



Latayette, London

Sir William Savage

Chief Medical Officer for Somerset, 1909-1937

SIR WILLIAM SAVAGE'S SOMERSET

The Annual Report of the Director of Public Health 2016

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FOREWORD

Foreword

It is a privilege to be Director of Public Health in my home county of Somerset and an honour to be one of a long list who have been in post for over 100 years now. This report is a special one: it marks the retirement of Sir William Savage, who was Medical Officer of Health in Somerset from 1909 to 1936.

This report considers the changes that have taken place in the health and wellbeing of what is, now, “a lifetime”, taken as 80 years. I will compare data from the 1936 Somerset Annual Report of the Medical Officer of Health with the latest figures (from 2015), but will also make reference to other Annual Reports from the 1930s.

I want to compare Somerset today with the county as it was when my eminent predecessor was the first County Medical Officer of Health. He was not only a major figure in Somerset’s history, but of national influence through his work on food and housing – issues which still have profound influences on population health today.

“Somerset” for Savage was, of course, the now ceremonial county, so as well as the current County Council area it also covered what are now North Somerset and Bath and North East Somerset unitary authorities. Where it has been possible to separate out information for the current area only I have done so. In other cases I have used rates rather than totals to reduce the effect, or simply pointed out that a direct comparison could be misleading.

I hope you enjoy reading the report and are able to draw as much information and inspiration from it as I have.

With special thanks

I would like to acknowledge and give my thanks to Dr Pip Tucker, Jacq Clarkson, Jack Layton and the Public Health Team who have done a huge amount towards putting this report together.



EXECUTIVE SUMMARY

Executive Summary

Policies and services that improve the welfare, living conditions and life chances of local people can bring about profound improvements in the health and wellbeing of whole populations. Often, though, they can take years to bear fruit. This report looks back from 2016 to 1936, when Sir William Savage was the first County Medical Officer of Health at Somerset County Council (1909-1937), to see how the effects of actions taken over the 80 years since have impacted on health and wellbeing, and to learn the lessons of what has worked. I have used his annual reports from the 1930s as the principal source for my report this year. His statistics can be compared with the 2016 data supplement at

<http://www.somerset.gov.uk/organisations/departments/public-health/>

It is striking how the health and longevity of people in Somerset has improved since the 1930s. Savage described a “high proportion of old people” when 10% were over 65; the proportion now is 23%. Such huge improvements in life expectancy are a significant public health achievement, in part brought about by the dramatic decline in infectious diseases through population immunisation programmes, the discovery of antibiotics and improved sanitation.

Unsurprisingly, lifestyle-related diseases such cardiovascular, respiratory disease and cancers now place the most significant burdens on the population, reflecting that advances in technology, transport and food production, for example, can have negative as well as positive impacts on society. The good news is that many of these diseases are also largely preventable but require us, as a population, to rethink how we live our lives. Conditions such as dementia have also increased in relative importance as other causes of death have reduced and people now live longer lives.

Many of Savage’s activities have parallels today.

- He was much concerned with maternity and infancy. Savage was well aware that whilst infant welfare centres could work in towns, home visiting and “flying clinics” were essential in the dispersed rural areas.
 - He was an expert in food quality, although his worries about the effects of malnutrition and food hygiene contrast strongly with our concern about obesity and energy-dense food and drink.
 - Now referred to as “health promotion” rather than “health propaganda”, there is still a strong element of public health activity which is about making sure people have the right information to make informed choices and help them manage their own health.
-

EXECUTIVE SUMMARY

- Housing continues to be a significant determinant of health in the county. Huge strides have been made in housing standards, particularly in the public sector. The issue of housing affordability and availability has now become more prominent and greater consideration needs to be given to the type of housing required to live healthy independent lives in the future, particularly in relation to the changing demographics of the county.
- Public utilities remain vital. For Savage that largely meant mains water, whereas now we seek to spread access to high speed broadband for social inclusion and economic growth. The link between economic development, wealth and health is as important now as it was in the 1930s. Having meaningful, good quality employment, particularly for those who experience the greatest deprivation, provides a significant positive impact on physical and mental health.

Public Health was then, as again it is now, based in the County Council. Other organisational aspects have been transformed, with the NHS and welfare state giving the whole population the right of access to treatment and social care on the basis of need and clearly contributing much to the improvements in population health.

Most importantly, there are lessons for today in how Savage went about improving public health and what had greatest effect. The significant achievements were largely brought about by:

- *A relentless focus, at pace, on the most significant areas of disease burden*
 - *Action taken at “industrial scale”, not just small patches of coverage*
 - *Prevention activity built-in systematically to existing processes, not a “bolt-on” on its own*
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CHAPTER 1: INTRODUCTION

Chapter 1: Introduction

Taking the long view

Changes in population health usually take a long time to appear, and interventions may take two generations to have their effects¹. This report takes that long view, so that we can see how work done in the 1930s has led to what has been, overwhelmingly, an improving picture of health in Somerset.

It can sometimes be frustrating not to have the “quick wins” available in some areas of work, and it is heartening to take such a perspective and see how the tortoise can win the race of health improvement.

I want to use the comparison of the 1930s and today to see if there are lessons to be learnt, and to think how actions that are being taken in 2016 could be leading to a healthier Somerset at the end of the 21st century. The latest data on population health in Somerset are in the statistical annex to this report at

<http://www.somerset.gov.uk/organisation/departments/public-health/>

Responsibilities of Public Health

Leading Public Health

1936 – County Medical Officer of Health

As now, public health was a responsibility of the County Council in 1936. The 1888 Local Government Act gave county councils the power, rather than the duty, to appoint a Medical Officer of Health. In 1909 the Housing and Town Planning Act made the establishment of a Public Health and Housing Committee and the appointment of a Medical Officer, who reported to that board, a statutory duty.

Sir William Savage served as the first County Medical Officer of Health for Somerset from 1909 until his retirement in 1937. The association between the origins of public health in local authorities and their housing and planning responsibilities is striking, as Somerset considers the creation of a new “garden town”, university and business parks as part of its vision. Other health responsibilities that lay with county councils were:

Mental Illness: County asylums existed since the 1845 Lunatics Act and the 1913 Mental Deficiency Act. They were responsible for their own medical supervision.

CHAPTER 1: INTRODUCTION

Infectious Diseases: Institutions for people with infectious disease had to be provided after the Isolation Hospitals Acts of 1893 and 1901, and tuberculosis (TB) after the Acts of 1911 and 1921.

School Medical Service: This - including oculists (now “optometrists”) and school dentists - was a responsibility after 1907, when county councils became education authorities. It also provided the staffing for the Venereal Disease Clinics.

Midwives and Health Visitors: County councils had a supervision duty after the 1902 Midwives Act, and after 1907 were given the power to set up a health visiting service. In Somerset this work was undertaken by nurse-midwives from the County Nursing Association who acted as infant visitors.

Medical welfare services: In 1929 Public Assistance Committees in county councils took over the remaining medical responsibilities that had previously been provided under the Poor Laws. Savage reported in 1931 that:

“No extensive changes, however, resulted during the year under review as regards the treatment and provision for treatment of the sick poor.”

William Savage was also able to draw on the services of 33 part time Public Vaccinators, with vaccination for diphtheria, tetanus, whooping cough and tuberculosis being available, as well as an orthopaedic surgeon and sister.

The only non-clinical elements in the responsibilities were those of “health propaganda” (health promotion in today’s terms) and the power to use public health funds to support water and sewage schemes in the county. It is striking that the concerns of Public Health were primarily in the directly “medical” field, including some treatment roles that were taken on by the National Health Service after the Second World War.

Sir William Savage (1873 - 1961)

William Savage was born in Somerset in 1873, and studied at University College Hospital, London. His first work after qualification was as an academic bacteriologist and pathologist, with a particular interest in food hygiene, including salmonella. He studied the ways in which domestic animals and vermin acted as reservoirs for such bacteria.

Whilst in post as Somerset’s Medical Officer of Health from 1909 to 1937, his publications included work on milk and public health (he was a strong advocate of pasteurisation), the quality of tinned food and, in 1929, the prevention of human tuberculosis being contracted from cattle. He continued to be active after his retirement in 1937, including helping with his successor’s annual reports, and wrote about the impact of poor housing on health in his book Rural Housing in the 1940s. He died in 1961 at the age of 87. Savage clearly enjoyed working at the local authority, in his final report in 1937 thanking:

‘the members of the County Council and...all the Committees with whom I have worked for their invariable kindness to myself, for the sympathetic way they have received all my reports and proposals and for their valuable suggestions to improve those proposals...and no shadow of friction has ever been added to darken my endeavours.’

CHAPTER 1: INTRODUCTION

In addition to the County Medical Officer of Health, the rural and urban district councils had their own Medical Officers of Health, whose responsibilities included the registrations of infectious diseases.

2016 - Director of Public Health

Although the title of County Medical Officer of Health (CMOH) was replaced by Director of Public Health (DPH) in 1989, the current role is very much the successor of William Savage, in having a broad responsibility for the health and wellbeing of the Somerset population.

Public Health again became a responsibility of upper tier local authorities in 2013, having been within the National Health Service for nearly 30 years since 1974. Whilst this was part of a wider re-organisation of the NHS, the reasons for integrating public health with local authorities were very similar to those behind the creation of CMOsH in 1909. There was a recognition that planning, housing, education and the economy have a profound impact on population health and that these would be best influenced by the DPH being placed in the local authority.

Now, as then, Somerset has a two tier local authority structure, although the northern part has been separated off into North Somerset, and Bath and North East Somerset, in the 1974 reorganisation. Joint working has been helped by the creation of a Health and Wellbeing Board, on which the DPH sits, bringing together the county and district councils, the NHS and representatives of patients. All DsPH are required to work across all three domains of public health.

Health Protection

The Director of Public Health has a statutory duty to assure that the health of the local population is protected. This includes ensuring arrangements are in place to protect against threats including infectious disease, environmental hazards and extreme weather events ranging from minor outbreaks and incidents to full scale emergencies. The DPH should be assured that these arrangements are robust and are implemented appropriately.

The DPH must also ensure that local plans for immunisation and screening are in place, and that hospitals and others have plans for the prevention and control of infection, including those that are healthcare associated, such as MRSA.

CHAPTER 1: INTRODUCTION

This work is undertaken through a number of channels. The Local Health Resilience Partnership (LHRP) gives strategic leadership on Emergency Preparedness, Resilience and Response Plans (EPRR) for the health organisations and communities of the Local Resilience Forum area. The LHRP regularly assesses health risks and priorities, taking into consideration the different needs of communities to ensure preparedness arrangements reflect current and emerging threats. It sets an annual EPRR plan based on information from the national and local risk registers, national planning assumptions, lessons learnt from previous incidents and emergencies, advice from health communities and specific local health needs. The LHRP is co-chaired by the Director of Public Health.

The local Health Protection Forum (HPF) is chaired by a public health consultant representing the DPH. This is where detailed local discussion can be had in relation to local threats, risks and plans and includes representation from NHS England (NHSE), Somerset Clinical Commissioning Group (CCG), Public Health England (PHE), the five District councils, Water Company, and the Civil Contingencies Unit. An annual report goes to the Somerset Health and Wellbeing Board detailing the activities of the group and plans for the future.

Public Health also works with the police and other partners to protect against the health impacts of crime - domestic violence in particular.

Trudi Grant

Trudi has overall responsibility for public health in Somerset. She was appointed as Director of Public Health in 2012, acting as a statutory chief officer and the principal adviser on all health matters to elected members and officers. The role of Director of Public Health has a leadership role spanning all three domains of public health: health improvement, health protection and healthcare public health.

Trudi completed her public health training in the South West, and has worked within the discipline for over 22 years. She has a relentless focus on tackling health and social inequalities and putting improvements in health and wellbeing at the heart of local policy, aiming for systemic change rather than smaller, isolated improvements. Trudi has a particular interest in public health in rural communities and the inextricable link between education, economic prosperity, wealth and health.

Having originally trained as an accredited Exercise Scientist and lecturing in Exercise Physiology before moving into the field of Public Health, Trudi is the first Director of Public Health in Somerset who comes from a background outside medicine. Public Health as a discipline now attracts people from a wide range of other professions, reflecting the degree to which health is influenced by social and environmental factors rather than simply medicine.

Bringing her backgrounds together, Trudi developed a strong interest in the relationship between physical and mental health and, linking together leading academic institutions, led the development of a National Consensus Statement on Physical Activity and Mental Health.

CHAPTER 1: INTRODUCTION

Health Improvement

Under this heading come the very significant functions of the drug and alcohol service, reduction in the harm from tobacco, sexual health and health visitors for children from birth to the age of five. A major component of work, which only moved from NHSE to counties in 2015, is that of the 0-5 services. This includes health visitors and family nurses, who undertake the ante-natal check, new baby review, 6-8 week assessment and the one and five year reviews. Public Health is charged with understanding local health needs – particularly inequalities – in order to improve population health, especially for those who are in greatest need. Activities such as the National Child Measurement Programme (NCMP) and the NHS Health Checks programme both collect information and promote good health in the population.

Healthcare Public Health

Understanding and using the available evidence sits at the heart of Public Health's third responsibility, which is to promote the good working together of the whole health and care system. Annual Reports – such as this one – are part of that, as is the Joint Strategic Needs Assessment of the county, also reviewed each year. The provision of specialist public health support and advice makes up the “core offer” to the NHS. At a time when health and social services are facing national pressures from a growing and ageing population, and in a time of austerity, Public Health has an important role to play in setting the strategic direction and encouraging work towards the best outcomes for the whole population, including helping the integration of health and care.

CHAPTER 2: THE POPULATION, THEN AND NOW

Chapter 2: The Population, Then and Now

“Somerset” in 1936 was a fifth larger in area than it is now, making a comparison of numbers difficult, as shown in Table 1.

The structure of the population has changed radically over time. Savage referred to a “high proportion of old people” in 1936 when 10% were aged 65 or over; by 2014 this had more than doubled to 23%. At the other end of the age range, in 1936 there were 22% aged under 15 and now this has fallen to 16%.

The proportion of the population who are male has increased slightly from 46% to 49%, possibly because of life expectancy improving more for men than women. The numbers of 0-4 year olds shows the expected slight excess of boys in both years. In the 1930s less than 2% of the population went to university², and there was no evidence of children leaving the county for higher education or employment as there is now.

Probably some of the most useful information comes from comparing data on deaths. William Savage was proud to point out that “only 39%” of deaths were of those aged under 65; this was a significant achievement. Now only 13% of deaths are below the age of 65 and a death below 75 is considered to be premature mortality. In both eras the crude birth rate is roughly the same as the crude death rate and there has been a reduction in both. However, the general fertility rate, which takes account of the number of women of child bearing age, was lower in the 1930s than now, perhaps reflecting the continuing impact of the First World War and economic depression.

Throughout the rest of this report I consider differences in the causes of deaths and where the health and wellbeing of the population has changed.

In 1936, Savage commented:

“As pointed out in previous years, we cannot hope to lower the death rate further to any great extent but must aim at a postponement of the period of death.”

He believed average life expectancy had peaked at approximately 66 years and that the focus should be given to increasing healthy years of life. By 2014 life expectancy had increased by more than 15 years to 81 for men and 84 for women. Allowing for the differing population structure, mortality was about 3.5 times higher in 1936 than in 2014. Many factors have affected the improvement in life expectancy, among them the introduction of antibiotics, immunisations and more available health care; increased education, prosperity and nutrition, and better housing and infrastructure. All these will be discussed in this report, but strikingly,

CHAPTER 2: THE POPULATION, THEN AND NOW

now 80 years on, I am also actively advocating that we focus our efforts on improving healthy life expectancy above improvements in overall life expectancy.

We do not have estimates of healthy life expectancy from the 1930s, but recent figures at least illustrate how life expectancy itself gives only part of the picture. Our latest figures, for 2012/13, show that healthy life expectancy for women in Somerset, at 68 years, was 16 years less than life expectancy; for men the equivalent figures are 67 and 14. Changes in definition (from “disability free” to “healthy”), a relatively short time series and annual variation in the data, make the local trends indistinct. However, national trends show clearly that increases in healthy life expectancy in the UK are not keeping pace with gains in life expectancy, particularly at older ages³.

Table 1: Demographic Comparison 1936 and 2014

	1936	2014
Population	403,600	541,609
Area (hectares)	416,331	345,055
Population density (people per hectare)	0.97	1.57
Proportion of people aged 65+	10%	23%
Proportion of people aged <15	22%	16%
Proportion male	46%	49%
Proportion 0-4 year olds male	50.9%	50.2%
Births	5,541	5,614
Live birth rate (per 1000 population)	13	10
General fertility rate (per 1000 women aged 15-44)	55	63
Deaths	5,217	5,565
Crude death rate (per 1000)	13	10
Standardised death rate (per 1000)	35	10
Proportion of deaths occurring before age 65	39%	13%
Proportion of population in rural areas	55%	48%

CHAPTER 3: INFECTIOUS DISEASES

Chapter 3: Infectious Diseases

Tuberculosis

Extent in 1936

Tuberculosis (TB) is a bacterial infection usually spread through inhaling tiny droplets from the coughs or sneezes of an infected person. It mainly affects the lungs but can affect any part of the body. The symptoms are persistent coughs, weight loss, night sweats, high temperature or fever, tiredness and fatigue, loss of appetite and swellings that persist for more than several weeks⁴. X-rays – as shown in Bridgwater Hospital in Figure 1 - were used to assess the effects on the lungs.

TB was a major public health issue in 1936 and the England and Wales mortality rate was over 80 per 100,000. This compares with an England rate today of 0.5 per 100,000⁵. Notwithstanding this, Figure 2 shows that the 1930s rates represented a rapid fall from a peak in 1918: the end of the First World War

being followed by housing acts promoting better living conditions.⁶ Somerset saw an average of 487 cases per year between 1912 and 1924 and while 38% were cured, sadly, 29% died.⁷

The Somerset mortality rate had been dropping year-on-year but for 1936 Savage wrote:

“the rate of drop has been considerably increased and figures are remarkable.”

