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Further information on many of the topics in this report and current statistics can be found on the Liverpool Joint Strategic Needs Assessment webpages:

www.liverpool.gov.uk/jsna

We welcome any comments or feedback on the Annual Report of the Director of Public Health for Liverpool

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Foreword

It is with the greatest pleasure that I bring to you my first report as Director of Public Health for Liverpool. Public health has gone through great transitional change over many decades, and this change has continued until the present day. Most recently we have returned to the Local Authority, where we started out, and it is with heartfelt gratitude that I thank Liverpool City Council for the warm and positive reception that we have received.

Our return brings us many opportunities and many challenges. Whilst we want to continue to work with and have an impact on the NHS, we also want to look outward to the wider determinants of health, using the powers of the Local Authority to impact on health in a more sustainable way. We also need to continue to forge strong partnerships across the City, not least with communities themselves and with the Third Sector, in order to ensure that any improvements in health are long lasting and span the life course of an individual.

Today Liverpool is recognised as a vibrant City that has benefitted from regeneration and inward investment, and yet our population still has some of the worst health outcomes in the UK. There is no doubt that we have seen improvement in some of these, but we still have a major job to do if we are to continue to improve and to reduce the health inequalities that exist within our City boundaries, and when compared with the rest of the country.

It is unacceptable in the 21st century that some people can expect to die earlier than others, simply because of the wider determinants of their birth and individual circumstances. These factors can make a huge difference to life expectancy. That is why we are doing all that we can do to narrow the gap and help achieve our vision of a 'Fairer, Healthier, Happier Liverpool'.

The last report before the 1974 reforms was written in 1973 by Andrew B. Semple, the Medical Officer of Health who died just recently in November 2013, aged 101 years. When we look at public health today, we can see stark changes in where we focus our efforts and how we communicate, compared to 1973 and on our return now we look back and reflect on how public health has changed to become what it is today. In the 1970s there was a great deal of focus on the improvement of living conditions for the population of Liverpool, and the increased control of infectious disease was identified as being responsible for the drop in mortality. Today, we are concerned much more than we were then with unhealthy behaviours and lifestyle issues, because they cause a great deal of preventable ill health, suffering and early death in our population.

The demographic structure of the population has also changed and today older people make up a greater part of our society. Ageing populations should be regarded as one of our greatest achievements, because the trend reflects the many significant advances in health, although we should not assume that longer living always comes with quality of life or good health and wellbeing.

So there is much that we wish to change, and we have a big task ahead of us. We cannot do this alone, and if we want to support the delivery of greatly improved health outcomes that our Liverpool people deserve, we need to work together on big solutions.
Finally, I will conclude by thanking my staff and colleagues for their hard work and dedication to public health over the years, and to public health’s safe transfer back into the Local Authority.

Dr Sandra Davies
Director of Public Health

This Public Health Report for 2013 presents us with an opportunity to understand more about the role of Public Health within local government and the advantages that this brings for the people of Liverpool. It does so in an interesting and unique way by considering the state of health for the Liverpool’s population in 1973 and 2013. The experience of health and illness has changed greatly for the better since 1973 but we still have a long way to go, particularly now as the population is living longer and we see many people developing long term conditions. The messages from the analysis help us to see what we can learn about the responses needed for the future health and wellbeing of the people of Liverpool.

I welcome this Report as it builds on the good partnerships that Public Health already has within the City Council and many other organisations and services. The movement of Public Health into local authorities in April 2013 heralded an opportunity to bring it closer to its origins in the social determinants of health but also to the systems that would place it in closer touch with local communities and their representatives. This closeness can also support our colleagues in the NHS in their quest to improve the quality of healthcare services for local people.

There has never been a more important time for understanding how to address the major health challenges for the city. We know that the social conditions in which people live can help support or hinder their health. Health inequities arise as a result of variations in these social conditions into which people are born, grow, live, work and age. Indeed, there are parts of the city where within the space of a short bus ride between Childwall and Kirkdale we can see a difference in life expectancy of over ten years which we cannot accept.

The messages arising from this report tell us that to address this situation we need to concentrate on building and maintaining partnerships, using intelligence and evidence to understand the needs and assets within the city and engaging with stakeholders for promoting and improving the health of the population.

For Public Health in 1973 and now, its role in highlighting the state of the health of the population continues to help us to gain a better understanding of the role we all have to play in promoting and improving health in Liverpool and creating a ‘fairer, healthier, happier’ city. I therefore commend this Report as Cabinet member for Health and Adult Social Care and look forward to continuing to support the role of Public Health in Liverpool.

Councillor Roz Gladden
Cabinet Member for Adult Social Care and Health
Introduction

This 2014 Annual Report of the Director of Public Health in Liverpool takes the opportunity to reflect on the development of public health as a discipline as well as on the comparative health of the people of Liverpool in the forty years since public health functions moved from local authorities in 1974 and the first year of their return in 2013. The Report is separated into distinct chapters that are connected to each other but can be read independently as areas of interest.

