health activities are clear to view—the diminished, though now rising birth rate, the great saving in child life as shown by the reduction in infant mortality, the disappearance of typhus fever, the declension of the enteric group of diseases, the virtual suppression of syphilis as a cause of infant death, and the survival of diphtheria as an infectious disease of importance.

On certain other features it is not so easy to comment. The death rate is obviously lower but, as during the previous war, is liable to fluctuation. Cancer has increased for reasons already explained. Influenza, so far, has ranged within its normal limit of virulence. On the whole the picture is one of manifest good health, and though there are signs that the robustness of the population can be exaggerated, such for example as the proneness to minor respiratory infections, it is a matter of congratulation for all concerned in the national and local government health service (not overlooking the beneficent wisdom of the Ministry of Food), that after three years of a dreary and wearying mode of existence the population remains so healthy and so free from outward and visible signs of physical impairment.

The Municipal Hospitals.

During 1942, the City Health Committee administered a hospital service of more than 3,000 beds spread over nine institutions. The number of in-patients treated numbered no less than 19,124, of whom 6,242 were cases for which the Emergency Medical or Maternity Schemes of the Ministry of Health accepted financial responsibility. The distribution of beds and patients amongst the various institutions is given below :—

	BEDS	PATIENTS ADMITTED DURING 1942	
City Hospital for Infectious Diseases	510	2986	
Barrasford Sanatorium	95	229	
Newcastle General Hospital	1326	11796 (4095)	} <i>Emergency Medical Service</i>
Shotley Bridge Emergency Hospital	1028	3086 (2147)	
Gilsland Emergency Maternity Home	100	1027	
Whitton Tower Convalescent Home	25		
Shoreston Hall Children's Home	22		
Wellburn Children's Home, Ovingham	20		
Newbiggin Hall, Blanchland			

The personnel employed in and about the hospitals comprised approximately :

Consultants	36
Resident Medical Staff	33
Nurses, Midwives and Auxiliaries	792
Clerks	50
Porters and Domestic	507

Although to a certain extent war-time conditions have become normal components of hospital life, so that rationing, black-out, fire-watching, have ceased to be novelties difficult to grapple with, it would be ungracious to create the impression that hospital administration in the third year of the war was the carrying out of a simple, repetitive routine. Each day in every hospital has brought its own quota of problems, which invariably have been resolved by the Medical Superintendents and Matrons in a manner which deserves the sincerest praise. The work of each institution should be reviewed in detail, if the Committee is to be informed of the extent and variety of the services which are provided under its auspices, but for reasons of space it is only possible to deal briefly and inadequately with the three largest—the City Hospital for Infectious Diseases, the Newcastle General Hospital and the Shotley Bridge Emergency Hospital.

The City Hospital for Infectious Diseases.

The City Hospital continued to serve its peace time purpose, conditioned to the needs of war time, of giving the completest possible service for the treatment of infectious diseases, not only for the citizens of Newcastle, but for the members of the armed Forces stationed throughout a large area, and also as regards certain specialist types of treatment for many patients referred to the hospital from neighbouring local authorities.

In addition the hospital has acted as the clearing station for the investigation of patients suffering from, or suspected to be suffering from pulmonary tuberculosis. This work has been of particular importance in view of the increase in the number of new cases of the disease to which reference has been made in an earlier paragraph.

All these responsibilities have been carried by the Deputy Medical Officer of Health and Medical Superintendent, Dr. E. F. Dawson-Walker, in collaboration with the Tuberculosis Officer, Dr. G. Hurrell, and assisted on the nursing and administrative side by the acting Matron, Miss J. Laing, and the Steward, Mr. H. Phillips, and it can be said without hesitation that their teamwork has proved invaluable in maintaining a clinical and epidemiological service of the highest standard.