There were 178 deaths at a rate of 42 per 100,000 and he calculated

“272 fewer persons died of tuberculosis in the County in 1936 than would have been the case 30 years ago with the same population.”⁸

Figure 1: X-ray, Bridgwater Hospital (Bridgwater Hospital)



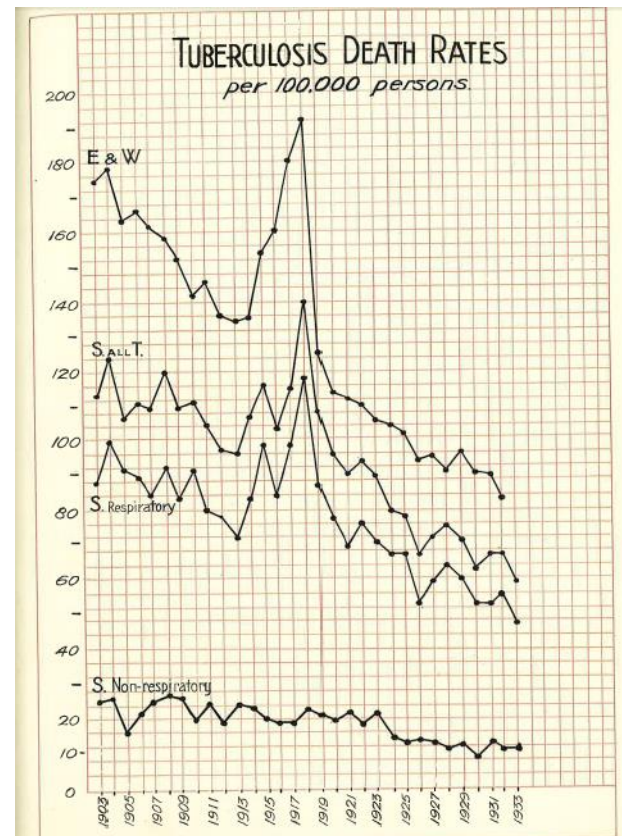
CHAPTER 3: INFECTIOUS DISEASES

Figure 2: Tuberculosis Death Rates

Treatment in 1936

A sanatorium was a secure hospital (with sanitary conditions) for long-term illness and many were used for the “detention” of TB patients. In 1935 there were five in the current Somerset area, with Quantock Lodge near Over Stowey being the largest, and the others being at Cheddon Road in Taunton, Chard, Wincanton and Compton Bishop. Somerset’s sanatoria received 307 new admissions in that year and cured 213 patients with “no signs of active TB having been detected after several years”. This was the highest number on record for a single year.⁹

The sixteen County Dispensaries - medical clinics that provided for working class people who paid a subscription - treated a further 1,121 people, examining 2,580 people in all. The dispensaries would often provide free basic healthcare for the poor, funded by charitable donation. There were 12,054 visits made by health visitors and nurses, and 888 by Tuberculosis Officers to people’s own homes in the same year.¹⁰ Treatment consisted of a strict regimen of bed-rest, fresh air, healthy diet and a gradual increase in activity levels.¹¹ At Quantock Sanatorium this amounted to “rest, graduated exercise and work, with good plain food under open-air conditions”. Nonetheless Medical Superintendent Dr V.C. Martyn of Quantock Sanatorium (now Quantock Lodge) did point out that the



Source: Savage, William G, Somerset County Council, Report of the Medical Officer of Health for the Year 1933, p21.

“amusement side of the Sanatorium life is very important, and besides billiards and billiard matches, concerts, pantomimes, whist drives etc., are arranged and much enjoyed. Mr Phillips, junr., one of the Honorary Dental Surgeons, has very kindly brought out sound films on behalf Toc H [an international charity]. These were greatly appreciated.”¹²

The year of 1936 was described as “sunless and cold” by the County Tuberculosis Officer, L.J Short, and he wrote that some patients

“missed their sun-bathing and were depressed in consequence,”¹³

showing a degree of consideration for the mental health and wellbeing of TB patients.

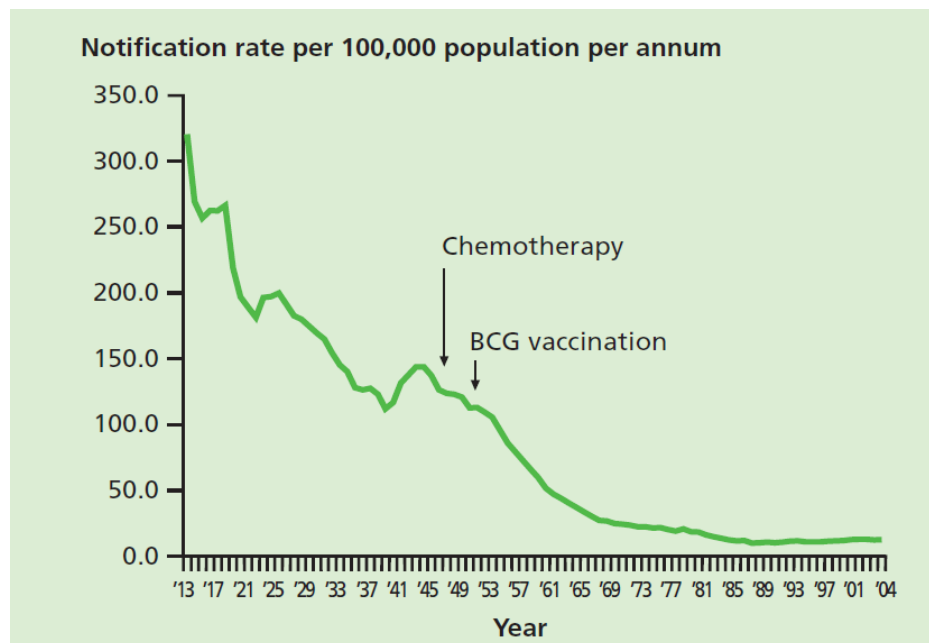
CHAPTER 3: INFECTIOUS DISEASES

Decline in Tuberculosis

Although rates were already declining during Savage's tenure, Figure 3 shows that mortality from TB decreased particularly rapidly after the introduction of effective chemotherapy in the 1940s and the introduction of routine adolescent BCG (*Bacillus Calmette-Guérin*) vaccine programmes in 1953.¹⁴ In the 1930s there were about 170 deaths a year from respiratory TB; in 2014 there were none. The BCG vaccine can provide effective protection in up to eight out of 10 people for a period of time. Vaccinations are now only recommended for high risk groups whose immune systems are more likely to be compromised, such as people who are homeless, have HIV/AIDS or who misuse substances.¹⁵

TB can usually be cured with antibiotic treatment. The first antibiotic drug, streptomycin, was discovered in 1943 and was generally available in Europe by 1947. By 1953 antibiotic drugs allowed for effective treatment in over 90% of TB cases.¹⁶ This coincided with a rapid decline in TB mortality in England and Wales between 1941 and 1956 and mortality rates continued to decline thereafter.

Figure 3: Rate of Tuberculosis Notification



Source: Public Health England, *Tuberculosis mortality and mortality rate, England and Wales, 1913-2013*

CHAPTER 3: INFECTIOUS DISEASES

Re-emergence of Tuberculosis

However, TB has re-emerged as a serious public health problem in the UK over the last two decades, as shown in Figure 4, and is a current Public Health England priority.¹⁷ The “Collaborative Tuberculosis (TB) Strategy for England: 2015 to 2020” aims to eliminate TB as a public health problem in England.¹⁸ New cases have increased steadily from 5,086 in 1987 to 8,183 in 2013. Incidence in England is higher than most other western countries and four times higher than in the United States. There are even examples of outbreaks in other European countries originating in the UK¹⁹.

Tuberculosis in England has particularly presented in urban centres and amongst those people who have been abroad in countries where TB is more common. Around 4,700 of the 6,500 cases reported in 2014 were of people born outside the UK.²⁰

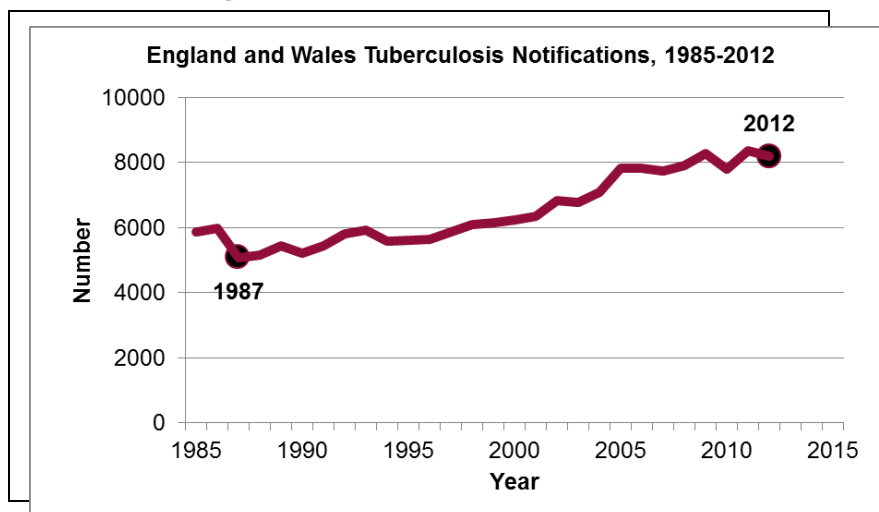
Most concerning is the rise in multi-drug-resistant tuberculosis – MDR TB. This is part of a global rise in “superbugs” that cannot be treated by current antibiotics. Over-use of antibiotics, such as prescribing for conditions that are not caused by bacteria or for conditions that would have got better anyway, can leave harmful bacteria to mutate so that they no longer respond to existing treatments.

Somerset has been relatively unaffected by the TB resurgence to date, apart from an outbreak in a factory in Shepton Mallet in 2014. Between 2001 and 2013 the number of people completing treatment for TB who were resident in Somerset has been suppressed in every year except 2005 (seven people) because so few notifications have been made. Despite the slight recent rise, Somerset residents were over 25 times more likely to develop active TB in 1936 than they are today.²¹

Other Infectious Diseases and Vaccination

In 1936, with little immunisation for most diseases and no antibiotics, infections were a major killer. The diseases monitored (other than Tuberculosis) were smallpox, diphtheria, scarlet fever, enteric and paratyphoid fevers, Encephalitis Lethargica, measles and whooping cough. The only one of these diseases with large numbers of cases now - though only about a fifth of the number in 1936 - is scarlet fever.

Figure 4: Tuberculosis Notifications, 1985-2012



Source: Public Health England, Tuberculosis case notifications, England and Wales, 1913-2013.

CHAPTER 3: INFECTIOUS DISEASES

Since then smallpox has been eradicated worldwide (the last record of smallpox in Somerset before 1936 was a family of four in Frome in 1930; the last endemic case in Britain was in 1935). The declaration of eradication was made in 1980.

Diphtheria, measles and whooping cough are all preventable by routine childhood immunisation; enteric fever (typhoid) and paratyphoid has been much reduced by improved sanitation, water and food handling processes (and there are also vaccines available when travelling abroad to areas of high risk). Encephalitis Lethargica has disappeared. It was the condition described in Oliver Sacks's book "Awakenings". It is not known what caused it or why it disappeared. There is speculation it was associated with Spanish Flu or possibly an unusual streptococcal infection. The mortality rate for Encephalitis Lethargica was quoted as 100% in 1936 - in the four years 1933-36 there were 29 cases and 28 deaths.

There were four cases of Acute Poliomyelitis (polio) reported in 1936. This compares with 16 two years earlier, reflecting natural periodicity in the infection. Figure 5 shows a boy fitted with callipers at Taunton Clinic, presumably for the treatment of the effects of polio. The World Health Organisation (WHO) is working to eradicate polio worldwide. It was eradicated in Europe in 2002 and is now endemic only in Pakistan and Afghanistan²².

In the 1930s there were about 33 deaths a year from measles, scarlet fever, whooping cough or diphtheria; in 2014 there were none. The number of notifications of scarlet fever is very similar now to what it was in the 1930s - the death rate has always been low.

Interestingly, influenza is not listed in Savage's report under "infectious diseases", but does appear as a cause of death. There appears to have been a flu epidemic in 1933, when 345 people died; in the next three years there were roughly 88 deaths a year compared to two deaths in 2014.

Figure 5: Taunton Clinic



Table 2 shows how the list of diseases in the notification system has changed, reflecting the different public health priorities then and now. In 1936 the ascertainment and treatment of TB was very important, and was counted separately from the infectious diseases. However, with the notification of infectious disease reporting, scarlet fever remains the most common condition. Changing patterns are shown in Figures 6 and 7.

CHAPTER 3: INFECTIOUS DISEASES

Table 2: Infectious Disease in Somerset, 1936 and 2014

	Cases		Deaths		Case mortality rate	
	1936	2014	1936	2014	1936	2014
Scarlet fever	510	102	5	0	1%	0%
Respiratory TB	297	19	143	0	48%	0%
Diphtheria	187	0	12	0	6%	-
Encephalitis Lethargica**	29	*	28	0	97%	-
Enteric and Paratyphoid fever	17	0	1	0	6%	-
Whooping cough	*	22	8	0	-	0%
Measles	*	13	12	0	-	0%

* not listed

**cases and deaths summed 1933-1936

Figure 6: Somerset Infectious Disease 1936

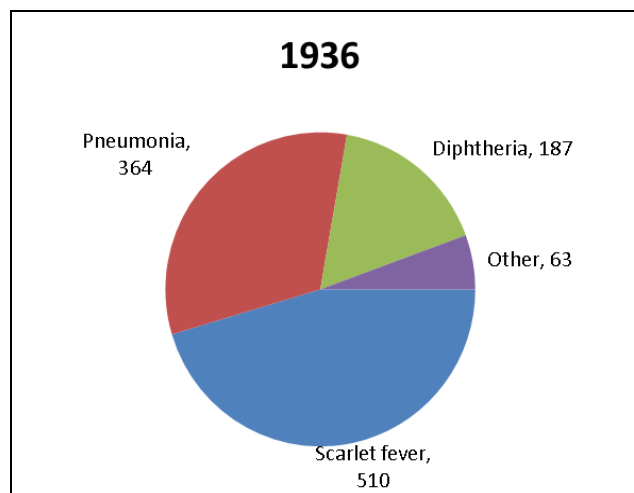
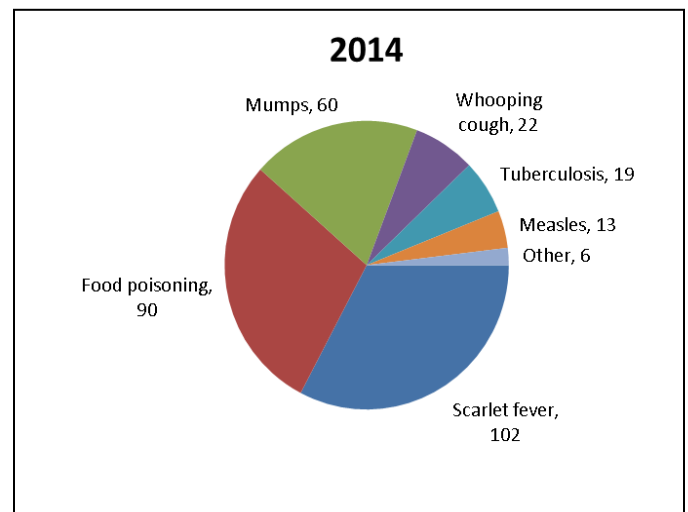


Figure 7: Somerset Infectious Disease 2014



CHAPTER 3: INFECTIOUS DISEASES

In 1936 information about and control over infectious diseases were not centralised: notifications of infectious disease were made to the Districts rather than the County Council so Public Health knew little about the incidence of infectious disease - receiving only a count of the number of notifications a week. The County Council was a partner with the isolation hospitals and provided laboratory functions.

The Maternity Service (run by the County Council) was concerned with the prevention and reduction of death and damage to health from measles and whooping cough but the Education Authority was responsible for dealing with measles and whooping cough among school children. Savage found all this unsatisfactory and argued it would be more economical and satisfactory for the control of infectious disease to be transferred to the County Council.

Today, doctors in England and Wales have a statutory duty to notify suspected cases of a list of 30 infectious diseases. Public Health England collects these notifications and publishes analyses of local and national trends every week and they are also responsible for disease prevention and control. This information is provided to DsPH in order for us to maintain an oversight of the health and wellbeing of our population and to assure the health protection arrangements are sufficiently robust. Public Health England and the local Public Health team work jointly to respond to disease outbreaks or other acute threats to public health.

Figures 8-15 show the changing patterns of a range of infectious diseases. With the exception of Dysentery and Polio, they show dramatic falls from the 1930s, with the most dramatic falls in notification coinciding with immunisation programmes. Such a fall applies to polio, but follows a period of epidemic in the 1950s, caused, counter-intuitively, by improving hygiene, which led to the disease appearing later in childhood and thus more seriously than the earlier period. Then it was a generally less-serious disease affecting those under five, who then achieved permanent immunity. Dysentery, which has not been the subject of vaccination, follows a similar but more subdued pattern.