In many aspects, there have been considerable improvements in health outcomes over the last forty years, frequently as a result of better evidence for interventions and technological advances. However in some cases, improvements have been slow since 1973. It is important to recognise that in 1973, the emphasis on health as the absence of disease with services designed to treat and cure illness meant that promoting health and tackling risk factors for illness were a very limited feature of the 1973 Report; reflecting the prevailing philosophy at the time. However, the 1970s were a time for a major international shift in thinking on how to respond to the increasing demands upon healthcare services as people were beginning to live longer with chronic illness. The challenge was to move from a curative approach to developing action that moved beyond healthcare provision alone for promoting health, and that drew on a wider range of disciplines and services. It would ultimately be many years before UK national health policy began to reflect this approach. Further insight into the development of Public Health as a discipline and the extent of its influence and contribution in the last forty years will be addressed in the first chapter. It is sufficient to say at this point that from the first salaried Medical Officer of Health for the Liverpool Corporation in 1847 through to the Director of Public Health in 2013 within Liverpool City Council, preventing illness, prolonging life and promoting health have been consistent features of the delivery of public health activity.

Despite these features, this Report for 2013 presents some of the contrasting aspects of health experiences over the last forty years. In Chapter Two the health of the population of Liverpool in 1973 and 2013 is compared, in so far as there is corresponding information available in the 1973 Report on the Health of the City of Liverpool. The main characteristic of 1973 reporting is that forty years ago what could be counted was reported, under each department function. Results were compared over time, and in the case of headline results such as mortality rates, against other urban centres, including the other seven English Core Cities (the largest outside London). There were no specific targets other than that counts should go up or down corresponding to improvement. Some reports were remarkably detailed, such as the report on health visitor training that informs us that one student "only worked with us until 30th October as her husband had moved to Capel Curig, North Wales, and she could not cope with the daily travelling." Chapter Three aims to give a little more insight into the way public health was working in 1973, including some of the areas of activity that were ongoing or have developed since Public Health moved back into the local authority in 2013. There is no intention of a direct comparison, but where activity is still aligned to the same purpose, the differences and similarities across forty years can be intriguing. Chapter Four follows the development of Public Health through the four decades from 1974 to 2013. Chapter Five considers the risk factors that are now apparent in public behaviours and showcases some of the work of Public Health in the present that was not undertaken in 1973. Chapter Six looks at what our current situation means both for Public Health development and for the health, care

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1. 1974 Lalonde M A New Perspective on the Health of Canadians Government of Canada Ottawa
and wellbeing of the people of Liverpool. This is followed by Chapter 7 which is a ‘Future View’ from the Director of Public Health as a personal reflection on addressing the health improvement challenges facing the city in the 21st century.

This Report for 2013 will show how the movement of Public Health as a discipline and function back into the City Council presents considerable opportunities for working with colleagues and partners within the public, independent and third sectors and local communities. It will highlight the importance of utilising all of the city’s resources and assets in achieving our goals for improving health and wellbeing and reducing inequalities by creating more focus on prevention and tackling the social determinants of health.
Chapter One
Public Health: before 1974

This introductory chapter takes a brief look at the development of public health within the context of health and care structures from the start of public health in the local authorities, through the birth of the National Health Service (NHS) up to 1974 when the post of Medical Officer of Health (MOH) was abolished and most public health functions moved into the new NHS.

The Liverpool Corporation appointed the first salaried Medical Officer of Health in 1847 when public health was addressing the basic issues of sanitation and poor living conditions. Reducing the spread and impact of communicable diseases such as tuberculosis, cholera and smallpox was a priority. The Medical Officer of Health had responsibility for reporting on the health of the area population and the authority to take measures that protected population health rather than an individual's health.

By the inter-war period major environmental sanitation issues were well under control and Medical Officers of Health had expanded their management and responsibilities to include:

- health education
- maternal and child health
- school medical services,
- midwifery
- health visiting
- social services and
- infectious disease prevention, treatment and rehabilitation.

The MOH would have contracts with voluntary hospitals for beds and services, and from the 1930s, could take control of Poor Law workhouses, eliminating stigma and developing general hospitals. Prevention and treatment services were combined under the direction of the MOH for the first time. The MOH continued to be very much involved in housing and health and a variety of environmental health related activity.

The 1944 White Paper *A National Health Service* proposed that access to individual medical provision would be free for all. The NHS would be funded through the national Social Insurance Scheme and central and local public contributions.

Medical Officers of Health had always held salaried posts as officers of local authorities, in contrast to other medical practitioners who valued their independent status. The Society of Medical Officers of Health proposed that local government should be reformed into local authorities large enough to run both health services (hospital, consultant, general practitioner, nursing, laboratory, preventive and environmental) and all local government services. These local authorities would have health centres where salaried GPs would work full time, participating in maternity, child welfare and school medical work. The medical officer of health would administer the whole of the local authority health services.