Some passing reference must be made to a single event. Early in the morning of July 7th, hostile aircraft scattered approximately 150 incendiary bombs over the several sections of the hospital. Six wards were hit, and the garage and Maids' Dining Room also. The resulting fires were dealt with promptly and efficiently and only in the case of D. Block was the damage substantial. The patients were evacuated from the affected wards and housed elsewhere. There were no casualties, nor did any of the patients, many of whom were suffering from diphtheria, appear any the worse. Under conditions which were fraught with considerable danger, and in which panic might quite easily have occurred, the staff, medical, nursing and domestic, worked with a coolness and steadiness worthy of the highest commendation.

The Newcastle General Hospital.

It has been customary to record year by year an extension in the work of the Newcastle General Hospital. The year 1942 was no exception, for in practically every department the achievements of the previous year were surpassed. The admissions which reached a total of 11,796, and the 4,635 operations performed are both record figures. The hospital is undoubtedly one of the busiest and most efficient of its kind in the country. The quantity of work is not the only criterion by which the value of the hospital is assessed; the quality has been equally high, and certain of the clinics are beginning to be regarded as important post-graduate centres of instruction and investigation. During the year, increased use has been made by the military and by the medical practitioners generally of the services of the consultative outpatient department and it is clear that the need for these facilities is increasing in proportion as the diagnosis of medical and surgical conditions requires the provision of instruments of precision and the ready availability of laboratory methods of every description.

Since 1930 the Newcastle General Hospital under the direction of the Health Committee has been transformed from a relatively small institution, taking but a comparatively minor share in the care and cure of the sick of the city, into a hospital which has only one rival in the whole of the north of England. The statistical details which confirm this statement are set out in Table V.

TABLE V.

Year	Admissions	Operations	Maternity Cases
1930	3,048	596	97
1931	3,598	1,125	99
1932	4,522	1,428	161
1933	4,776	1,560	194
1934	5,544	2,076	225
1935	6,245	2,722	273
1936	6,707	2,722	388
1937	7,801	2,719	545
1938	8,354	3,388	694
1939	8,469	3,476	811
1940	9,763	2,937	858
1941	11,542	3,866	719
1942	11,796	4,635	602

These great achievements are a tribute to the work of the Medical Superintendent, Dr. G. P. Harlan, who has been concerned in the transformation referred to from its earlier stages, and of the many members of the consulting and specialist staff, whose endeavours on behalf of the community they serve have been amply rewarded by the growing reputation of the hospital and its clinics. The Health Committee, and the citizens of Newcastle whom they represent, have every reason to be grateful to Dr. Harlan, the Matron, Miss D. R. Gibson, the nursing staff and all their un-named assistants in every department of the hospital, for their respective contributions to the beneficent and noble task of converting an institution into a great house of healing.

The Shotley Bridge Emergency Hospital.

An uninstructed study of the records of the Shotley Bridge Emergency Hospital for 1942 might lead one to believe that the year had been easier administratively, in accordance with the reduction in the number of patients admitted. The statistical evidence as to numbers is not the best guide, because short-stay cases of comparative triviality were replaced by long-stay cases (as for example in the Department of Thoracic Surgery), which immediately raised administrative problems of difficulty and importance. The question of obtaining adequate nursing and domestic staff has been constantly present both to the Medical Superintendent, Dr. G. F. Duggan, and the Matron, Miss J. L. Watt. Somehow the demands of the wards have always been met, and here recognition must be given to those Newcastle General Hospital probationers who though removed from their own training school, have given invaluable service

to a sister institution. The Shotley Bridge Emergency Hospital as its name implies, is an emergency hospital, designed with one great purpose in view, namely, to provide a series of specialist services in the treatment of a group of war injuries—the Psycho-neuroses, Chest wounds, injuries to the face and jaws. It has been equipped, planned and staffed for these purposes. Through long months of the war it has been carrying out similar work amongst the civilian sick, and such Service patients as have required the appropriate form of treatment. But in the main it stands ready for an emergency which has yet to arise.

Here again, Dr. Duggan, Miss Watt, the Steward (Mr. Connolly) and the nursing and domestic staff have earned deservedly the thanks of the Committee for their patience and perseverance in the midst of continuing difficulties, and for the willingness and whole-hearted enthusiasm with which they have undertaken their respective tasks.