Figure 9: Notifications of Diphtheria

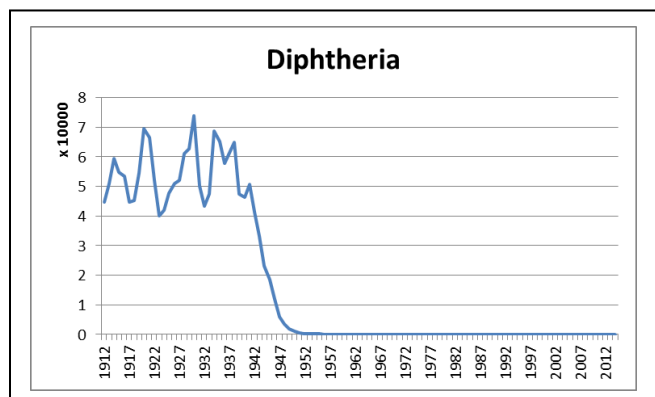
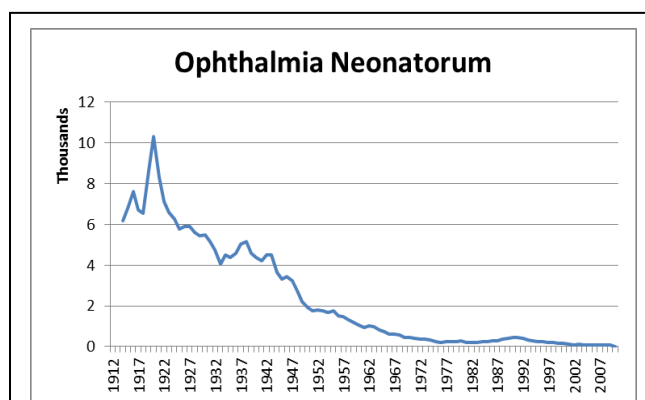


Figure 8: Notifications of Ophthalmia Neonatorum



CHAPTER 3: INFECTIOUS DISEASES

Figure 11: Notifications of Measles

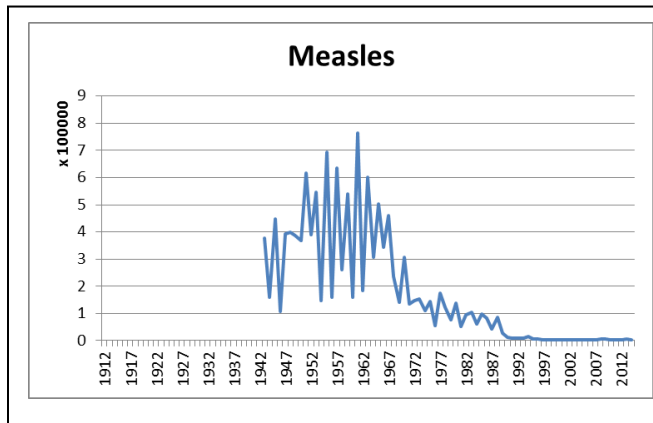


Figure 10: Notifications of Whooping Cough (Pertussis)

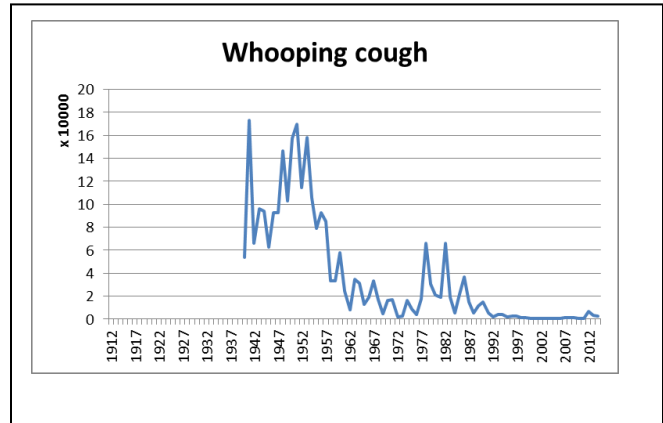


Figure 12: Notifications of Scarlet Fever

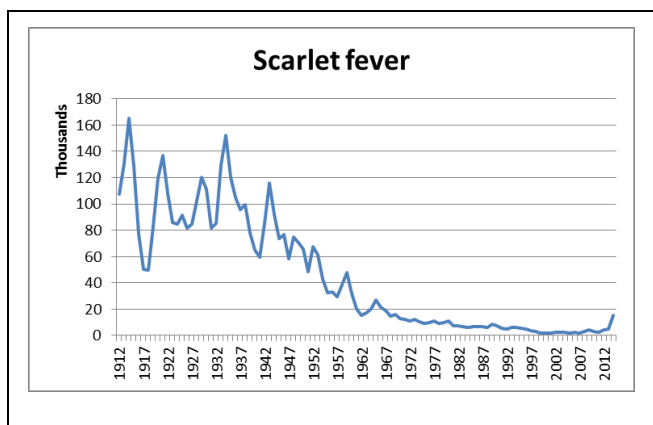


Figure 13: Notifications of Typhoid and paratyphoid fevers

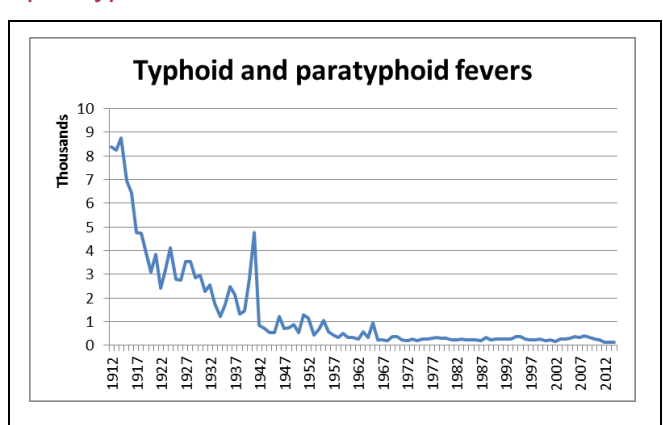


Figure 15: Notifications of Acute Poliomyelitis

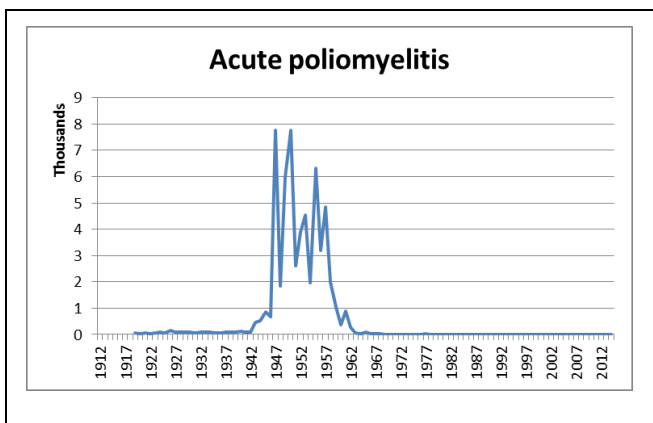
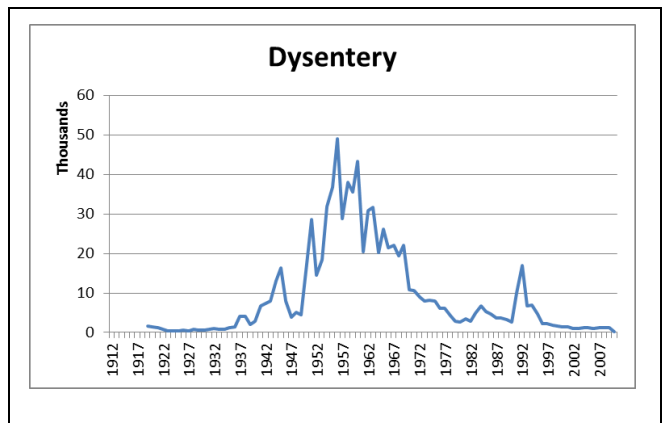


Figure 14: Notifications of Dysentery



CHAPTER 3: INFECTIOUS DISEASES

Immunisation

Smallpox vaccination was being offered to infants in 1936, but only 25% were being vaccinated. In Bridgwater and North Radstock & Clutton (then in Somerset) only 7% were protected, but in Dulverton the rate was 55%. Despite this low take up it is apparent that the virus was not circulating in the community and no cases were reported.

By the end of the 1920s, vaccines for diphtheria, tetanus, whooping cough and tuberculosis (TB) were all available, but there is no mention of them being administered in Somerset in 1936 in a routine programme. Polio vaccine was introduced in 1955, measles in 1968 and since then many more have been added to the routine schedule of immunisation, for children, adolescents, special groups and older people^{23 24}.

Vaccination can protect not only the people who receive it, but also those who do not. If a sufficient proportion receives it - 95% for most childhood diseases - a “herd immunity” is created which means the disease is less likely to circulate in the community. At various times there have been drops in the levels of vaccination following suggestions that vaccines are harmful. These drops mean not only that the disease is circulating again, but the people getting the disease tended to be older than in the past and this is often associated with more severe disease and complications, as described for polio.

A striking example of a drop in vaccine uptake is the combined measles, mumps and rubella (MMR) vaccine, following widespread publicity given to a flawed report suggesting a link with autism, in 1998. The Somerset take up rate fell from 94% in 1997/98 to reach a trough of 77% in 2004/05, before rising again to reach 94.7% by 2014/15. Local numbers of measles notification are too small to identify trends, but for England and Wales “measles incidence has increased dramatically in recent years”²⁵ and with more people catching the disease at older ages the severity has also increased.

The flu jab was introduced in the 1960s for vulnerable groups such as the older people and people with long-term conditions such as diabetes. In the last few years a nasal spray vaccine has been introduced for young children, as they are especially good at spreading the flu virus in communities. This vaccine will gradually be rolled out to all school age children. The flu virus changes every year, so unlike other vaccines, the flu vaccine has to be given annually.

CHAPTER 3: INFECTIOUS DISEASES

Sexually Transmitted Infection

Gonorrhoea and Syphilis in 1936

Between 1933 and 1936 there were approximately seven deaths from syphilis a year, and a further 11 from “general paralysis of the insane”, then another name for tertiary syphilis. There were 4,887 attendances related to venereal diseases at Somerset clinics in 1936 and 266 new presentations. Somerset County Laboratory and Bristol University laboratory examined 1,120 samples for venereal diseases for the county. These were mainly focused on the Wassermann test for syphilis (602) and a test for gonorrhoea (453).

Syphilis was a scourge affecting a significant proportion of men and women in the early 20th century. Routine therapy for the disease had been with mercury, both as an ointment and internally, but this was quite toxic. The first commercial arsenobenzol compound for the treatment of syphilis was Salvarsan. It had been developed by Paul Ehrlich in the first decade of the 20th century and was marketed in 1910. These compounds were available to 23 chemists in Somerset who were licensed with the council. This remained the main method of treatment until the introduction of antibiotics in the form of penicillin following the Second World War.²⁶

There is no mention of chlamydia in Savage’s report. The 20 cases of ophthalmia neonatorum (conjunctivitis of babies acquired during birth) may include some attributable to chlamydia, but it is impossible to say how many.

Sexually transmitted infection in 2016

By contrast in 2014 there were 12,751 attendances at Genitourinary Medicine (GUM) clinics with 2,285 new diagnoses of sexually transmitted infections (STIs) or Human Immunodeficiency Virus (HIV). The most common STIs diagnosed in GUM clinics were anogenital warts (500), chlamydia (432), anogenital herpes (172), gonorrhoea (64) and syphilis (10). In 2014 there were 1.9 cases of syphilis per 100,000 population, 11.9 cases of gonorrhoea per 100,000 and 2.0 people with HIV per 100,000. 232 Somerset residents were receiving treatment for HIV.

Whilst the figures for sexually transmitted infection for 1936 and 2016 are not entirely comparable because of differences in reporting, the significant increase in demand for services in 2014 is notable. Largely this is due to the changes in sexual practice amongst the population with people tending to have more sexual partners now, being sexually active at an earlier age and changes to the availability of different forms of contraception. Sexual health remains a significant public health challenge in the UK and is arguably an area which requires an even greater focus to increase population understanding.

CHAPTER 3: INFECTIOUS DISEASES

Summary

The dramatic fall in the incidence and severity of infectious disease since 1936 is probably one of the greatest success stories for public health in the UK. Improved living conditions and immunisation have hugely reduced the impact of conditions that used to be major killers.

Only smallpox has been eradicated, though, and the threats to health that existed a lifetime ago show why the promotion of immunisation, good hygiene and avoiding antibiotic resistance remain so important. Such huge progress has been made in reducing infectious disease but only by taking action at population scale, systematically and done at pace. There is significant learning that can be drawn here and applied to the public health challenges that we face today. This point will be explained further in the conclusion of the report.

CHAPTER 4: PREGNANCY AND EARLY YEARS

Chapter 4: Pregnancy and Early Years

In 1936 Sir William Savage, talking of maternity and child welfare, wrote:

“The County Council scheme is a very complete one, and as it has never been detailed in any of my Annual reports I am dealing with it in more detail this year.”

The number of births in 1936 was slightly lower than in 2014 but the crude birth rate (live births per 1000 total population) was higher then. The general fertility rate, which relates the number of births to the population likely to give birth (live births per 1000 women aged 15-44), has, however, increased. Figure 16 shows a mother and new born baby at Bridgwater Hospital in the 1930, and Figure 19 is of a children’s clinic in Yeovil in the same period.

Maternity and Infant Mortality

Savage reports that the infant mortality rate (of deaths under one year old) in 1935 was 40 per 1000 live births, which he describes as an “extraordinary achievement”. There were 252 deaths of children aged under 1 in 1936, 47 per 1000 live births – these rates were much lower than the average for the country. The still birth rate was 40 in every 1000 births and the perinatal rate (deaths within the first seven days of birth) 46 in every 1000. Indeed, he said,

“I do not think any local action beyond what we are now doing is required.”

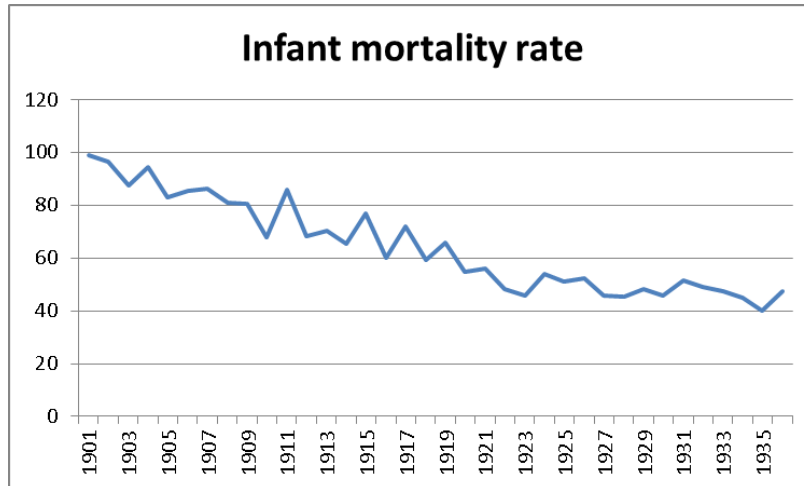
Wonderfully, by 2014, all of these mortality indicators had fallen to about a tenth of the 1936 values. Table 3 compares the statistics for 1936 and 2014 indicating striking differences in mortality.

Figure 16: Mother and Child, Bridgwater Hospital (Bridgwater Hospital)



CHAPTER 4: PREGNANCY AND EARLY YEARS

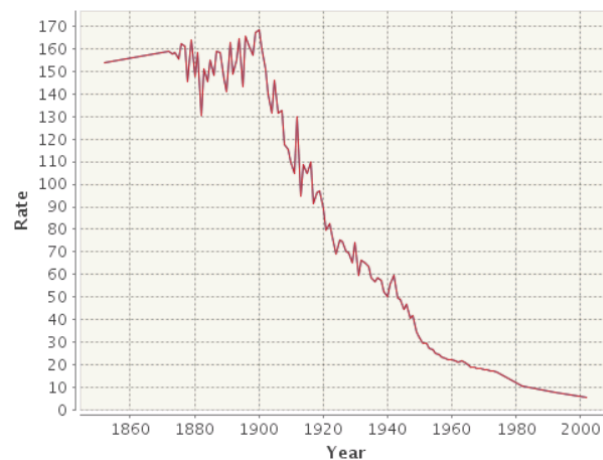
Figure 17: Infant Mortality Rate, England



It is clear what prompted Savage to say the infant mortality rate was an “extraordinary achievement” as the trend from 1900 (Figure 17) was dramatically downward - not just in Somerset but across the whole country. High infant mortality rate had been associated with diarrhoea from contaminated food, milk and water; insanitary living conditions; badly ventilated housing; overcrowding and poor childcare. In 1900 – which can now be seen as a peak in infant mortality (see Figure 18) - recruits for the Boer War were found to be in poor condition, leading to a range of policies being brought in, including midwife training, health visitors, diet and hygiene advice in schools and housing legislation, and rising prosperity raised incomes.

Similar factors have continued since 1936 to keep the trend going, but there have been other changes too. Given antibiotics, better maternal care and family planning, increasing immunisations, better education and living conditions and the introduction of a free National Health Service, the rates have continued this fall to reach very low – and still declining - rates today.

Figure 18: Infant Mortality Rates - England



Source: GB Historical GIS / University of Portsmouth, England and Wales through time | Historical Statistics on Life and Death for the Nation | Rate: Infant Mortality Rate, *A Vision of Britain through time*.
http://www.visionofbritain.org.uk/unit/10001043/rate/INF_MORT

CHAPTER 4: PREGNANCY AND EARLY YEARS

Figure 19: Children's Clinic at Yeovil Hospital (Bath Records Office)



Table 3: Perinatal statistics, 1936 & 2014

	1936	2014
Live births	5,321	5,588
Still births	220	26
Still birth rate (per 1000 births)	39.7	4.6
Deaths of children under 1 week of age	124	11
Early neonatal mortality (per 1000 live births)	23.3	2.0
Perinatal mortality (still births and deaths <1 week)	344	37
Perinatal mortality (per 1000 births)	45.7	5.0
Deaths of children under 4 weeks of age	165	13
Neonatal mortality (per 1000 live births)	31.0	2.3
Deaths of children under 1 year of age	252	25
Rate of infantile mortality (per 1000 live births)	47.4	4.5
Legitimate	5,140	2,934
Illegitimate	181	2,654*
Percentage of (live) births illegitimate	3%	48%†

* Estimate

† National rate

CHAPTER 4: PREGNANCY AND EARLY YEARS

Maternal deaths

The number of women who died during pregnancy and childbirth had been reasonably stable (about 25 deaths per year, a rate of just under 5 per 1000 births) in the 20 years up to 1936. Savage described the latest figure of 36 deaths as “exceptionally high”. All cases were investigated and no special reasons could be found for the increase, which he expected to be temporary. The factors described above have been the same ones improving maternal health. Maternal deaths in Somerset in the past 10 years have been so few that the figure is below five and therefore not able to be reported specifically.