The government, however, decided that a national health service would have a separate governance structure to local authorities in order to ensure the support of the British Medical Association for the proposed NHS. Local authorities, and Medical Officers of

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3 1944 Min. of Health and the Dept. of Health for Scotland *A National Health Service* Cmd.6502
Health, would lose control of municipal hospitals to regional hospital boards and several services would move into the new health service.

The 1946 National Health Service Act\(^4\) established a comprehensive health service to "secure improvement in the physical and mental health of the people of England and Wales and the prevention, diagnosis and treatment of illness" by providing services free of charge, except where the act expressly provided for charges. The National Insurance Act\(^5\) established the welfare state through compulsory contributions. The United Kingdom National Health Service commenced on the 5th July 1948. The World Health Organisation was also established in the same year.

The organisation and operation of the NHS was under scrutiny from its implementation and by the early 1960s proposals were being made for all preventive and personal health services to move from local authorities to area health boards. In 1968, the Seebohm Report\(^6\) recommended that all social care staff in local authorities should be brought together in one department of social services which would leave local authority health departments unviable. Seebohm raised the question of what should be the remit of the MOH and characterised it as 'community medicine' with the MOH as 'the community physician' responding with his team to the demand for leadership and organisation in the promotion of health and in preventive medicine.

In 1968 the first Green Paper on the reorganisation of the NHS\(^7\) recommended that there should be new area health authorities co-terminous with the proposed new structures for local government and responsible directly to the minister. Each health authority would have a chief administrative officer and a chief medical officer, with access to the board, who would be its principal adviser on all medical professional matters and would be the director of the department for the planning and operation of services. The health authorities would have responsibility for hospital and specialist services, family practitioner services, the personal health services provided by the local health authorities, and school health services. The four main tasks identified for the community physician were to develop the quantity and quality of information about health needs and the working of the area health services; to act as adviser on the health services to the area health authority; to advise the local authority on the health aspects of all of its services and particularly to give a lead in health education; and to perform the public health duties of the present Medical Officer of Health. Environmental health services and the health inspectorate remained with local government authorities.

The establishment of a Faculty of Community Medicine of the three Royal Colleges of Physicians was proposed to set and maintain standards for training and specialist registration and was inaugurated in 1972. Membership of the Faculty of Community Medicine would become the recognised public health specialist qualification from 1974. The Hunter Working Party\(^8\) reported in June 1972, three months after the inauguration of the Faculty of Community Medicine. It concluded that the functions of specialists in Community Medicine were:

\(^{4}\) 1946 National Health Service Act (9&10 Geo.VI, c.81)
\(^{5}\) 1946 National Insurance Act (9&10 Geo.VI, c.67)
\(^{6}\) 1968 Report of the committee on local authority and allied personal social services (Chairman: F Seebohm.) Cmnd 3703 London HMSO
\(^{7}\) 1968 DHSS National Health Service The Administrative Structure of the Medical and Related Services in England and Wales
\(^{8}\) 1972 The Working Party on Medical Administrators (chairman, RB Hunter)
i. assessment of need for health services;
ii. planning of services to meet needs;
iii. promotion of health, including health education;
iv. measuring the effectiveness of health care services and promoting improvements;
v. promotion of research and development into health care services;
vi. integration of health services and their co-ordination with other services, particularly the relevant services provided by local government; and
vii. provision of medical advice and services to other bodies, including local government authorities responsible for environmental hygiene and the control of communicable disease.

The development of health information systems was considered an essential pre-requisite to the performance of the majority of these functions.

The White Paper in 1972\(^9\) gave more detail on the NHS reorganisation in England into 14 regional health authorities, 90 area health authorities and Family Practitioner Committees coterminous with the new local government authorities, and 207 districts. Each tier had a team of officers which included a community physician to:

"assess need for health services, evaluate the effectiveness of existing services and plan the best use of health resources. Equally, they will concern themselves with developing preventive health services, with the links between health and the local authority personal social, public health and education services, and with providing the medical advice and help which local authorities will need for the administration of those and other services."

The 1973 National Health Service Reorganisation Act\(^10\) was passed and the date for reform of local government structures and the reorganisation of the NHS was set for the first of April 1974 when Public Health effectively moved away from the local authority.

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\(^10\) 1973 *National Health Service Reorganisation Act* (c.32)
Chapter Two

The overall health status of the people of Liverpool has changed considerably between 1973 and 2013, yet in some aspects it has changed relatively little.

The social environment in 1973

1973 was characterised by recession in Western countries with both high unemployment and high inflation. The UK saw strikes by rail workers, civil servants, miners and ambulance drivers, with 1,600,000 people taking part in a TUC day of national protest and stoppage over pay restraints in May. A two year stock market crash started in January, VAT came into effect and inflation was at 8.4%. Following fighting in the Middle East, OPEC doubled the price of crude oil leading to a Three Day Week for electricity conservation and warnings of petrol rationing. In Liverpool Red Rum won the Grand National for first time and Liverpool FC became league champions for the eighth time as well as winning the UEFA Cup.