Hospital Co-ordination.

The preliminary outline of a definite attempt at hospital co-ordination in the North East of England which was briefly drawn in previous Annual Reports has now been rounded out. The constituent elements of the scheme, the North-East Regional Hospitals Advisory Council, its Chairman's Committee, and Medical Advisory Committee, the Divisional Councils and the ancestor of these bodies, the Newcastle Joint Hospitals Advisory Council—are a recognised part of the hospital organisation of the region. Much of the work that has been done has of necessity been of an educative character. The representatives of the two hospital systems, voluntary and municipal, sitting at the same meetings have learnt a good deal regarding their common problems and, to their mutual advantage, not a little as to the peculiar difficulties of the opposition camp. In these discussions lay and medical opinions have been put forward with equal voice.

Certain of the projects of the Council are well under way—the co-ordination of bacteriological services on Tyneside, the encouragement and extension of contributory and provident schemes, the survey of the fracture and rehabilitation services. In addition the Council took the initial step in bringing together the major local authorities and voluntary hospitals in the region with a view to their preparing a comprehensive scheme for the diagnosis and treatment of Cancer. Subsequent to the first meeting the task of

preparing that scheme was undertaken by yourself, Sir, as the Lord Mayor Elect of the City.

The work of the council is in many respects only at its beginning, for it is clear there still exist wide differences in the standards of hospital provision in various parts of the region. A knowledge of the range of services that can and should be provided is being steadily disseminated amongst the members of the Council, and these seeds carried back to areas where through lack of practical knowledge of the intricacies of modern hospital organization, progress has been hindered, will yield their life-saving produce in due season.

The Civil Defence Medical and First Aid Services.

The work of the Civil Defence Services was maintained at its previous high standard of efficiency throughout the year. The '75 point' scheme which had survived two years of enemy raiding and given reasonably good results was replaced by the model organization of the Ministry of Home Security. These changes did not impair the efficiency or damp the enthusiasm of the members of the services. They met the not infrequent demands which were made upon them as the result of the lighter type of enemy raiding with promptitude, courage and high determination. The maintenance of that efficiency and the sustenance of that morale have been the principal objectives of the officers in charge of the several sections of the organization—Dr. Gavin Muir (First Aid Commandant), Mr. T. Brooke Davison (Ambulance Officer), Mr. R. Dobbin (Staff Officer) and Mr. W. Gray (Head of the Mortuary Organization). To these gentlemen, and the many hundreds of men and women who have helped in various capacities in tasks sometimes dangerous, often tedious, but always ungrudgingly, the people of Newcastle owe a considerable debt of gratitude.

Conclusion.

The seventieth Annual Report is concluded. In its earlier pages an attempt was made to cover a space of time—the Psalmist's allotted span—in the history of public health administration in this city, and to show the changes for good which even in the lifetime of many now living have been brought to pass. The latter pages have dealt yet again with the health of the city's inhabitants during the third year of a great war. Whether the report has succeeded in its purpose is a matter of no particular account. The facts have been recorded, and the historian of 1973 may be able

to use them, when he unrolls the panorama of a hundred years. Let us hope that he may also be able to gather from these pages something which will tell him, and enable him in his turn to hand on, of the spirit which animated our nation and our townsmen in these times.

It now remains for me to thank you, Sir, and the members of the Health Committee for the kindness which they have shown to myself and members of the department, for that consideration for our various difficulties, and those expressions of appreciation which have made the work easier and the routine less monotonous.

My personal thanks are owing not only to my medical colleagues—Dr. Dawson-Walker, Dr. Miller, Dr. McCracken and the heads of sub-departments and hospitals—but to Mr. Gilhespy and every member of the staff of the Health Department. Without their collaboration and assistance, their patience and cheerful acceptance of long hours and dreary tasks, very little of what we have succeeded in accomplishing together, could otherwise have reached attainment.

I am, Sir,

Your obedient servant,

J. A. CHARLES,

Medical Officer of Health.

Health Department,

Town Hall,

Newcastle upon Tyne.

January, 1944.