Contraception

Contraception in 1936

In July 1930²⁷ the Ministry of Health allowed local authorities to give birth control advice in welfare centres - with restrictions. Savage reported on its provision, which was only available for married women “for whom a further pregnancy would be detrimental to health”.

“Birth Control...is conducted along the restricted lines authorised by the Public Health Committee. Applications for the most part go direct to Dr. Halliday. During the year 19 applications were received, of which 11 were seen and advised personally by Dr. Halliday; 2 were advised by another Medical Officer; 6 were referred to other clinics.”

The numbers applied for had been reducing since 1933, when there were 45, though this might have been because once advised, women might not need to be advised again.

Contraception in 2016

Family planning provision was not included in the Act which established the NHS. Women about to be married were allowed advice from 1952, but it wasn't until 1967 with The National Health Service (Family Planning) Act that birth control advice was extended to all and on social as well as medical grounds. In 1974 all contraceptive advice and prescribed supplies provided by the NHS were free of charge irrespective of age or marital status. In 1992 a target for reducing the number of unplanned pregnancies and births in young people was introduced, and the year 2000 saw the increased provision of emergency contraception by nurses and pharmacists. Family planning increasingly became involved in the prevention of sexually transmitted diseases, initially gonorrhoea and syphilis but latterly including AIDS/HIV and chlamydia.

CHAPTER 4: PREGNANCY AND EARLY YEARS

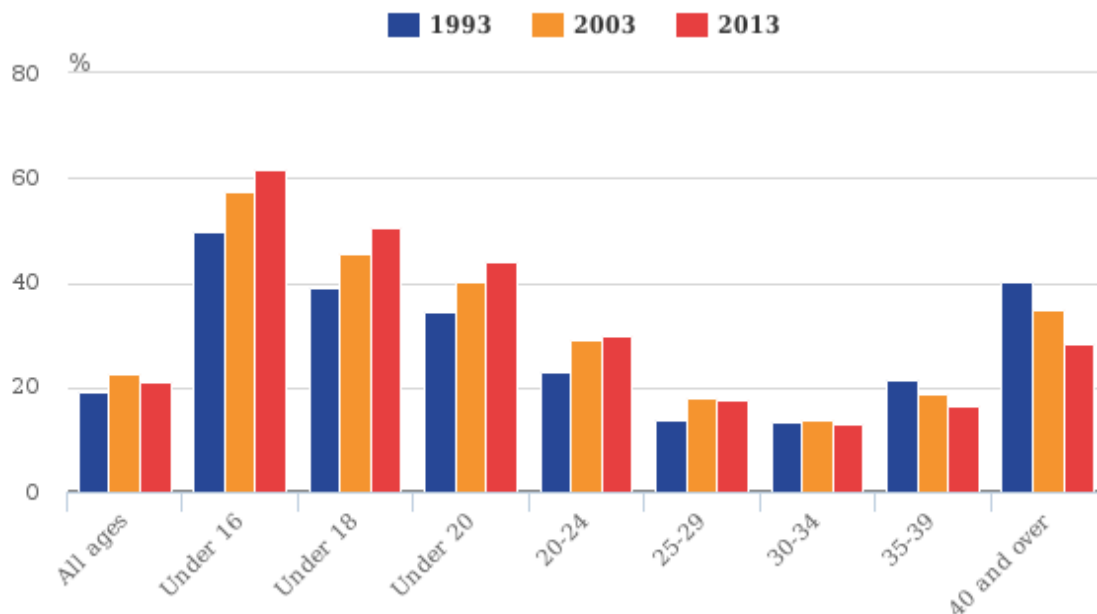
Teenage Conceptions and Abortion

In Savage's reports from the 1930s there is no discussion of the age of mothers at all. This appears to be a modern concern – however the number of births to young mothers (aged under 20) has decreased since the 1950s, at least²⁸, and it is possible that there were many very young mothers in Savage's time.

In 2014 there were 22,653 conceptions in England and Wales to women aged under 18 compared with 24,306 in 2013, a decrease of 7%. This is the lowest number of conceptions in this age group since 1969. Just over half (51%) of all conceptions to women aged under 18 in 2014 led to an abortion; this proportion has remained relatively unchanged since 2006. It is widely understood that teenage pregnancy and early motherhood can be associated with poor educational achievement, poor physical and mental health, social isolation, poverty and related factors. There is also a growing recognition that socio-economic disadvantage can be both a cause and a consequence of teenage motherhood.²⁹

Abortion was illegal in 1936 and not considered. That does not mean that illegal – and probably very dangerous – abortions were not attempted. Recent figures for England and Wales are shown in Figure 20.

Figure 20: Percentage of Conceptions Leading to Legal Abortion by Age of Woman at Conception, 1993, 2003 and 2013 (England and Wales)³⁰



CHAPTER 4: PREGNANCY AND EARLY YEARS

Legitimacy

Having a baby outside marriage in 1936 was considered a moral failing. With the increasing secularisation of the country this is no longer the case. This is dramatically shown by comparing the very low rate of 3% nationally in 1936 with 48% of children now being born to parents who are not married. The change in attitude has been such that even the term “Illegitimacy” is no longer used.

Midwives and Health Visiting in 1936

Ante-natal work

In 1936 Ante-natal Clinics were held at most of the Infant Welfare Centres. In the current county area, these were Bridgwater, Crewkerne, Frome, Glastonbury, Shepton Mallet, Street, Wellington and Wells. Bridgwater was directly administered by the County Council, with the rest managed by Voluntary Associations. There were also 241 held at the Flying Clinics, where they were “more and more sought and given”. At these clinics the midwives were able to make the examinations whilst having medical practitioners on hand for advice.

When conditions such as

“abnormality of the mother or suspected difficult confinement or unsuitable or very inaccessible home”

were found, the expectant mothers could be sent to maternity homes in Bridgwater, Taunton, Wellington and Yeovil, at the County Council’s expense.

Midwives

Sir William Savage viewed with satisfaction the decline in the untrained “bona fide” midwives, which was more than outweighed by an increase in those trained as nurse midwife or midwife, with two or three years’ training and those qualified as “Queen’s Nurses”. The service was inspected by Miss Stewart, Deputy Inspector of Midwives, who made, on average, 3.6 visits to each midwife, and

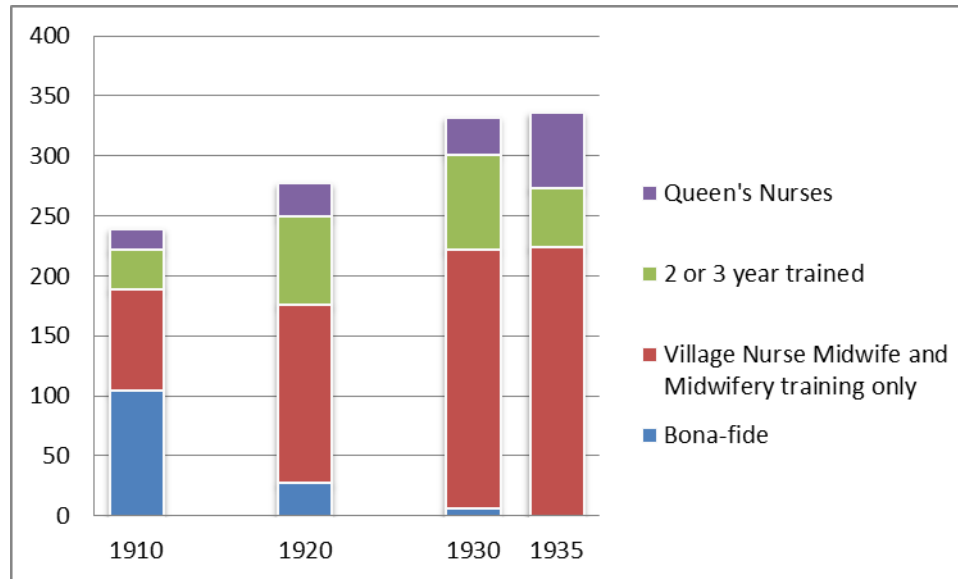
“Some midwives require a good many visits, others much fewer.”

Savage stressed that the encouragement and help were

“even more important than the actual inspection.”

CHAPTER 4: PREGNANCY AND EARLY YEARS

Figure 21: Midwifery Training in Somerset



Midwives could call on medical assistance when required, and Savage was concerned about the increase in the proportion of births when this happened. He felt that the rules of the Central Midwives Board were getting more and more complicated so that the midwife was confused and

“a timid midwife can find authority for calling in a doctor in practically every case. I am of the opinion that this policy of the Central Midwives Board is far from wise and instead of reducing maternal mortality is likely to increase it.”

The percentage of births with doctors called had risen from 10% in 1910, to 26% in 1920 (when the cost to the County Council was £555) and to 45% in 1935 (when the cost was £935). These were based on a contributory scheme of insurance introduced in 1918, with a compulsory 5/- charge to the council as Local Sanitary Authority.

Savage said:

“Parturition is a physiological and not a pathological condition and if midwives are adequately trained they should not need assistance for a natural process in such a high proportion of cases. Either a natural process has been allowed to become an unnatural one, the training of the midwife is inadequate, or the midwife is so badgered and restricted by precise directions as to calling in medical aid that simply to keep the rules she has to call for medical assistance to this preposterous extent. I believe all three operate.”

CHAPTER 4: PREGNANCY AND EARLY YEARS

His solution was to improve midwifery training, a thorough revision of the Central Midwives Board directions on calling for medical aid and a restriction of midwifery to medical men (!) on a panel containing only those with experience and aptitude for this work. He went on to say that

“the maternal mortality rate is not appreciably different when the percentage of doctors’ call was 10 or under from now when it is over 40.”

Infant Welfare Centres

There were 13 Infant Welfare Centres in the present county area in 1936, plus two, in Taunton and Yeovil, that were outside the county scheme. They were generally held weekly or fortnightly. Such centres offered two services that were not possible for home visitors. One was medical advice on “deviations from the normal”. A clear distinction was made between medical services and the social welfare that was required by some, often identified by doctors. Savage hoped

“that this friendly co-operation will continue to develop.”

The second was education on healthy living and infant care. Bridgwater Infant Welfare Centre was under direct council control. There were 368 births in the Borough in 1935; 743 children were on the visiting list. One service provided was that of Milk Grants – 49 of which were given. These were intended more for mothers³¹ than infants, with 33% to expectant mothers, 43% to nursing mothers and only 24% to children under five. As Savage said,

“Were it not for the milk grants a very considerable number of mothers would be unable to breast feed who now do so.”

In total for the (then) county, 2,028 “necessitous cases” received grants, at an estimated cost of £712. These grants were also, of course, beneficial to dairy farmers³².

Some of the education sessions were evidently disrupted by “unsatisfactory arrangements for the toddlers”, and care was taken to focus on those in the greatest need. Savage said:

“...steps are always necessary from time to time to try and keep the Centre for people needing it and *discourage* its use as a social centre.” (Emphasis added).

Home Visiting

Savage wrote in 1936 that while Infant Welfare Centres were

“very useful and capable of doing valuable work, the claim so frequently advanced that they are the essential and all important feature cannot be accepted.”

CHAPTER 4: PREGNANCY AND EARLY YEARS

Instead, he argued:

“The core and essence of any work must be the supervision and care over this child group exercised in the homes by people trained to this work. Infant Welfare Centres are really ancillary agencies.”

The figures for sessions held by county staff and district nurses show the bulk of the task being taken on by the latter, but overwhelmingly so in rural areas. As Savage put it,

“the District Nurses have the advantage of being well known to the mothers and so more likely to be listened to, while they are more accessible.”

However, he said, they would not have had the training received by health visitors, and he had required district nurses to pass an examination in order to work as “Infant Visitors”.

“By these various methods we do aim at a good standard of health instruction in the homes by the Infant Visitors.”

Midwives and Health Visitors in 2016

In 2016, midwives work within the NHS. They have an important role in public health by talking to mothers before the child is born, promoting maternal health through advice on smoking, alcohol and diet, and preparing for the most suitable birth.

Responsibility for health visitors returned to Public Health during 2015.

“As public health practitioners, they work alongside other health professionals including early years practitioners, voluntary organisations, peer supporters, Family Nurse Partnership teams, GPs and primary and secondary care providers, as well as children’s centres and early years’ staff to ensure a holistic service focused on improving health outcomes and reducing inequalities at individual, family and community level.”³³

Today, Public Health continues to stress the importance of a good start in life, and health visitors play a vital role in advising and supporting new parents, particularly by making home visits and understanding the environment in which the child is being brought up.

Looking at “vulnerable children and young people” in 2016, the Joint Strategic Needs Assessment found a big contrast between the concentration of children and young people in income-deprived households between the urban and rural parts of the county. Urban housing estates had strikingly large numbers of these potentially vulnerable children, with 50% living in just 5% of the county’s area. The corollary, of course, is that 50% are distributed over 95% of the county’s area. Reaching such a dispersed population requires a flexible approach that cannot, as Savage said, rely entirely on mothers and children coming into centres.

CHAPTER 4: PREGNANCY AND EARLY YEARS

Working with Schools

Public Health and Schools in 1936

Savage makes several references to schools, although does not give a specific section in his reports to them. This is perhaps surprising given the County Medical Officers of Health were responsible for the School Medical Service, including dentists and oculists. It is presumably this service that, in 1936, identified the 80 children to be sent to a holiday camp to improve their health.

He describes, under “health propaganda” the lectures given (to teachers rather than pupils) covering physiology and hygiene, and “sex and social hygiene”. In 1936 the pupils at local elementary schools were encouraged to give displays of “Modern Physical Training and Posture Exercises” to parents, which were a valuable stimulus to Physical Training in the District. Schools were also the location for lectures given by the Dental Board, and “keeping-fit” classes.

Public Health and Schools in 2016

In January 2015, 27 out of Somerset’s 39 secondary and middle schools were academies, as were 34 of the 212 primary schools. The direct relationship that these schools have with the Department for Education, rather than the County Council as a local education authority, means that Public Health relies on influence and persuasion, and this may increase as more schools take on academy status.

In 2016 we know that strong links are demonstrated between health and attainment. Changing school environments to promote health and wellbeing can also improve attainment and contribute directly to the core business of schools.

Somerset Public Health commissions and provides a number of school-based services, whilst encouraging a whole-school approach to health and wellbeing. The school nursing service has 17 Whole Time Equivalent (WTE) school nurses, leading a public health programme in primary, secondary and special schools throughout the county. Key aspects of their work include a school-based immunisation programme, the National Child Measurement Programme (NCMP) and the offer of a health clinic to every secondary school in the county.

The NCMP has highlighted the extent of childhood obesity in the county, leading to the development of healthy weight services. Schools in areas of high need are supported to provide information for students on healthy eating, physical activity and supervised tooth brushing.

CHAPTER 4: PREGNANCY AND EARLY YEARS

Whilst physical health continues as a concern, present day support includes healthy relationships and emotional resilience for all school children as part of Personal, Social, Health and Economic (PSHE) education. School clinics see school nurses providing emotional support and information on sexual health and contraception, smoking cessation, drugs and alcohol. Somerset Public Health has been instrumental in establishing emotion coaching for school staff and developing a Mental Health Toolkit for schools to support staff, enabling them to equip children and young people with life skills that will make them more resilient at school and throughout their lives, including when they become parents themselves.

Fostering

Fostering in 1936

After April 1930, the County Council became responsible for the supervision of children under seven who were “maintained for reward”, or, in modern terms, households who were paid to look after them as foster children. Payments were made up until the age of nine. There were 275 children fostered under the scheme (it may have been that other informal fostering arrangements existed outside it, of course) as shown in Table 4.

Table 4: Payment for Fostering in 1935

Methods of payment	Number
Weekly payments in	245
Single lump sum payment	6
Otherwise paid for (mostly monthly or irregularly)	24
Total	275

Most mothers – 128 – had only one child, although three had more than four. These were “regular baby homes”, with one in Taunton having 28 (authorised for 35), another in Bridgwater having eight (authorised for twelve) and what was, in fact, a Convent School in Minehead having nine.

Fostering in 2016

Fostering remains a responsibility, although not an exclusive one, of the County Council, but within Children’s Social Care rather than Public Health. Fostering takes a range of forms depending upon the children’s needs and circumstances. Mainstream fostering includes short, intermediate and permanent fostering, as well as for school holidays and weekends. An allowance is paid to cover the costs of looking after the children and young people. Fees are paid to those who take on specialist fostering roles, such as looking after both a parent and his

CHAPTER 4: PREGNANCY AND EARLY YEARS

or her young child or “home based care” for young people with complex needs and often challenging behaviour. Somerset has 270 foster care households, 180 of whom currently have foster children. There were 390 children in foster care in March 2016, some in agency care, and a further 110 children looked after. The changes in circumstances and the geography of the county make a numerical comparison with 1936 impossible.

Child protection

Child protection is a critical responsibility of the County Council now, but not discussed in these terms by Savage in 1936. The body charged with protecting children then was the National Society for the Prevention of Cruelty to Children (NSPCC), which had been founded in London in 1884 but given a national remit with a Royal Charter in 1895³⁴. The absence of child protection in the reports probably derives from the clear medical focus of Savage's responsibilities, as well as long-standing view in society that the care of children was largely a private, family matter, and cannot be taken as a lack of concern.