In 1973 Liverpool was suffering the effects of recession. The port was struggling with a combination of adverse factors including the resurgence of south coast ports as the UK joined the EEC and Atlantic trade routes lost business and cruises were losing out to air travel. Containerisation took over from cargo shipping which formed the majority of Liverpool's port business and although the Seaforth dock opened in 1971 as the biggest container dock in the world, much of the older dock system was closed down as it could not be used. Manufacturing in the city, which had provided alternative jobs to marine dependence, was concentrated in a small number of large factories, mostly owned by external companies. Closing plant in Liverpool was an easy option when recession hit. In 1972 national unemployment hit 1,000,000 for the first time since the Second World War, with young people finding it almost impossible to find work.

The housing situation in Liverpool in the early seventies was confused, with slum clearance programmes continuing in the city, and over 160,000 people having been dispersed to the new municipal housing estates/towns of Kirkby, Speke, Halewood, Croxteth and Netherley. The lack of facilities such as schools and food shops and the effects of breaking up of communities became apparent, and as unemployment grew, people became more isolated and found it difficult to adapt to the change in living circumstances.

Living standards were rising although unevenly distributed across the UK. Consumer goods such as televisions, refrigerators and freezers became more available and early digital technology was emerging. Credit cards became an acceptable form of funding for consumerism. Convenience foods were more common, the range of take away food outlets grew rapidly and confectionery marketing aimed at children increased. Car ownership rose and package tours made holidays abroad commonplace. The school leaving age was changed from fifteen to sixteen in 1973 which meant that most young people would attempt to gain some form of qualification before leaving.

However, unlike the promise of post war improvement, there was no definite end promised for this situation, and indeed for Liverpool worse was to come before recovery could be envisioned.
The city in 2013

In 2013 there is recession in Europe again. The UK is seeing the start of recovery but only in certain areas and not yet in the North West. There has been industrial action relating primarily to minimal pay awards in the public sector and proposed changes to pensions - action usually lasting 24 hours. 2013 saw the biggest drop in household disposable income for 25 years. Continued fighting in the Middle East and former Soviet Union could threaten oil and gas supplies. Liverpool Ladies Football Club win the FA Women’s Super League.

In 2013 Liverpool is still reinventing itself as a global cultural, heritage, and business destination. Recovery from the slump of the 1970s and 1980s started slowly in the mid 1990s and has continued through the triumphs of the city’s 800th anniversary in 2007, European Capital of Culture status in 2008, the marionette giants of the Sea Odyssey and a very strong programme of events that mark Liverpool out as a modern, international city for visitors. One of the Mayoral pledges is for Liverpool to be the preferred place for investment and jobs and the city is encouraging investment, helping existing businesses grow and new ones to start up. Major successes include the Liverpool One retail and leisure complex, the return of cruise liners to the city, and the development of the Liverpool Science Park. Liverpool is currently achieving faster economic growth than other areas despite a difficult economic environment.

Liverpool’s unemployment rate is 11.8% which is 4% higher than the rate for England. However, the employment growth rate has been better in Liverpool than nationally. Young people are disproportionately affected; both school leavers and those coming out of universities are finding it very difficult to move into work. Liverpool has a relatively high proportion of public sector jobs which are decreasing due to the impact of austerity measures. The number of private sector jobs is growing but is not yet equivalent to the public sector decrease.

Housing is also the subject of a Mayoral pledge to build 5000 new homes in the city. Liverpool also aims to provide a choice of high quality housing for residents, including larger family homes, which helps to prevent migration out of the city. There is a well supported programme to bring empty homes back into use in the city. Student accommodation and hotel accommodation are leading uses for both new build and conversion of property. Current concerns to be addressed include the housing needs of an ageing population and the negative impacts of welfare reforms on tenants.

Population comparison

In 1973 Liverpool’s population was still declining steeply from a post-war peak of 802,200 in 1950, falling by 14000 from the previous year to 578,900 in 1973. In 2013, we are seeing a very gradual recovery from the lowest point of 441,900 in 2002 to the most recent population figures of 469,700 in 2012. This kind of demographic change is not unusual and has been seen in other larger European cities. There was considerable out-migration (people leaving the city) and little in-migration in the seventies and eighties as an effect of mass unemployment. The city continues to be reliant on international migration to sustain population growth.
The population pyramid (Fig. 2) below shows the current population structure of the city, with the overlaid lines showing the structure in 1973. The main differences can be seen in the younger age groups, with far fewer children today than in 1973, but many more people in their 20s and 30s. The large 20-24 population today is immediately apparent, and is reflective of the large and growing student population within Liverpool. There are over 53,000 people in this age group, representing more than 11% of the population, compared to 7% in England.

Mirroring a pattern seen across most western economies, the live birth rate in Liverpool dropped sharply in the early 1970s from a steady decline and the 1973 value was at 7,411, a record low of 12.9 live births per thousand (Fig. 3). It started rising at the end of the decade then fell again from the mid 1980s. Since a low of 4,915 in 2001 there has been a
general upwards trend to 5,942 in 2012. The birth rate in 1973 and 2013 are almost equivalent at 12.9 live births per thousand and 12.7 live births per thousand.