Summary

The early years of life were a focus of Public Health activity in the 1930s as much as they are now. Infant mortality rates have improved steadily and have been, of course, a significant element in increasing the overall life expectancy of the population. For children, the major advance has been the development of a range of vaccinations, whose impact can be seen in the graphs showing declining incidence when implemented for each infection. Treatments continue to be developed, with Human Papillomavirus (HPV) vaccinations being given since 2008 to limit the risk of cervical cancer. That said, breastfeeding, good diet and exercise remain simple but vital contributors to the health of children and young people.

CHAPTER 5: MAJOR NON-INFECTIOUS DISEASES

Chapter 5: Major Non-Infectious Diseases

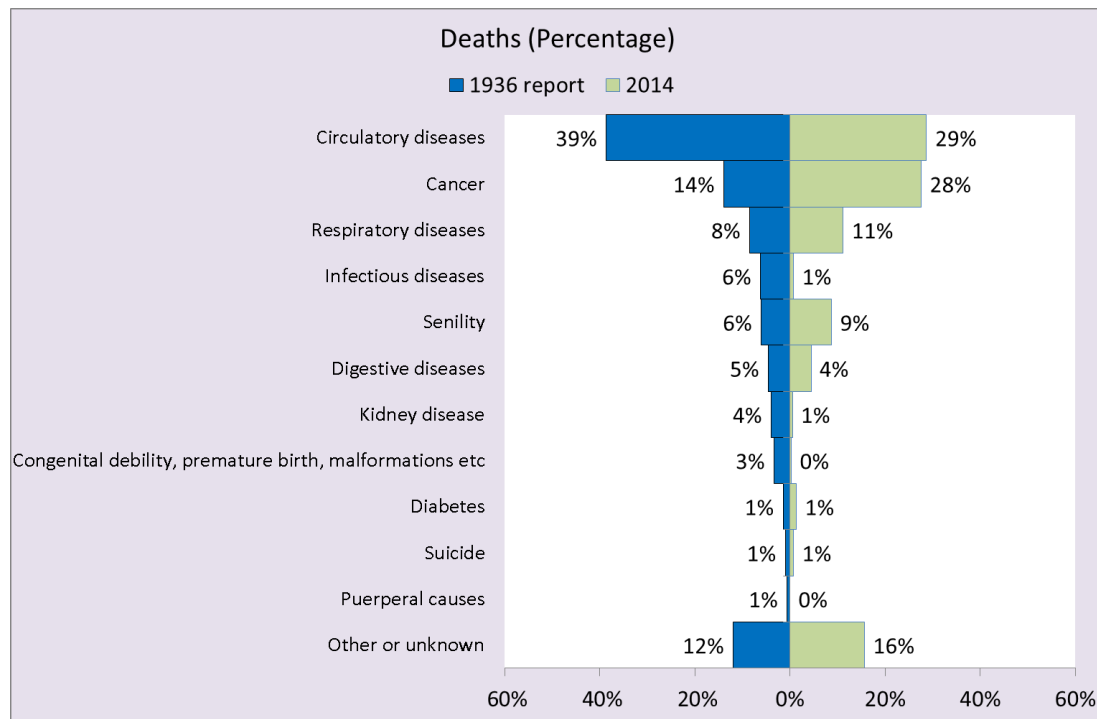
Death Rates and Major Causes of Death

Savage's summary of causes of death read

“...heart diseases are responsible for the largest number of deaths from one single group of causes (1,353 deaths), cancer and other forms of malignant disease the next largest (729 deaths), bronchitis and pneumonia caused 399 deaths, while tuberculosis caused 178 deaths.”

The pattern has changed over time, with cancer now being the leading cause of death in Somerset. Part of the reason for this is that people are living longer now that the infectious diseases that caused early deaths have been reduced to a tiny fraction of their previous levels. This gives cancer (the uncontrolled, inappropriate growth of cells) the time to develop and cause death. The increases in smoking, sedentary lifestyles, obesity and environmental pollution have also increased the risk of developing cancer. At the same time the identification and treatment of heart conditions has improved and reduced the mortality rate dramatically. “Senility” (Dementia in 2014) has also increased with the increasing life expectancy. See Figure 22.

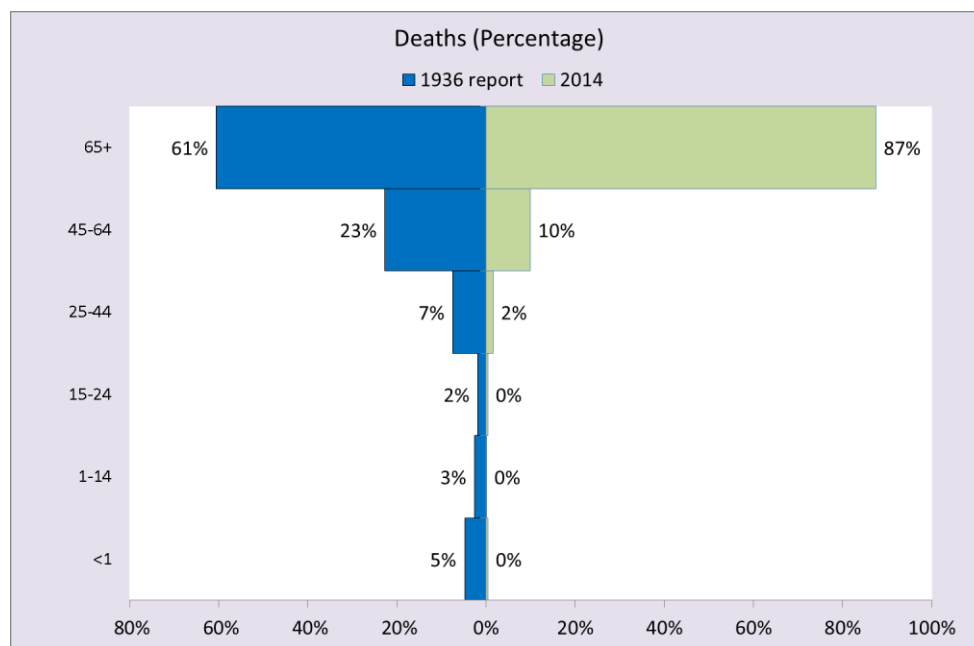
Figure 22: Causes of Death



CHAPTER 5: MAJOR NON-INFECTIOUS DISEASES

Although the number of deaths has remained similar for some conditions the ages of those dying has generally increased, as shown in Figure 23.

Figure 23: Age at Death



The number of deaths observed in 1936, compared to the number of deaths expected if the 2014 age and gender specific death rates were being experienced in 1936, show that the death rates were very much higher 80 years ago.

Table 5: Causes of Death

	Deaths in 1936	Deaths in 2014	Times higher in 1936
Circulatory diseases	2,018	1,596	5
Stroke	319	420	3.6
Heart disease	1,353	670	8
Cancer	729	1,533	1.4
Respiratory diseases (almost exclusively Bronchitis and Pneumonia)	441	621	3.0

CHAPTER 5: MAJOR NON-INFECTIOUS DISEASES

	Deaths in 1936	Deaths in 2014	Times higher in 1936
Infections (some may be missing in 1936)	322	44	24
Senility/Dementia	314	489	3.8
Digestive diseases	236	246	3.3
Congenital debility, premature birth, malformations etc	173	17	15
Diabetes	74	76	4.1
Suicide	50	44	1.7
Pregnancy, childbirth, puerperium	30	0	-
Other	625	870	2.6
TOTAL	5,217	5,565	3.4
The attribution of deaths to conditions has changed over the years; some of the elements in the table above may cover different ranges of disease or ages.			

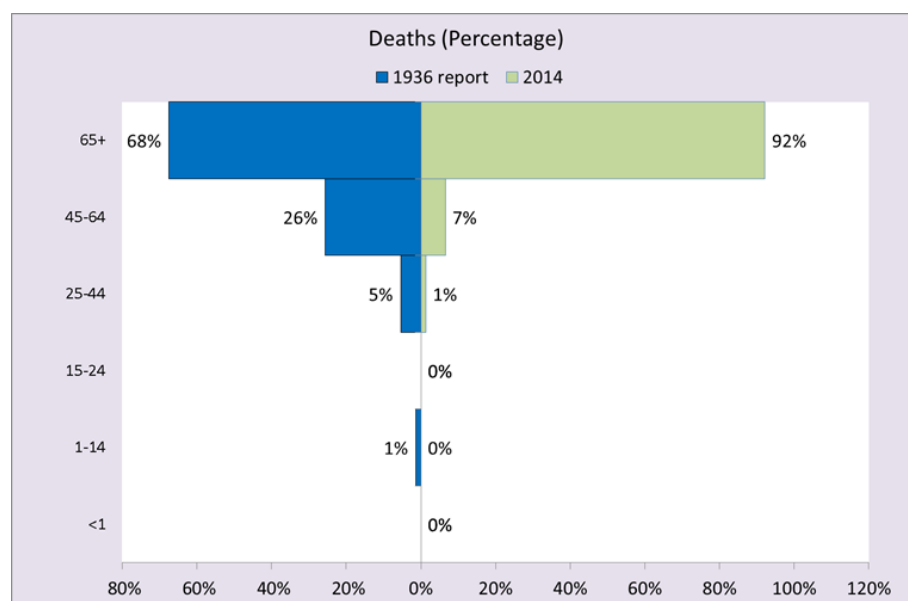
Diabetes

Diabetes was a noted cause of death in 1936 with a similar number of deaths to those occurring today. However it was not considered such an issue as it is today. Treatment with insulin was not widespread - in 1934 novelist HG Wells and his practitioner Dr RD Lawrence, both of whom had diabetes, set up the Diabetic Association, aiming to make sure that everyone in the UK could gain access to insulin, so it is likely that from 1936 onwards deaths from diabetes in young people began to decline³⁵.

Surprisingly most of the deaths attributed to diabetes in 1936 were in those aged over 65, as shown in Figure 24. This could suggest that Type 2 diabetes was an issue then as it is now – it is very unlikely that people with Type 1 diabetes would survive until late adulthood without insulin. It is also possible that those with Type 1 diabetes, for which a widely available treatment was then only just becoming available, died in childhood or early adulthood or were perhaps listed as dying from some other cause.

CHAPTER 5: MAJOR NON-INFECTIOUS DISEASES

Figure 24: Deaths from Diabetes



In 2016, diabetes is a major concern of health services, both because of its impact on health, with national incidence having doubled for middle aged people in England since 1995, and because of the financial cost to the NHS, where 10% of the budget is used on diabetes management. Type 2 diabetes makes up about 90% of the incidence. This is a particular interest in public health because Type 2 is often preventable: 90% of people with the condition are overweight or obese, so just as rising obesity rates have led to more diabetes, so a healthy diet, not smoking, drinking in moderation and an active lifestyle can help reduce its incidence and severity. At 6.1 % in 2014/15, diabetes prevalence in Somerset was slightly below the England average of 6.4%³⁶. Although people are being diagnosed with Type 2 diabetes earlier in life³⁷, it is generally associated with ageing, and the incidence of all diabetes for over 65s in Somerset is projected to rise from 14,600 in 2012 to 17,800 in 2020.

Lifestyles

Malnutrition and Obesity

Savage reported that 59 children were being treated for rickets in Somerset during 1936. The condition is usually caused by a deficiency of vitamin D or calcium and affects the bone development of children. Rickets can lead to deformities, pain, poor growth and it can make children more susceptible to bone fractures. In 1936 treatment for malnutrition was given to 106 underweight children in Somerset: 39 improved, 63 remained in treatment, three were moved and just one child did not improve. Savage wrote that malnourished children are those:

CHAPTER 5: MAJOR NON-INFECTIOUS DISEASES

“who fail to gain weight, and there is a constant supply of these, whose weight remains stationary for months at a time. Most of these are in poor families, i.e., those whose income is well within the scale for free grants. A few children whose diet is badly balanced, or who do not get sufficient rest, but poverty is also present.”³⁸

The Milk (Mothers and Children) Orders (1918) had permitted local authorities to award Milk Grants to “necessitous cases”. In all £834 (the equivalent of £30,841 in 2005) was spent on 2,455 people: 30% of grants went to expectant mothers, 40% to nursing mothers and 30% to children under the age of five.

Prevention of malnutrition, and consequent reduction in the risk of tuberculosis, was a focus in 1936 and took the form of children’s holiday camps where 40 girls and 40 boys were selected on the basis that they were

“predisposed to tuberculosis on account of general debility or undernourishment.”

Savage reported that the improvements in health and in weight were satisfactory.³⁹ There had been a great increase in the number of new houses being built in the interwar period and councils had new social responsibilities in relation to housing. Savage understood that new houses needed to provide affordable rents and wrote that the

“great difficulty of housing construction work is to provide houses at low enough cost so that the right people to occupy them can afford to live in them. If the proportion of rent to income is too high there is always the danger that insufficient money is left to provide adequate nourishment for the family. Important as is good housing, it must take a lower place than nutrition, a fact which I have observed in Somerset for over 20 years.”⁴⁰

Overweight and obesity

In 2016, rickets is largely absent from Somerset. Despite an increase in incidence in the UK over recent years the condition is now very rare, especially since the fortification of certain foods (like cereals and margarine) with vitamin D.⁴¹ Only 0.6% of reception age and 1.1% of year six children in Somerset were found to be underweight in the 2014-15 National Child Measurement Programme⁴². Estimates suggest that 5%-10% of the elderly population may be malnourished; this is often associated with cancer, dementia or other chronic disease⁴³.

Today the major public health challenge around weight concerns obesity. Worldwide obesity has more than doubled since 1980.⁴⁴ In England the costs of obesity and overweight have been estimated at between £0.5 billion to £4.2 billion and the costs to the wider economy (including things like loss of productivity) at between £2.6 billion and £15.8 billion.⁴⁵ If no action is taken to prevent this trend it has been predicted obesity-related diseases will cost society £49.9 billion per year by 2050.⁴⁶

CHAPTER 5: MAJOR NON-INFECTIOUS DISEASES

Childhood obesity is associated with a higher chance of adulthood obesity, premature death and disability in adulthood. Obese children have an increased risk of breathing difficulties, fractures, hypertension, insulin resistance, psychological effects and early-markers of cardiovascular disease.⁴⁷ Excess weight is a major risk factor for non-communicable diseases such as cardiovascular diseases (mainly heart disease and stroke), diabetes, musculoskeletal disorders (especially osteoarthritis - a highly disabling degenerative disease of the joints) and some cancers (endometrial, breast and colon).⁴⁸ Dietary risk factors and physical inactivity account for 10% of all Disability-Adjusted Life Years (DALYs).⁴⁹

Most adults in Somerset are either overweight or obese and the proportion is higher than the England average. Between 2012 and 2014 in Somerset 23.3% of children (aged 4-5) and 66.1% of adults were overweight or obese and in both cases this was significantly higher than the England average.⁵⁰

Smoking, Alcohol, Drugs and Physical Activity

Smoking, alcohol, drugs and physical activity are all considered major contributors to individual health and wellbeing today but not all of them were considered significant in 1936. It was a time when smoking was almost universal; its effects on health were far from obvious and had been little researched. Alcohol also was perhaps viewed more as a concern for public order than for public health and in 1936 drugs that are now illegal were tolerated, with the relatively small numbers of dependent users being supplied by the medical profession.

Physical activity, however, is mentioned briefly by Savage in relation to the “keep fit” movement, especially for school children. For many people, especially adult males, it is likely that physical work and simply getting around provided exercise that is now sought in gyms and has to be artificially built into our everyday lives.

In 2016, all these are major concerns for Public Health in Somerset. Exercise is promoted through “Zing Somerset” and healthy workplaces, “Smokefreelife Somerset” is the stop smoking service and the Somerset Drug and Alcohol Service provides advice and treatment. As in Savage’s time, management of drugs includes provision of (substitute) opiates, now combined with support towards recovery. This change has largely come about as a result of scientific research that has uncovered the links between lifestyle and ill-health. Whilst lifestyle services are in place, the importance placed on tackling issues systematically and at scale is still woefully inadequate, given their impact on health and their prevalence in the population. The association of these lifestyle issues with deprivation is stark and they contribute significantly to the health inequalities that are seen throughout the county.

CHAPTER 6: HEALTH SERVICES AND WELFARE

Chapter 6: Health Services and Welfare

Whilst we tend to think of health and welfare quite separately today, there was considerably overlap in 1936. We still often find an association between ill-health and poverty, but the huge presence of the National Health Service dominates our definition. The pre-NHS arrangements in 1936 were a confusing mix of private, municipal and charity schemes, closely linked to welfare provision for older people.

The Institutions of Health and Welfare in 1936

Sir William Savage's position in the health and welfare system meant that his concern was with the "sick poor", rather than old age pensions or benefits for those out of work. Then, as now – and as was shown in my report last year – people whose income, resources and social position were limited were far more likely to fall ill than the wealthy. The provisions of welfare in 1935 had largely been set out in the 1929 Local Government Act. This legislation had transferred many of the responsibilities originally set out in the 1937 Poor Law Act to local government. It put an end to the system that had been based around workhouses and administered by Poor Law Guardians, with responsibilities being taken on by the Public Assistance Committee of the County Council. The Committee's activities were funded by the national insurance scheme of 1911 that also funded pensions for those over 70. Savage was, as County Medical Officer of Health, the Medical Adviser to this committee. The County Council took over 11 former workhouses, nine of them within the boundaries of the current administration.

The systems of funding and administration meant that hospitals and infirmaries were in three categories:

- Voluntary – maintained by subscription to Friendly Societies and Welfare Societies, endowments and benefactors. This category included what we might today describe as "private".
- Hospitals under the transferred Poor Law responsibilities
- County Council hospitals to treat certain notifiable diseases such as scarlet fever, diphtheria, typhoid and tuberculosis. Maternity services, midwives and health visitors also came into this category.

County Council Health Services in 1936

For 1936, Sir William Savage reported that there were 626

"infirm and chronic"

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residents of local authority hospitals, all but two being adults, and with slightly more women than men. The largest was at Bridgwater (80 people) and the smallest at Williton (44). In addition to these 11, the Infirmary at Chard was opened in 1931,

“built on modern lines, with excellent accommodation.”

As well as administering the institutions themselves, the County Council provided assisted admissions to hospitals and maternity homes. Figure 25 shows maternity services at the Fiveways Hospital in Yeovil⁵¹. As discussed in the section on maternity, Savage described a rising demand and an expectation that more money would have to be spent in future.

Whilst very far from the post-second world war comprehensive welfare state, Savage reported on a range of other schemes that supported the health of the poor in the 1930s.

Milk grants were, as described earlier, a form of government assistance to both expectant and nursing mothers, and to dairy farmers. In 1934, Savage reported that 1,606 grants had been made in the previous year, at a cost of £530, which was rather higher than the £511 that had been estimated. These were made for

“specific public health purposes”

and:

“Great care is taken to prevent abuse and to see that the milk is taken only by the person for whom it is intended.”

Much of Savage’s welfare concern was around maternity and post-natal support. There were 37 applications for assistance that were turned down, some of them

“difficult border line cases which, if funds were available, would have been included.”

Figure 25: Infant Welfare 1939 (Bath Record Office)



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Four obstetric consultants were available to be called upon if needed, although only one, Dr R S S Statham in Cheddar, was within the present county boundary. Savage noted that there was need for a consultant in the Taunton area.

In 1935 there were 53 women accepted for assisted admission to a maternity home or hospital, mostly because of actual or expected obstetric difficulty or medical complication, although six were admitted as the home was

“very insanitary or inaccessible.”

Of the 53 women, 47 made good recoveries, five remained in poor health and one died; there were 56 healthy babies born, and five deaths.

Free treatment of persons suffering from venereal disease was started in 1917, and remained in operation through the 1930s.

The County Council operated an insurance scheme for medical costs associated with maternity. This was started as a local initiative in 1918, with a contribution of 2/-. Eight months later the County Council was required by the Midwives Act of 1918 to implement a compulsory scheme with 5/- contributions to the Local Sanitary Authority. For 1936:

“During the year 1,036 doctors’ accounts were paid under the contributory scheme, at a cost of £1,476 6s. 6d., while the contributor fees were £650 15s. 6d., the deficit payable by the County Council being £825 11s. 0d. The average doctor’s fee per case was £1 8s. 6d. Fees amounting to £90 1s. 0d. were paid in 68 cases not coming under the scheme, and of this £37 13s. 6d. was recovered. Apart from the Central Office Expenses, the cost of working this section of the Midwives Act for 1936 was, therefore, £877 18s. 6d.”

Some money was also made available by the County Council in 1935 to provide nursing and expectant mothers with dentures. A dental clinic was opened in Glastonbury early in 1936, and by June 1937 had seen 73 new cases, 40 of whom were recommended for dentures. A second clinic opened in Frome in 1937.

All these schemes were means-tested. The restriction of benefits to those on the lowest incomes is consistent with means-testing today, but what is rather different is the fact that people on higher salaries were not allowed to contribute to the schemes; they were expected to make private arrangements.

As part of its housing responsibilities, the County Council also subsidised the rents of people who had been displaced by slum clearance. This scheme:

“enables excellent houses to be provided at rents which compare quite favourably with those which tenants are now paying for hovels and quite insanitary houses...There is,

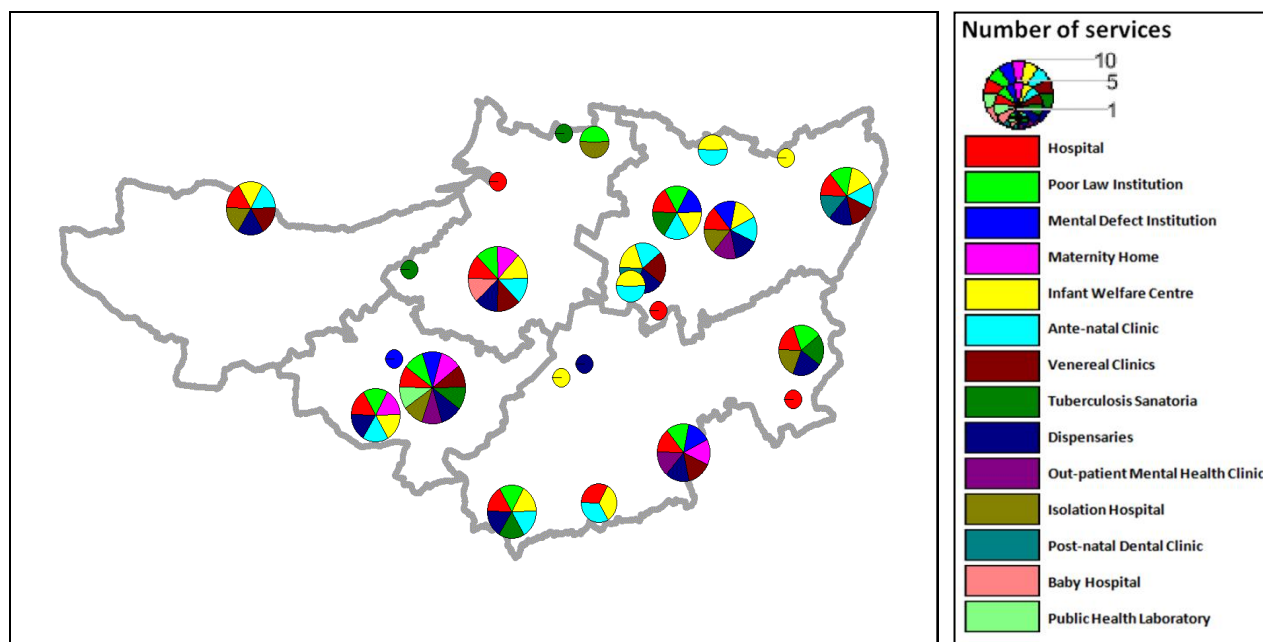
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however, a need for many more houses at cheap rents (such as can be provided under the Slum Clearance scheme) to provide for those persons who because of low incomes are compelled to reside in houses which are insanitary, defective and below any reasonable standard of housing efficiency.”

Health Infrastructure in 1936

The “health infrastructure” of Somerset in 1936 – clinics, hospitals, sanatoria and so on – is shown in Figure 26. (Figure 28 shows similar information, although it is clear that direct comparisons cannot be made, both because of the lack of detailed information about 1936, but also the real changes in the nature of the services and institutions themselves.) The apparent greater concentration reflects the absence of care homes as we now know them in that period, as well as the fact that when the detailed location is unknown we have had to map services in the appropriate town centre. Then, as now, access to services appears to have been an issue for West Somerset, with more of a focus of services in Taunton, Bridgwater and Yeovil. Figure 27 shows treatment at Bridgwater Hospital during the period.

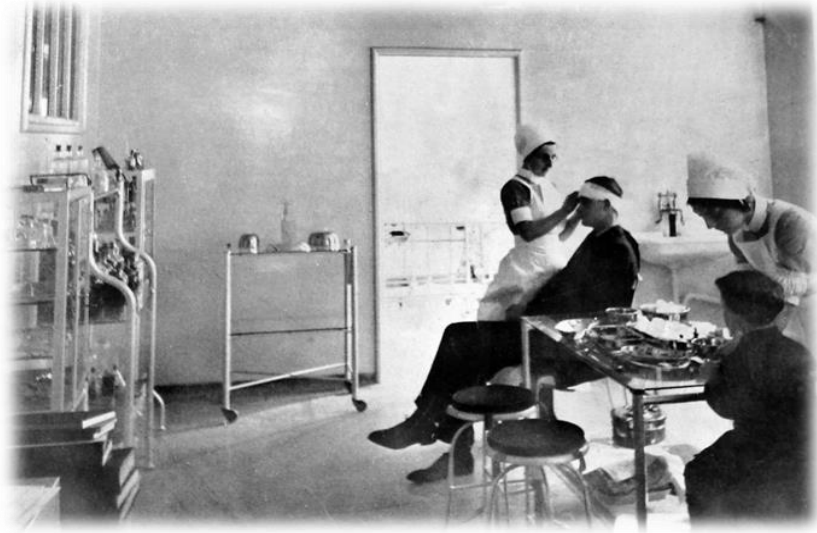
Figure 26: Health Infrastructure in 1936



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Figure 27: Treatment at Bridgwater Hospital

Savage reported on recent expansion of hospital services in 1936, although he did describe progress as slow, and was planning further development. Axbridge had been enlarged with a new ward block of 14 beds and Weston-Super-Mare (then part of the administrative county) had been extended by eight beds. Shepton Mallet, Taunton and Yeovil all had planned or approved expansions, which were intended to enable a county-wide scheme for pooling resources for isolation hospitals.



The Arrival of the NHS and the Health Service in 2016

The NHS came into being in 1948, and brought the bulk of Somerset's health services under its "tripartite system". The three parts in this case were:

- Acute hospitals: there are now two large acute trusts in Somerset. Musgrove Park in Taunton was created from an American military hospital established during the Second World War; Yeovil District Hospital replaced a number of smaller hospitals in the town on its new site which opened in 1972.
- Primary Care: there are currently 74 GP practices in the administrative county of Somerset. Since the creation of the NHS they have been independent businesses, contracted by the NHS to provide family health services.
- Community Health: a range of health-related activity comes into this category, including maternity services, health visitors, maternity, vaccinations, ambulance and environmental health. These were initially responsibilities of the local authorities, but many have changed (more than once) in the 68 years since the NHS was founded. For example, health visitors and vaccination are now part of Public Health at Somerset County Council, the ambulance services are run by South West Ambulance Services NHS Foundation Trust and Somerset Partnership provides 13 community hospitals and district nursing.

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As well as providing an overarching structure, the NHS also gave a broader financial base to the health services. Importantly it has meant that they are funded from general taxation, rather than on the basis of insurance. This means that all taxpayers contribute, and the whole population is entitled to benefit.

Figure 28: Health Infrastructure in 2016

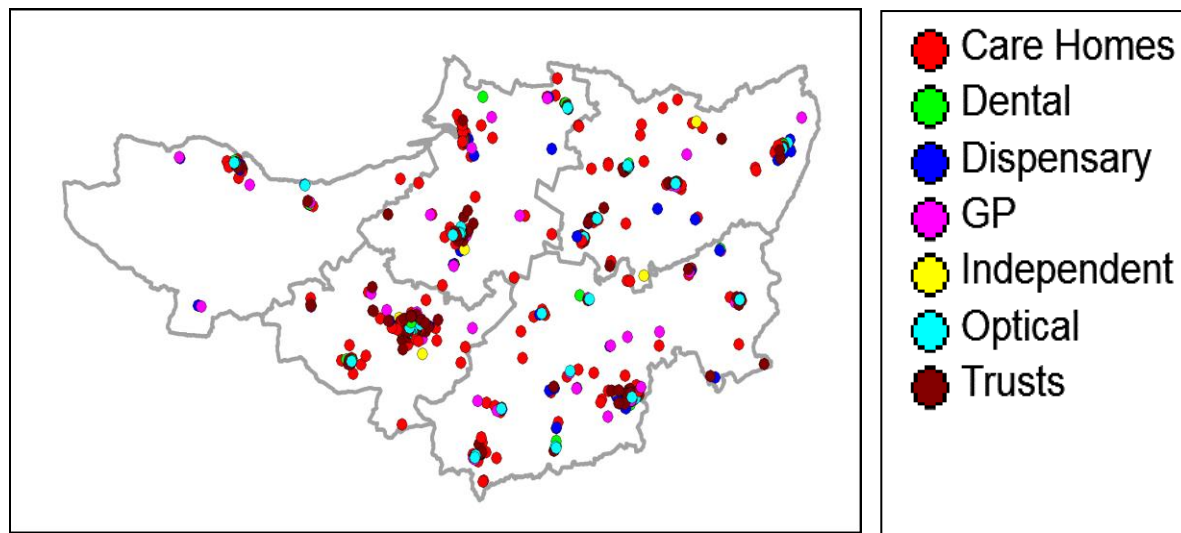


Figure 28 shows the location of GPs, hospitals and other services in Somerset in 2016. Clearly GP practices have a vital role in providing primary care across the county. The map includes the location of care homes, run or commissioned by the County Council. Somerset has a more elderly population profile than the England average, and is likely to have a higher proportion of elderly people in the future, so such services are a vital part of maintaining health and wellbeing.

Benefits and welfare reform 2016

The administration of welfare on which Savage reported was taken from local authorities with the creation of the welfare state, with medical costs being managed within the NHS and most benefits coming under what is now the Department of Work and Pensions (DWP). Housing benefit is administered on behalf of the DWP by district councils, rather than the county.

The welfare of the poorest in the county, though, remains a major concern of public health as we seek to reduce inequalities in Somerset. As I described in last year's report, the most deprived people have poorer health outcomes across a whole range of measures, and as I discuss elsewhere in this report, the quality and availability of housing remain significant factors affecting health and wellbeing. Whilst Public Health does not have a role in

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administering the welfare system we are very conscious of its importance and we work with partners to understand and mitigate the impacts of welfare reform.

Summary

The scale and sophistication of the health and welfare system has been transformed since Sir William Savage was writing in the 1930s. Issues such as children's behaviour and adult anxiety have become "medicalised", new medicines and technology, especially in hospitals, have made previously incurable conditions treatable and the welfare safety-net is far more comprehensive that could have been conceived before the modern welfare state. All this has undoubtedly contributed to the improved life expectancy that we have observed.

However, in recent years there has been a renewed emphasis on health services as promoting good health rather than simply treating illness. This was given prominence by the Wanless Review "Securing Our Future Health: Taking A Long-Term View"⁹⁴ in 2002, and is central to the NHS Five Year Forward View of 2014.⁵² The justification for this approach is simple, in that it is self-evidently better for individuals to remain healthy for as long as possible than to be treated for illness, but also that the rising financial burden of illness associated with an ageing population is unsupportable in the long term. The Five Year Forward View declared that "the future health of millions of children, the sustainability of the NHS, and the economic prosperity of Britain all now depend on a radical upgrade in prevention and public health". I intend to work with health and local authority partners in helping to improve the health of the Somerset population by making the healthy choice the easy choice. It is also vitally important that the health and social care system is "flipped". There is a predominance in the system to treat and foster dependence; this needs to be flipped around to become a system which promotes health, the prevention of ill health and independent living.

CHAPTER 7: SOCIAL INFLUENCES ON HEALTH

Chapter 7: Social Influences on Health

Public health is concerned with populations, so characteristics of the whole society and environment are of great interest to us. In 1936 Savage wanted to improve these conditions so that people in Somerset could live longer and healthier lives.

Food Supply

Milk and slaughterhouses

Human TB had become a serious problem in Victorian England as industrialisation crowded people together in insanitary conditions in large cities. To add to this, many of the dairy herds that were kept in and around the cities to provide fresh milk were infected with Bovine TB. The milk was a potent source of infection for many people, particularly children, many of whom died.⁵³

Today almost all milk is pasteurised to ensure that it safe to drink and any raw (unpasteurised) milk and dairy products must be clearly labelled. Pasteurisation is the process of heating a substance to a set temperature for a set time to ensure that all harmful bacteria are destroyed.⁵⁴ In 1936 pasteurisation was still relatively uncommon and in Somerset there were just 23 licensed pasteurisation plants to cover well over 7,000 producers.⁵⁵

Figure 29: Milk Producers and Distributors

Sanitary Area. (Urban).	Producers.	Distributors.			Sanitary Area. (Rural).	Producers.	Distributors.		
		Also Produ- cers.	Not Produ- cers.	Total.			Also Produ- cers.	Not Produ- cers.	Total.
Bridgwater	15	9	52	61	Axbridge	904	90	15	105
Burnham	26	13	11	24	Bathavon	267	88	25	113
Chard	11	2	10	12	Bridgwater	760	184	29	213
Clevedon	27	11	13	24	Chard	550	58	2	60
Crewkerne	10	8	4	12	Clutton	472	131	29	160
Frome	16	14	10	24	Dulverton	128	128	0	128
Glastonbury	57	12	4	16	Frome	390	80	0	80
Ilminster	9	10	4	14	Langport	433	123	2	125
Minehead	9	9	1	10	Long Ashton	424	63	43	106
Norton-Radstock	29	12	15	27	Shepton Mallet	350	61	1	62
Portishead	10	4	14	18	Taunton	453	41	79	120
Shepton Mallet	27	7	5	12	Wellington	177	61	2	63
Street	21	13	6	19	Wells	477	121	11	132
Taunton	8	6	57	63	Williton	303	43	5	48
Watchet	5	3	6	9	Wincanton	544	26	4	30
Wellington	25	11	14	25	Yeovil	465	46	6	52
Wells	6	3	7	10					
Weston-super-Mare	28	15	95	110					
Yeovil	17	4	28	32					
					Total	7,097	1,344	253	1,597
Total	356	166	356	522	County Total	7,453	1,510	609	2,119

Source: Savage, William G,
Somerset County Council,
Report of the Medical Officer
of Health for the Year 1936,
pp. 54-59.

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The British people of the time were very fond of raw milk and even Savage himself had stated that a compulsory system of pasteurisation would be a

“confession of failure and the acceptance of a second best procedure.”