The total period fertility rate (TPFR) measures the average number of children which would be born to a woman throughout her life. Figures for Liverpool show the TPFR in 2012 was 1.66 - below the level where the population is considered to be self-sustaining in the long term (TPFR of 2.1).

Infant mortality

Figure 4 shows that in 1973 Liverpool's infant mortality rate was 19.6 per 1000 live births, higher than the average for England and Wales (16.9) and four of the Core Cities.

In 2012 Liverpool's infant mortality rate had dropped to 4.5 per 1000 live births and the England and Wales average was 4.1. The reduction in infant deaths has been achieved primarily by reducing the number of deaths between one month and one year of age, through better information campaigns, infant care and surveillance, for example, the
national campaigns on how babies should sleep, and signs parents should look for which could indicate possible serious illness.

**Causes of infant death**

![Causes of Infant Death in 1973](image1) ![Causes of Infant Death in 2012](image2)

**Figure 5 Causes of infant deaths in Liverpool 1973 and 2012**

A comparison of causes of infant death in 1973 and 2012 shows that Infections, such as Meningococcal infection and Bronchitis, were strong factors in infant mortality in 1973. Injuries at birth also feature as a cause of infant death, but are much rarer today, with no cases in 2012. However, circumstances of birth also differ, with a larger proportion of home deliveries in 1973. It must be remembered that these are relatively small numbers and that the number of deaths in 2012 was one sixth of that in 1973. Although the infant mortality rate is now so much lower, it can still be unstable, as any unusual event can have a large effect, such as the increase in multiple births as a result of fertility treatment. The infant mortality rate affects life expectancy measures, and strongly reflects inequalities. Further reductions in the rate may well be achieved by addressing inequalities rather than disease.

**Infectious diseases**

Comparison of notifiable infectious diseases for 1973 and 2012 shows that most are better controlled in 2012 (Fig. 6). Cases of measles had become minimal due to comprehensive vaccination but sufficient parents have made the choice not to have their children vaccinated in recent years that outbreaks are being seen more frequently.

![Notifications of Infectious Diseases](image3)

**Figure 6 Notifications of infectious diseases in Liverpool 1973 and 2012**

Although these outbreaks are classed as epidemics, they are thankfully currently at a much smaller scale than those seen in 1973, when there were 2,104 notified cases. The
number of cases of measles in 1973, considered shockingly high today, was only half the number of cases notified in 1972. However, the present level of cases (351) is much too high for a potentially fatal infection that should have been practically eradicated in the developed world.

![Sexually Transmitted Infections](image)

Figure 7 Sexually transmitted infections in Liverpool 1973 and 2012

Cases of gonorrhoea notification reduced rapidly from the mid 1970s. However, national trends for both gonorrhoea and syphilis have risen sharply recently. Rates of gonorrhoea are rising for men who have sex with men and antibiotic resistant strains of gonorrhoea are now apparent. Cases of syphilis have also risen for men who have sex with men and there have been a small but worrying number of outbreaks in young heterosexual groups where the infection is not normally seen. Cases of chlamydia only seem to have become present in significant numbers in the UK in the mid 1970s but chlamydia is now the most common sexually transmitted infection in the UK, and in 2012, 2452 people tested positive for chlamydia in Liverpool. Around two-thirds of chlamydia cases are found in young people under 25 years old with 50% of men and 70-80% of women experiencing no symptoms.

The first case of Acquired Immune Deficiency Syndrome (AIDS) was identified in 1981 in America and its aetiological agent Human Immunodeficiency Virus (HIV) two years later. In the UK the 1987 government information campaign ‘AIDS: Don't Die of Ignorance’ shocked the public but got across the message that anyone could be at risk. The campaign has been credited with the UK experiencing half the number of diagnosed cases that might have been expected. The diagnosed prevalence of HIV in Liverpool has more than trebled in recent years, with more than 500 people now accessing HIV related care. However, it is important to recognise that it is estimated almost 1 in 4 people with the condition are unaware of their status. Although Liverpool has the highest rate of the Merseyside local authorities, it has the lowest prevalence among the eight core cities in England, significantly behind Manchester.

Tuberculosis was still an important concern in 1973, with the incidence of new cases numbering 169 for the year, but the rate of reduction having plateaued for the last five years. Although many of those receiving treatment recovered and could be removed from the register, there were still 23 deaths from tuberculosis in the year. In 2013, tuberculosis has become a disease of deprivation, found most often in vulnerable groups. National tuberculosis rates rose over a decade while most western European rates continued to fall,
however the rate is now falling sharply. Incidence in Liverpool in 2012 was stable at 10.6 per 100,000 population and below the England average of 15.2 per 100,000 population.