This opinion was mainly on the grounds that there may be damage to the “qualities” of the milk and was influenced by objections from consumers and producers.⁵⁶

Under the modern TB control programme cattle are tested regularly for Bovine TB. If a cow gives a positive reaction to the test it is called a “TB reactor” and it must be isolated and slaughtered. Its milk must not be used for human consumption.⁵⁷ This is reminiscent of the process in 1936: in Somerset 442 samples were collected from cowsheds and examined for Tuberculosis, with 3.4% testing positive. In these positive cases the County Veterinary Surgeon attempted to identify the infected cows. These cows would then be separated from the herd.⁵⁸

The Milk (Special Designations) Order 1936 meant there were three approved categories of milk: Pasteurised, Accredited and Tuberculin Tested. The Order gave local authorities responsibility for granting tuberculin tested licences for the first time. Tuberculin Tested milk meant that herds had been routinely tested to ensure that they were free from tuberculosis and that any cows identified as carrying the bacteria were removed promptly.⁵⁹ Savage wrote that Tuberculin Tested milk was better than anything to ensure the “milk is safe from the risk of spreading tuberculosis to man [and] it is a type of milk which merits every encouragement”. Tuberculin Tested licences had risen from 229 to 400 in the same year but this was still a small proportion of all Somerset producers.⁶⁰

Accredited milk was routinely inspected by a veterinary surgeon but was still a concern as the herds were not tested for tuberculosis; 3.3% (3 of 77) accredited samples examined by the Somerset County Laboratory were found to have living bacteria and Savage wrote that “this illustrates the correctness of my attitude in refusing to accept “Accredited” milk as a safe supply to be used in schools”.⁶¹

The Somerset County Laboratory, whose examinations in 1935 are summarised in Figure 30, had been in operation since 1911 and was

“so valuable that it has been extensively expanded, particularly in the last few years coinciding with great increase in laboratory milk examinations.”

It also proved popular with other authorities and in 1936 examined 609 milk specimens for TB.⁶²

CHAPTER 7: SOCIAL INFLUENCES ON HEALTH

Figure 30: Examinations at the Public Health Laboratory in 1935

Drinking Water—	
Bacteriological examinations	779
Chemical analyses	48
Sewage, sewage effluents, rivers and streams	53
Swabs for diphtheria bacilli	5,355
Cerebro spinal fluid and Post Nasal swabs	18
Sputum for tubercle bacilli	1,658
Blood for typhoid, paratyphoid, B.abortus, etc.	88
Hairs and skin for ringworm	92
Specimens for venereal disease	451
Urine for tubercle bacilli, B. coli, sugar, albumin, casts, etc.	99
Faeces for typhoid and dysentery	54
Swabs for haemolytic streptococci	158
Milk for tubercle bacilli	609
Milk for bacteriological examination (general)	34
Milk—Accredited	1,107
Milk—Grade A (T.T.), Certified and Pasteurised	495
Other specimens	84
Total	11,182

Of the 5,355 swabs examined, 588 showed the presence of diphtheria bacilli; of the 1,658 specimens of sputum, 453 contained tubercle bacilli; of the 88 specimens of blood, 9 gave a positive Widal reaction, and 16 gave agglutination with B.abortus; of the 92 specimens of hair, 32 contained ringworm fungi; and of the 451 specimens for venereal disease, 74 contained gonococci.

Source: Savage, William G, Somerset County Council, Report of the Medical Officer of Health for the Year 1936, pp. 54-59.

Food poisoning, and its avoidance, was one of Sir William Savage's principal concerns through his career, including writing *Milk and the Public Health* in 1912, and was closely related to the concerns around TB. Compulsory testing of herds for TB began in 1935 (although not referred to by Savage), and increasing rates of pasteurisation, particularly in the 1950s, led to milk being of a consistently high quality for consumers in the present day.

Obesogenic environments

Just as malnutrition is largely absent from Somerset, so food safety has diminished in prominence as a concern; its monitoring is now the responsibility of environmental health departments in district councils. Too much food availability, on the other hand, is a concern. Local councils have a responsibility through their Health and Wellbeing Boards to bring together local organisations to create an environment in which people can make healthier choices. In relation to food, some areas have developed a local food strategy.⁶³ Somerset is currently working on a healthy eating strategy, due to be finalised in 2016.

Many children today are growing up in an “obesogenic environment” – one that encourages weight gain and obesity. In the UK people are being “overwhelmed” by environments that promote unhealthy eating and activity habits. An abundance of energy-dense foods, motorised transport and sedentary lifestyles mean people are becoming less active. The most disadvantaged in society are especially vulnerable to these conditions.⁶⁴ The behavioural and

CHAPTER 7: SOCIAL INFLUENCES ON HEALTH

biological responses of a child to the obesogenic environment can be shaped by processes even before birth, placing an even greater number of children on the pathway to becoming obese when faced with an unhealthy diet and low physical activity.⁶⁵

Consumption of sugar and sugar-sweetened drinks is particularly high in school age children and also tends to be highest among the most disadvantaged who also experience a higher prevalence of tooth decay and obesity and its health consequences.⁶⁶ Children in England are exposed to a high volume of marketing and advertising in many different forms both old (eg TV advertising, radio, cinema, press and billboards) and new (for example, “advergaming”, social media, online advertising), as well as through sponsorship by food and drinks companies of TV programmes, public amenities and events.⁶⁷

Food retail price promotions are more widespread in Britain than anywhere else in Europe. Foods on promotion account for around 40% of all expenditure on food and drinks consumed at home. Higher sugar products are promoted more than other foods. Price promotions increase the amount of food and drink people buy by around one-fifth. They also increase purchases of high sugar foods and drinks by 6% overall.⁶⁸ The evidence shows that lowering the sugar content of the food and drinks offered in shops, restaurants, takeaways and the many places we eat including at work and in institutions (schools, hospitals, prisons etc) could be a successful way of changing how much sugar the population consumes, particularly if accompanied by reductions in portion size. These approaches to sugar reduction do not rely on individual behaviour change and may serve to reduce health inequalities, given the current distribution of sugar intake and related diseases across the population.⁶⁹

Recent national legislation will attempt to shift consumption away from one of the most significantly obesogenic elements in young people’s diet, with the introduction of a tax on high-sugar drinks, especially fizzy drinks, announced in the March 2016 budget. It is expected to add 18 pence to the cost of a litre of drinks with 50-80g per litre, and 25 pence/litre for those with more than 80g/l. This tax was strongly argued for by Public Health England, making particular reference to the disproportionate health impact on disadvantaged groups⁷⁰.

It is clear that nutrition and diet are significantly affected by the wider environment. This was the case in 1936 and continues to be so today, even if the causes and effects are very different.

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Health Promotion in 1936

Individuals are not powerless in responding to the environment. In 1936 Somerset's public health activity included encouraging the population to change behaviour in relation to diet and exercise.

"Propaganda"

The bulk of the work on what was then called "health propaganda" in the 1930s was undertaken by "Miss Lamb, BSc., the County Lecturer". The first County Lecturer was appointed in January 1926. Miss Lamb started work in 1929 and left the post at the end of 1935. Savage commented that she had:

"brought knowledge, untiring enthusiasm and great energy to bear and with great benefit to the inhabitants of Somerset. Sound health propaganda requires just the right person to make it a success and Miss Lamb's work has been invaluable."

Savage reported in 1936 that in the previous year the "Health Exhibition" had visited 14 centres in the county. The list – Swainswick, Writhlington (both now in Bath and North East Somerset), Winsham, Hinton St George, Exton, Horsington, Middlezoy, Chard, Misterton, Duston, North Newton, Puckington, Woolavington and the Bath and West Show – reveals the efforts made to visit small villages across Somerset, often in schools. This involved what might now be called "co-production".

"The success of these Exhibitions depends a great deal upon the co-operation obtained locally, and the need for advertising it well before hand. The best evenings were obtained when the school or other local organisation took over part of the management."

Other "partnership working" was with the Milk Publicity Council, and sharing the cine-motor van of the Health and Cleanliness Council.

Propaganda also involved more formal talks, often at Flying Clinics and Infant Welfare Centres, 34 of which were visited in 1936. These were most successful when part of a regular sequence of talks, but:

"with casual talks the mothers found it extremely difficult to concentrate and listen. Much greater success is obtained when steps are taken to exclude all the toddlers and if possible the babies from the lecture room, which is done in a number of Centres and could be done in all with a little firmness."

The Women's Institute provided other venues, and 35 meetings were attended. Their interest was particularly in "Nutrition". The Somerset Rural Community Council was another partner and 14 lectures were given in villages with their help. Schools were seen as important

CHAPTER 7: SOCIAL INFLUENCES ON HEALTH

locations for health messages; “many” lectures were given to teachers and 85 schools visited. Miss Lamb made arrangements for two education tours to be carried out by the Dental Board in schools. As well as nutrition, physical exercise was promoted, such as through the “Keeping-fit movement”, classes of which were held in many villages.

Different media were used to convey messages about health. Literature was produced for distribution at a range of meetings, and the journal “Better Health” was distributed throughout the year, including special reference to conditions in Somerset.

“Care is taken to supply it only to persons likely to be interested, and despite this restriction its circulation reaches nearly three thousand copies a month.”

New media were embraced, too. Not only was there shared use of the Cine-Motor, but an

“epidiascope (see Figure 31) has been purchased and has been found of very great value. The demand is so great that we need to go further, and a portable projector to enable health films to be shown is also required.”

Under the heading of health propaganda Savage also reported on what might now be described as training or CPD. This included training of midwives, “Study Circle” meetings for nurses and lectures to TB Care Committees.

Savage was firm in his commitment to health promotion.

“Health Propaganda work has now been carried on for a good many years, and I am satisfied that it is one of the best activities of the County Health Department. As regards value for money it is also one of the cheapest. One has only to consider the figures, available from various sources, as to the immense amount of sickness and ill-health, not measurable by death rates, which takes place to realise that an effective Public Health Department must make strenuous efforts in this direction. Only some of this mass of ill-health is removable by improvements in environment conditions often carried out at great cost. A much larger proportion is due to ill-health, due lack of knowledge of how to avoid it and due to a lack of knowledge of healthy living. This can only be overcome by continued and steady efforts to supply what is lacking.” (1936).

Figure 31: Epidiascope



CHAPTER 7: SOCIAL INFLUENCES ON HEALTH

Health Promotion in 2016

Health promotion (as it is called now) remains a cornerstone of the work done locally to improve health and wellbeing. Much less is done on a face to face basis with the public now but more is done through different forms of media, including social media. I use Twitter to communicate messages informing about and encouraging healthy lifestyles: we try to empower people and families to make healthy choices (Figure 32). We often build on or re-tweet messages from partners such as Public Health England, district councils in Somerset or other parts of the County Council. Our commissioned services also use social media, such as Smokefree Life Somerset's Facebook group, to assist supportive, self-help communities of people trying to live healthier lives.

It is clear that to ensure health messages are relevant, consistent and readily available when people are at a point when they are likely to take notice of them, we need to have radical improvements in how modern-day “health propaganda” is undertaken. We need to make far greater use of modern communication methods and ensure that the promotion of health, rather than the treatment of ill-health, is the focus of our health services.

Housing

The Housing Act (1930) led to the building of 700,000 homes across Britain and meant councils had to actively participate in “slum-clearance”. This involved demolishing houses deemed unfit for human habitation and rehousing the people affected. It was a major concern for local councils; Bristol, for example, had 25,000 people living in unfit houses - around 5% of the population.⁷¹ We cannot make direct comparisons because of the boundary changes, but do know that there were about 120,000 dwellings in Somerset in 1936, and by 2016 this had risen to about 250,000 in the present administrative boundary alone. There were 28,103 dwellings constructed in Somerset (as it was then) between 1921 and 1936 at an average of 1,756 per year (see Figure 33). This compares with 9,610 new homes in the current county built between 2006/07 and 2012/13 at an average of 1,373 per year.⁷²

Figure 32: The Somerset DPH Twitter account



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Figure 33: Housing Construction in Somerset 1921-36

The following shows the housing construction since 1921:—

Year.	Urban.	Rural.	Total.
1921	493	685	1178
1922	395	637	1032
1923	279	375	654
1924	432	551	983
1925	581	812	1393
1926	974	1217	2191
1927	1393	1442	2835
1928	960	718	1678
1929	857	1070	1927
1930	887	833	1720
1931	654	837	1491
1932	746	724	1470
1933	1070	1035	2105
1934	1450	940	2390
1935	1525	1061	2586
1936	1303	1167	2470

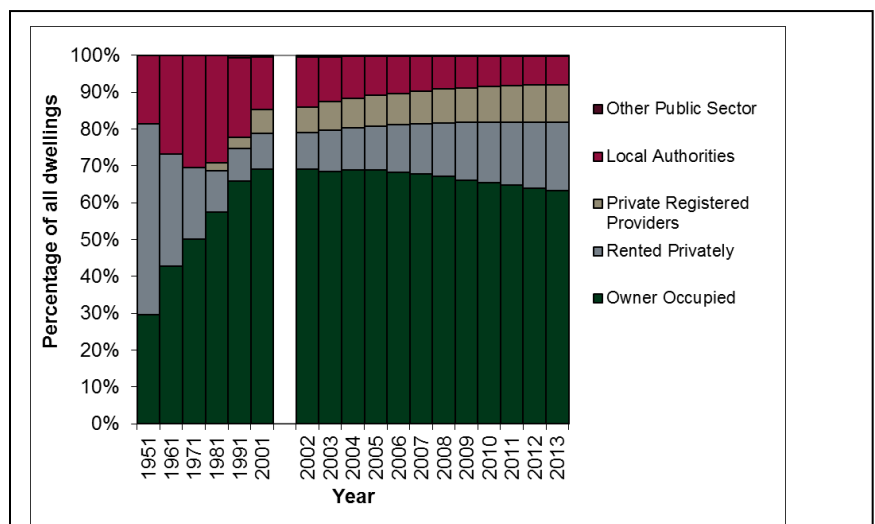
Source: Savage, William G, Somerset County Council, Report of the Medical Officer of Health for the Year 1936, pp. 48-53.

The interwar period saw a rapid increase in house building that sparked a sharp increase in private ownership. This rose from around 10% in 1914 to 25% in 1939. Large-scale council house building across Britain accounted for one in ten homes by 1939. Savage refers to this

“great change which is taking place in housing trends in his annual report of 1936.”⁷³

In 1931 there were around 8,805,000 dwellings in England compared with approximately 23,372,000 in 2014.⁷⁴ Figure 34 shows that local authority housing stock continued to expand as a proportion of all dwellings as did owner occupied properties. In recent years however there has been an increase in the proportion of privately rented properties.

Figure 34: Trends in Housing Tenure in England



Source: DCLG Live tables on dwelling stock (including vacants), January 2016

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There is a parallel with what Savage identified as the “exodus of people who want to live in the country [that] has evidently had the effect of generally sending up rents” and the current issue facing Somerset of an ever increasing proportion of older people and the potential increased demand on services.⁷⁵

Today the home ownership rate is closer to 70% across Britain and there is a focus on making house *buying* affordable.⁷⁶ In 2012/13 the average house price paid in Somerset was £207,000 and the average for a starter home was £159,000. The affordability ratio for entry level homes was 8.04 which compares unfavourably to the England average of 6.59. The ratio is a measure of how the lowest quartile house prices compare with the lowest quartile of earnings. A lower ratio means that houses are more affordable. In 1933 Savage used a similar method, comparing the proportion of income for families receiving milk grants (considered to be the poorest members of the community) that was being used for rent. He found for 36.3% of these families over 20% of income was diverted towards rent which seemed “particularly high, and out of proportion”.⁷⁷

The Housing Act of 1935 made it a duty of each local authority to inspect houses for overcrowding and take steps to alleviate this.⁷⁸ In Somerset 7,509 people from 986 families were recorded in 1936 as living in overcrowded conditions.⁷⁹ At the end of September 2013 there were 16,298 households on the social housing register, “Homefinder Somerset”. A further 605 households were accepted as homeless and in priority need by the district and borough councils in 2012/13.⁸⁰

Figure 35: Grants under the Housing (Rural Workers) Acts, 1926 & 1931

District.	No. of Dwellings.	Amount.
<i>Rural.</i>		£
Axbridge ...	1	100
Chard ...	6	596
Frome ...	8	738
Langport ...	26	2,585
Shepton Mallet ...	10	1,000
Taunton ...	6	568
Wellington ...	1	100
Wells ...	7	700
Wincanton ...	42	4,200
Yeovil ...	6	600
	<u>113</u>	<u>£11,187</u>
<i>Urban.</i>		
Ilminster ...	2	200
Wellington ...	2	200
	<u>117</u>	<u>£11,587</u>

Source: Savage, William G, Somerset County Council, Report of the Medical Officer of Health for the Year 1936, pp. 48-53.

In 1936 there was a bigger concern with simply making houses liveable. The 1926 and 1931 Housing (Rural Workers) Acts gave local authorities power to provide private landlords with loans in rural areas. These loans were specifically for improvement works where houses needed either rebuilding or renovation to make them fit for human habitation (Figure 35).⁸¹ Somerset County Council awarded grants totalling £11,587 (the equivalent of £430,000 in 2005) for improvements at 117 dwellings in 1936. Bridgwater Rural District Council operated independently and issued a further 21 grants.⁸²

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Currently district councils have the responsibility to identify and remedy health and safety hazards in both private rented and owned properties, particularly in relation to vulnerable people. The British Research Establishment in 2007 estimated that more than 40% of Somerset homes (excluding Mendip) would fail to meet the Decent Homes Standard, although thousands of these homes have been improved since.⁸³

As has been made clear here, housing continues to be one of the significant challenges for the county. Again, pace and scale seems to be the issue; the county remains short of affordable homes, particularly those with only one bedroom as single person household demand continues to outstrip supply.

Utilities

A large section of Savage's 1936 report described the water supplies and the work required to make them better. Many areas of the county were reliant on springs and private boreholes and several comments were made about the inadequacy of supplies in some rural areas. A mains supply was being extended to many villages in the 1930s. Urban areas, in general, possessed "good supplies of water" which were "adequate for all normal times". Even so, more additions to the infrastructure were taking place in urban areas while some rural areas were undersupplied. Today water supply and quality is no longer the responsibility of Public Health. It is the responsibility of District councils to monitor drinking water supplied to premises in the district and to ensure it is of good quality. There remain many private water supplies within the county: about 1% of the population is served in this way. In Taunton Deane, for example, there are currently 627 known properties using private water supplies and 575 private water supply sources. Private water supplies are regulated under The Private Water Supplies Regulations 2009 which came into force on 1 January 2010. They are a result of a European Directive that requires everybody to have access to a wholesome supply of water, equal in quality to the mains supply.