Approximately a third of the 51 new cases in Liverpool in 2012 were at risk because of drug or alcohol use, homelessness or imprisonment. Three quarters of cases were found in people born outside the UK. Cases of tuberculosis are now usually successfully treated in six months; however, increasing numbers of cases of multidrug resistant TB (MDR-TB) are being seen globally. One of the actions to improve TB control in Liverpool in 2013 is awareness raising for health professionals as cases are relatively rare. This same point was raised by one of the Consultant Chest Physicians in 1973 in relation to younger members of the medical profession who might never have seen a case of tuberculosis.

Mortality and morbidity

As care improves, people are able to live longer and manage their health conditions, prolonging their life well past working age. In 1973, far fewer people would need long term support after their working life.

Figure 8 shows the remarkable difference in life expectancy at birth in 1973 and 2012. Overall life expectancy shows a gain of 8.2 years, with a gain of 9.5 years for male life expectancy and 7.1 years for female life expectancy. Male life expectancy is still below female life expectancy and although the gap has reduced by a third, it is still more than four years in 2012.

There are two issues with rising life expectancy that are pertinent for Liverpool, the first being that people may not have a sufficiently good state of health to benefit from additional years. Current figures indicate that healthy life expectancy in Liverpool is 59 years for both men and women, suggesting around 20 years of life in poor health. The large number of years spent in poor health places significant pressure on families, with more than 1 in 10 adults in the city providing unpaid care. A third of these provide more than 50 hours of care per week. Carers pay a significant health penalty for caring and there is now strong evidence to suggest that the longer you provide care and the more of it you give, the more likely you are to be in poor health yourself. Although figures for 2012-13 indicate most carers rate their health as fair or good, of those who do not, caring has a significant impact on health.
The second issue with life expectancy is whether the risk factors that are affecting younger populations will reverse the gains that have been made. The rising problems of obesity and alcohol, and the resulting conditions such as Type 1 diabetes and liver disease, have repeatedly been identified as concerns which could lead to the first generation of children with a shorter life expectancy than their parents. This applies across the developed world, but is particularly pertinent to Liverpool given the life expectancy gap.

The overall number of deaths in Liverpool in 1973 was higher than the number of live births for the first time since 1866. Crude mortality was at 14 deaths per thousand, up from 13.6 in the previous year, and higher than the national average of 12 deaths per thousand. Figure 9 shows the main causes of death in 1973 and 2012, and highlights the shifting causes of death over the past four decades.

![Figure 9: Causes of death in Liverpool 1973 and 2012](image)

The reduction in circulatory deaths (heart disease and stroke) is immediately apparent. In 1973, these accounted for almost half of deaths in Liverpool, compared to just over a fifth today. Research suggests the large reduction in mortality from heart disease has mainly been driven by a reduction in risk factors, most notably smoking. The proportion of deaths caused by neoplasms (cancer) in Liverpool has increased, along with diseases of the digestive system and nervous system. One of the main changes since 1973 has been the emergence of deaths identified as being caused by mental disorders, the majority of which being dementia. The reasons for this are likely to be two-fold, with better identification and diagnosis, and also an ageing population which makes the condition more prevalent.

Figure 10 below illustrates the changing pattern in mortality in Liverpool. In 1973, the number of deaths begins to increase at a much earlier age than in 2012, reflecting the fact that people today live much longer. The chart also shows the higher infant mortality in 1973 compared to 2012.
There has been a significant improvement in the overarching measures of health in Liverpool since the 1970s with reductions in infant mortality, and marked increases in life expectancy. However, with these improvements come challenges. As the population lives longer, there is a greater need and demand for care for the elderly, both through services and through family and friends.

In order to reduce the number of years spent in poor health, a strong emphasis is required on reducing the risk factors for health (reducing obesity, smoking, and alcohol consumption, and physical inactivity), and improving self-care so people are better able and confident enough to manage their own health and live independently.
Chapter Three
Public Health Activity: forty years ago and today

This chapter gives a flavour of some of the public health work carried out in local authorities in 1973 and 2013. Areas of activity are described under each of the four groupings of functions in 1973 and in 2013. The boxes below describe how Public Health is structured in each of the two comparison years.

### Public Health functions Liverpool City Corporation 1973

**Health Department**
- Epidemiology
- Control of Radiation Hazards
- Health Education
- Medical Care of Immigrants
- Occupational Health
- Emergency Care of the Elderly
- Rehousing on Medical Grounds
- Cremation

**Personal Health Services Department**
- Maternity and Child Health
- Midwifery Service
- Health Visiting
- Cervical Cytology
- Welfare Foods Service
- Family Planning Service
- Chiropody Service
- District Nursing Service
- Immunisation and Vaccination
- Tuberculosis
- Venereal Disease
- Ambulance Service

**Social Services Department**
- Occupational Therapy
- Mental Health

**Environmental Health and Protection Department**
- Environmental Health
- Housing and Slum Clearance
- Supervision of food supply
- Meat inspection
- Diseases of Animals Act
- Atmospheric Pollution
- Rodent control
- Disinfection and Disinfestation

### Public Health functions Liverpool City Council 2013

**Health Improvement**
- Health Improvement Programmes
- Delivery of Making Every Contact Count Programme
- Public Health Commissioning
- Work with communities and neighbourhoods
- Prevention Strategy
- Clinical governance

**Public Health Healthcare**
- Strategic Needs Assessment
- JSNA Development
- Epidemiology
- Research and Development
- Public Health Advice to the NHS
- Behavioural Insight
- Social Marketing
- Evidence Reviews

**Wider Determinants**
- Integration of PH across City Council
- Public Health Strategic Planning and Governance
- Public Health Strategic leadership for Children
- PH Policy Development
- Health and Wellbeing Strategic advice
- PH support to community safety and violence prevention
- Public Mental Health
- Vulnerable Groups
- Public Health European work

**Health Protection**
- Health protection governance and strategy
- Resilience
- Prevention and control of infectious disease
- Support to environmental public health
- Safeguarding

In 1973 Public Health reported to the Health Committee, the Environmental Health and Protection Committee and the Social Service Committee. In 2013 Public Health provides statutory support to the Liverpool Health and Wellbeing Board and also reports to the Adult Social Care and Health Select Committee and the Education and Children's Services Select Committee among others. The Health and Care Services Scrutiny Panel and the Joint Health and Well Being Scrutiny Committee are representative of a democratic scrutiny function that was not in place in 1973.
1973 Health Department

Health Education
Health education depended on people across many disciplines, with varying levels of commitment. Four categories were identified: full-time health education workers; staff for whom it was a major part of their specified work e.g. health visitors, school nurses; staff for whom health education played some part in their work e.g. medical profession, public health inspectors, social workers; those with an interest without it being a specific part of their work e.g. group leaders, voluntary workers. The actual number of staff engaged in health education was small however the potential was considerable. Health education relied on contact with the public as individuals, groups or en masse. However, with limited resources, a large proportion of the public was not reached on a sufficiently sustained basis to be effective. High mortality and morbidity indicated that the size of the education effort was not yet sufficient to meet population needs and this was especially true of diseases associated with people's behaviour.

Occupational Health
Any organisation large or small, will be concerned with the health of its employees. Liverpool Corporation had oversight of the health of its thousands of employees through the Medical Officer of Health's Occupational Health section. Employees were examined for fitness to undertake the duties of their post and those with prolonged sickness records underwent medical examinations and were given advice as to future work. Other examination duties included: recruits to Liverpool and Bootle Constabulary and the Fire Service, traffic wardens and crossing patrols and Mersey Tunnel workers. The section also dealt with medical aspects of concessionary travel passes (minimum 35% leg disability) and driving licences. Of 5,235 examinations carried out in 1973, 4,872 persons were found to be fit and 363 unfit. Causes of unfitness included Diseases of the Cardio-Vascular system (20%), Diseases of the Respiratory System (17.8%), Diseases of the Musculo-Skeletal System (18.7%) and Mental Disorders (13.5%). Of 1,281 applications from manual workers for admission to the Corporation Superannuation Fund, 81 were found unfit and refused.

Emergency Care of the Elderly
Emergency care of the elderly was undertaken with the Social Services Department, at their request for assistance under Section 47 of the National Assistance Act 1948 which provided for the removal to suitable premises of persons in need of care and attention. Each case was assessed with great care as to the medical social and environmental aspects. Every effort was made to provide adequate support in the home in order for the elderly person to maintain an independent existence for as long as possible. Where someone could no
longer be cared for at home, the problems were fully discussed and an offer of suitable premises away from home was made. Most were persuaded to accept admission for care and attention but those who had no insight into their problems had to be admitted under the Act. Admissions were rising with greater life expectancy. There was an acute shortage of beds and it might have been asked whether the emphasis on community care had not been too great. There were 7 nursing homes registered with the local authority in the city.

Rehousing on Medical Grounds
The Medical Officer of Health was authorised to grant priority in rehousing to a limited number of persons on health grounds. For those applicants who lived in Council property and requested transfer, the MOH might recommend priority in only the most urgent cases, owing to the number of applications made. During 1973, 10,182 applications were received for rehousing on medical grounds. Where necessary, visits were made by a medical officer, health visitor, social worker, public health inspector or occupational therapist, considering not only the applicant, but the whole family as a unit. 618 tenants were recommended for transfer and 266 cases were recommended for special priority allocation. In most cases the medical factors put forward were genuinely related to the housing conditions, and the applicant would benefit from suitable rehousing. However, owing to the severe shortage of housing accommodation in Liverpool, only the more serious cases could be considered, and a medical recommendation was only made where there was a reasonable prospect of the applicant being rehoused. The major conditions for recommendations were Cardiovascular Disease, Respiratory Disease, Conditions affecting locomotion and Psychiatric Conditions.