Then, the areas without mains water pipes were in the rural areas, though some areas had adequate springs, wells and boreholes, some areas were:

"badly in need of water, the present supply from surface wells being poor in quality and inadequate"

or

"badly in need of piped water...but progress is very slow."

Electricity and gas had not reached all parts of the county by 1936, but were not mentioned, probably because public health did not have any responsibility for their supply.

CHAPTER 7: SOCIAL INFLUENCES ON HEALTH

There are parallels between the issues around water supplies in 1936 and the roll out of superfast broadband in 2016. There were many schemes listed detailing improvements required, as an adequate water supply could significantly improve sanitation and health.

Now, having good (or any) access to the internet is considered essential for people to claim benefits or look for work, be socially connected and receive information

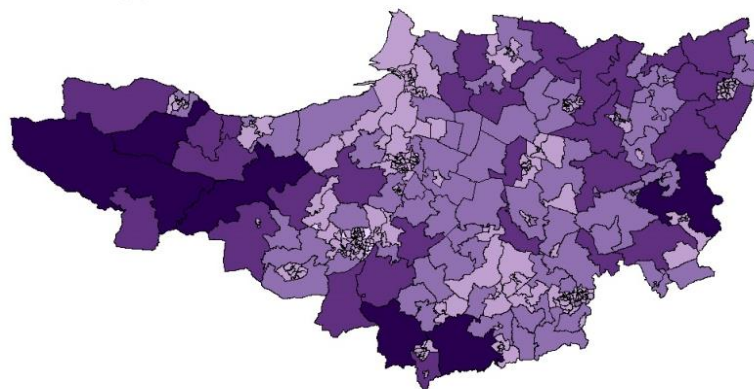
and education in the widest sense of the word – all important determinants of health. There is much work on digital health care and apps for helping people manage their own health needs. Today most urban areas are well provisioned with superfast broadband; indeed most areas have access to some sort of broadband, but there remain some areas where the broadband connections are slow or non-existent. The County Council continues to prioritise this and progress is being made to achieve significant coverage (Figure 36). Of course, other things such as older age, increased deprivation and lack of technical skills also affect digital exclusion, and there are pockets of people experiencing these across the county. Anyone reading this report 80 years on from now would probably consider this situation unimaginable. The changes in technology we have experienced even over the last 20 years are still unimaginable for those of us alive today; what could be achieved in 80 years' time is beyond comprehension!

Another parallel in 2016 is access to cheap fuel; many areas in Somerset are poorly provided with piped gas (see Figure 37). Unfortunately data are not available for many areas in West Somerset, but in the district as a whole an estimated 46% of households are not connected to the gas network⁸⁴.

% connections <2MB/sec
Ofcom 2015

20% or more	(6)
15% -	(28)
10% -	(75)
5% -	(205)
0% -	(13)

Figure 36: Broadband Speed 2015



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Estimated percentage of households not connected to the gas network
(gas meters to number of households)

80% or more
60% -
40% -
20% -
0% -
No data

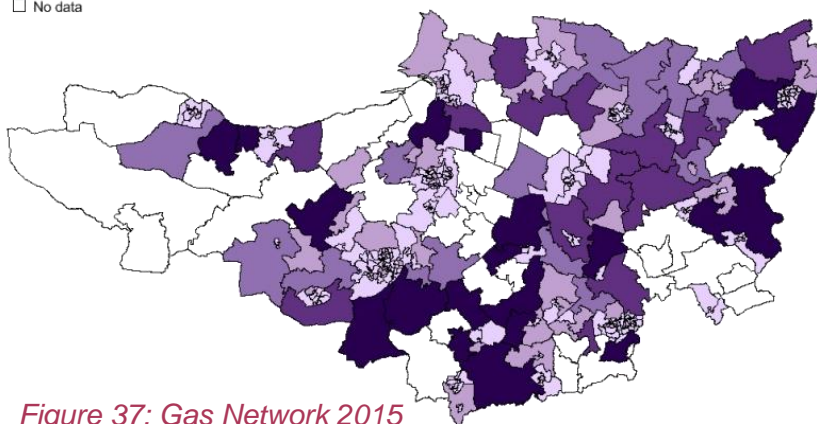


Figure 37: Gas Network 2015

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CHAPTER 7: SOCIAL INFLUENCES ON HEALTH

Environmental Pollution

The County Medical Officer of Health was required to report on river pollution, from sewage and industrial sources. In 1936 Sir William Savage described how the dry summer had meant that pollutants were only a little diluted by rainwater and so river pollution was “markedly aggravated”. Fortunately,

“owing to the appointment of Mr. W. Dewhurst as County Sanitary Inspector from May 1st it has been possible to devote much time to river pollution problems.”

As with human and animal health matters, Savage was concerned with prevention and arranged

“a survey of all the rivers with careful records of all possible sources of contamination.”

The only extensive incident reported that year was into the River Tone at Wellington, as a result of the sewage works being replaced, combined with the heavy discharge of whey and other milky fluids from a milk processing factory. In spite of warnings from the County Council, the Directors of the company had not taken steps to keep these “very prejudicial” liquids from the sewers. Legal responsibility lay with Wellington Town Council, and the County Council took legal proceedings against them, only withdrawn when stringent conditions to prevent further pollution were agreed.

In his health protection role, Savage was also able to make small grants to support sewage disposal schemes in the five areas of Milborne Port, Sparkford, Kingsbury Episcopi, Kilmersdon and Ansford. These grants were of 25% of the net annual loan charges, and matched by the Rural District Council. Again, Sir William and Mr. Dewhurst acted proactively, surveying Yeovil District Council areas to identify necessary village sewage schemes.

In 2016, the responsibility for environmental health lies with district councils, and river water quality monitoring lies with the Environment Agency. Mains sewerage systems have been extended to cover much of the county, and domestic septic tanks and soakaways are well regulated, so river pollution incidents are rare. Of greater current public health concern is air pollution, especially from motor vehicles in urban areas; a recent report by the Royal College of Physicians suggested that 40,000 deaths in the UK each year might be attributable to air pollution.⁸⁵

Economy and Employment

Agricultural and manufacturing workforce

There is a strong evidence to suggest that work is generally good for physical and mental health and wellbeing – although it is important to take into account the nature and quality of work and its social context – and that worklessness is associated with poorer physical

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and mental health.⁸⁶ The national strategy - Preventing Suicide in England (2012) - highlights that there are direct links between mental ill health and social factors such as unemployment and debt and that these are risk factors for suicide.⁸⁷

There are relationships between unemployment and poor mental health and suicide, higher self-reported ill-health and limiting long-term illness and a higher prevalence of risky health behaviours including alcohol use and smoking. Links between unemployment and poor mental health have been explained by the psychosocial effects of unemployment: stigma, isolation and loss of self-worth. People with long-term psychiatric problems are less likely to be in employment than those with long-term physical disabilities, despite indications that most people with severe mental illness would like to work.⁸⁸

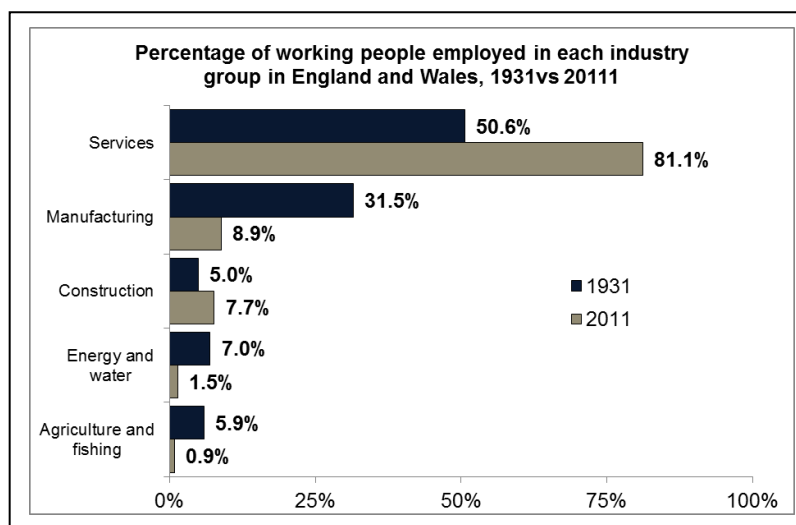
Economic activity and employment

At the end of 1936 there were 213,900 economically active people in the administrative county of Somerset and the local unemployment rate was 9.1% (8,843 people).⁸⁹ At the time of the 1931 census 5.0% (3,209) of economically active females and 8.3% (12,352) of males were unemployed in Somerset.

In Somerset there were 276,200 economically active people and the unemployment rate was 3.8% (10,400 people in September 2015: the unemployment rate for females was 3.9% (4,900 people) and for males it was 3.7% (5,500 people)^{90,91}. There has also been a major change in women's participation, with 31% (64,332) economically active in 1931 compared with the 79% (128,100) in Somerset today.⁹²

The percentage of working people employed in agriculture and fishing in England and Wales has fallen from 5.9% in 1931 to just 0.9% in 2011. This change is likely to have been more severe in rural communities like Somerset. According to the Office for National Statistics Business Register and Employment Survey (2013), 2.8% of the working population in the South West were in Agriculture, Forestry & Fishing. However, the majority are working proprietors and only 1.0% of employed people are in this industry group. The big change nationally has been a shift from manufacturing to service industry jobs, as can be seen in Figure 38.

Figure 38: Changing Employment Structure



Source: ONS 170 Years of Industrial Change across England

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Inequality

Savage's concern with the most ill and poor in society implies an awareness of inequality, but the term does not appear in his reports; nor does a description of poverty and disadvantage as sitting within a wider social framework. The 1930s were a period of general economic depression, and it may well be that inequality was less overt than it would be in more prosperous times. However, his earlier discussion of the proportion of income taken up by rent for those households receiving milk grants – over 20% for 36.3% of the families – is very similar to the sort of analysis we would undertake now in trying to quantify inequality and assess the impact of welfare reform, and shows a degree of awareness.

For Public Health, in 2016, addressing health inequality is a statutory duty under the Health and Local Government Act of 2012. The Public Health Outcomes Framework sets out the Government's goals for improving the health of the poorest, fastest. That so many of the activities pursued by Savage in the 1930s – immunisation, promoting a healthy diet, exercise and good housing, with an emphasis on the early years of life – continue today, shows that the concerns of Public Health in 1936 were very similar to those of today.

Summary

Whilst overall social circumstances have improved significantly for all residents living in Somerset since 1936, there remain systematic inequalities that demonstrate the inextricable link between health and wealth.

In the 1930s there was a strong emphasis on improving the life chances of the worst off in society, possibly because standards were so poor. Less of a focus is given on addressing inequalities today, which probably explains why the inequalities gap is widening rather than narrowing.

Again, the issue of prevention done systematically, at scale and pace and with a relentless focus on tackling inequalities, is arguably the most effective way of improving overall population health and wellbeing in the 21st century.

The focus should be on the major preventable disease burdens that are largely driven by the way we live our lives in 2016.

CHAPTER 8: CONCLUSION

Chapter 8: Conclusion

What have been the biggest changes?

It is striking, and encouraging, that even though Sir William Savage was able to celebrate undoubted improvements in the health of Somerset in the 1930s, the increase in healthy life expectancy in the 80 years since then would have been astonishing to him. Some of those changes have been because of scientific and technical advances, with the development of antibiotics (penicillin was first used in treatment in 1942⁹³), extensive vaccination and other drug treatments clearly a major factor.

We can also see how health services have been transformed since then, with the creation of the National Health Service in 1948 leading to equality of access far greater than had existed in the 1930s.

We know how important environment, hygiene and lifestyle are to overall population health, and in these realms, too, there have been vast improvements, particularly in areas that Savage was already addressing in his role as County Medical Officer of Health. The supply of piped, clean water into people's homes and the sanitary removal of waste are hugely powerful drivers of good health: the fact that almost all of us can take this for granted almost all of the time is something we should celebrate. And whilst we know higher housing quality could lead to more sustainably healthy lives for many residents in 2016, the improvements since the 1930s are huge.

Some of the interest in reading the reports of my predecessor is seeing what he did *not* report on. For Somerset today, the biggest, single, simple change we could see to improve health is for more people to give up smoking, yet tobacco is not mentioned at all in Savage's reports. It was not until the 1950s that the link between smoking and lung cancer, and then heart disease, was established, and Savage did not consider it. It is probably also the case that smoking was so prevalent in the adult population that those *not* smoking were the minority.

Similarly, current concerns with alcohol and what are now illegal drugs are not mentioned. For alcohol that probably reflects a lack of knowledge of the impacts on health; this may also apply to the latter as well, although lack of access to those drugs for the bulk of the population probably also plays a part in making substance abuse a minor contributor to ill health.

Mental health *is* discussed by Savage, but the terms and treatment are very different from today. Drugs for mental illness were limited and much of the "treatment" seems, in hindsight, to be about isolating the mentally ill from the wider population who would find their behaviour disturbing or even frightening. That said, there may well have been much undiagnosed mental illness – especially depression and anxiety - that was "managed" within families or simply

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borne by those suffering the conditions. The term “dementia” is not used, but “senility” undoubtedly covers much the same conditions.

Savage is clear that his principal concern is with the worst off in society (partly because of his direct responsibility for administering what would now come under the welfare and benefits system) even if he does not explicitly talk about reducing inequalities. He does not, though, really address “equalities”, in the sense of groups within society facing particular challenges as a result of being in those groups. Disability is treated as a health issue, rather than one of discrimination. Any coverage of sexuality is within the norms of the time, in which male homosexuality was illegal (and would remain so for another thirty years) and transgender barely thought of. Marital status was only discussed in relation to illegitimate births.

Finally, Savage would probably be pleased to see that shortage of food has largely disappeared as a problem for the county; however, food affordability remains an issue for some, as demonstrated by the increased growth and demand for food banks. Food hygiene has, overall, improved considerably since the 1930s. He might see our concerns with excessive salt, sugar, fat and consumption generally as comparatively easy to deal with.

Messages for 2016 from 1936

There are some striking similarities between the issues faced by Sir William Savage in the 1930s and those we experience today. Importantly, however, there are lessons to be learnt that can be applied to our current challenges. The issue that **preventing ill-health is better and cheaper than curing disease** was as true a lifetime ago as it is now. Medical and pharmaceutical advancements have been vast over the past 80 years and have saved many, many lives. However, we must ask ourselves whether we have the balance right between treatment and prevention. This very question was posed by Derek Wanless in 2002⁹⁴. He concluded that the balance was not right and far more was needed to be done to prevent ill-health and the need for medical intervention. Only now, 14 years on, has this been called for through the NHS Five Year Forward View.

Improving population health and wellbeing is not a short game. Yes, there can be some wins in a relatively short time, such as the success we have had in reducing smoking in pregnancy over the last couple of years; but really significant whole population change can often take a lifetime.

Looking back over a lifetime period is a valuable exercise. It not only reminds us of the successes that have been achieved but also shows us where we haven't made enough progress; for example in housing, which remains a significant issue today, albeit for slightly different reasons. Housing standards have improved hugely; however, we now have a significant lack of affordable housing and our housing stock is not keeping pace with our changing needs, particularly the demographic changes.

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The need to ensure public services are sustainable in the 21st century has led to this being “**the age of prevention**”. There is no better time to make the case for needing to invest resources and energy in improving the health and wellbeing of our population.

The lessons we can learn from the 1930s through the dramatic reductions in infectious disease are stark. The significant achievement was largely brought about by:

- A relentless focus (in this case on raising hygiene and increasing immunisation rates)
- Action taken at “industrial scale”, not just small patches of courage
- Prevention activity was built-in systematically to existing processes, not a “bolt-on” on its own

As the wider health and wellbeing system picks up pace and scale on preventative activity, the role of the specialist public health team needs to change accordingly. There will need to be an increased focus on health promotion (or “health propaganda” as explained by Sir William Savage), in particular focusing on the promotion of health and wellbeing of children and young people, seeking to break the perpetual cycle of deprivation.

As recognised in the 1930s, there are significant differences between the urban centres and rural parts of the county and one size does not always fit all. There is a need for Somerset to consider more “tailored” service provision for different parts of the county. This will include making the most of people willing and able to volunteer their help.

I hope that the next 80 years can see the continued improvement in health and wellbeing that we have observed in the last 80, and that our actions today bear fruit as effectively as did those of my predecessor, Sir William Savage.

GLOSSARY AND ACRONYMS

Glossary and Acronyms

Affordability ratio	Ratio of lower quartile earnings to lower quartile house prices
BCG	Bacillus Calmette-Guérin vaccination
CMO(s)H	County Medical Officer(s) of Health
D(s)PH	Director(s) of Public Health
DALYs	Disability Adjusted Life Years
Diphtheria	Infectious disease, particularly affecting the throat
DWP	Department of Work and Pensions
Early Neonatal Death rate	Death within seven days of birth/1000 births; excludes stillbirth.
Encephalitis Lethargica	A usually fatal epidemic disease in the 1920s and now extremely rare, described in Oliver Sachs's book "Awakenings".
Enteric/Paratyphoid Fever	Related diseases associated with a rash and fever
EPRR	Emergency Preparedness, Resilience and Response Plans
GUM	Genitourinary Medicine
Infant mortality rate	Deaths under one year of age/1000 live births
LHRP	Local Health Resilience Partnership
MDR TB	Multi-drug Resistant Tuberculosis
MMR	Measles, Mumps and Rubella (vaccine)
MRSA	Methicillin-resistant Staphylococcus aureus
Neonatal Death Rate	Death within 28 days of birth/1000 births, excluding stillbirth
Ophthalmia Neonatorum	Conjunctivitis of babies acquired during birth
Perinatal death rate	Death within seven days of birth/1000 births, including stillbirth
Puerperium	Infections affecting mothers in the first weeks after giving birth

GLOSSARY AND ACRONYMS

Queen's Nurse	Nurse accredited by the Queen's Nursing Institute
Scarlet Fever	Disease associated with Streptococcal infection, usually in young people
STI	Sexually Transmitted Infection
TB	Tuberculosis

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