1973 Personal Health Services
Midwifery Service
Notification of intention to practice was received from 294 hospital midwives, 1 private midwife and 60 domiciliary midwives of whom 19 were Lancashire County and Bootle midwives who delivered patients in Fazakerley Hospital. There were 178 domiciliary births (298 in 1972) and 73 hospital deliveries by domiciliary midwives. Patients discharged to domiciliary midwives numbered 6,862. Of these patients 572 were premature births (including 32 sets of twins) under the care of the three specialist midwives. The emergency obstetric unit was called out 5 times and there were 34 calls for a midwife to attend emergencies from the ambulance service. Antenatal care was offered at 21 GP clinics, at hospital clinics and in the home. Midwives attended 694 sessions with family doctors, 36 hospital sessions and made 2,699 home visits. 3,413 visits were made to assess home conditions for patients who requested early discharge from hospital. There were four maternal deaths in 1973 of which only one was directly due to pregnancy, caused by acute Fatty Liver of Pregnancy.
Health Visiting
The retention of trained staff continued to be a problem and recruitment had become more difficult because of the pending re-organisation of the NHS. There were 26 family health clinics in operation and more hearing assessment sessions as staff were trained. Developmental paediatric assessment clinics were now run, with priority given to children on the 'at risk' register although there had been failure to attend appointments in some areas. Home visits were made to follow up and persuade parents of the benefits of these clinics. During the year 72,093 visits were made to 38,395 children under the age of 5 years. The purpose of these visits was to give help and advice to the parents and to educate them to maintain as high a standard of living as possible in their circumstances and to promote mental and physical good health. During these visits deviations from normal development could be detected and the child further assessed. The number of case conferences held during 1973 was 1,750. These conferences were of great importance especially because of the growing interest and concern about harm towards children.

Family Planning and Cervical Cytology
There was increased demand for Family Planning services in 1973, with clinic sessions increased from 30 to 40 per week. The number of attendances increased by over 5000 to 31,515 from 1972. Domiciliary Family Planning services recorded an additional 5671 visits. Family Guidance clinics had also been extended. There were 6052 cervical smears taken at Family Planning clinics which was almost double the number taken in the previous year. Nine factories had requested Cervical Cytology services and 1,262 cervical smears were taken on factory premises. The number of cervical smears taken at Cytology clinics was 4,190 giving an overall total of 11,504, an increase of 3,532 above the 1972 total. However, although 4190 attendances were recorded, 9,933 appointments were made, meaning that more women did not keep their appointments than did attend. Health education might help more women to come forward. Cytology services were now on a five year recall system through the Computer at Southport.

Health Screening in the Elderly
An important aspect of preventive medicine was detection of pre-symptomatic disease and a pilot scheme was implemented to screen the health of a group of patients felt to be 'at risk' from remediable disorders including anaemia, deafness and cataract. The population chosen were patients over 65 on the lists of two collaborating GPs who were invited to a clinic at the practice, with ambulance transport if needed. A medical officer, health visitor, social worker and chiropodist participated in the screening. A full medical history was taken and examination including vision and hearing tests, urine test, haemoglobin estimation and full blood count. An attempt was made to assess the adequacy of each patient's diet by their weekly consumption of principal foodstuffs. Just under half of those invited attended the screening (354) and 170 conditions requiring further investigation or treatment were found in 48% of those patients. The highest was anaemia found in 20% of patients. 19% of patients were referred to chiropody and 12% to social services. Those patients who failed to attend were followed up by health visitors. It must be emphasised that without medical follow up of the conditions found by the GP, the screening itself would be valueless.
Welfare Foods Service
Welfare Foods and Proprietary Foods were distributed to the public from various distribution points based in Health Centres, Maternity and Child Welfare Clinics and Church Halls throughout the City. Of these 8 were full time centres, 21 part time centres and 8 Voluntary Centres. Appreciation was expressed to the chemists who had distributed Welfare Foods to the public for many years on a voluntary basis. In 1973 19,885 packets of National Dried Milk, 16,216 bottles of Children's Vitamin Drops (A,D and C) and 10,602 tubes of Vitamin Tablets (A, D and C) were distributed. There continued to be close liaison with the Old People's Council and Age Concern provided Welfare Food facilities for the housebound through their 'Good Neighbour' scheme.

District Nursing Service
The District Nursing service continued to meet an increasing demand to care for the acute and chronically sick in their own homes. In 1973, a record number of 16,702 patients were cared for while the number of patients aged 65 and over continued to show an upward trend to 8,770 patients from 8,429 in 1972. Of a total of 427,267 visits in the year, 240,355 were to patients over 65. The specialist services provided were: the Night Service for terminally ill and chronically sick patients plus support to attending relatives; Renal Dialysis; Liaison for continuity of patient care between hospital and community, and the Myelomeningocele Service (Spina Bifida) which worked with 148 children and their parents. Observation visits were arranged for 330 student nurses and 38 hospital nurses spent a day with the service to observe community nursing roles. Requests were again received from the Department of Health and Social Security and the Royal College of Nursing for programmes for senior nursing personnel from overseas including a WHO Fellow from Iceland and visitors from Denmark, Nigeria and Ghana.

Vaccination in Schools
The BCG (tuberculosis) vaccination was offered to 10,670 schoolchildren in 1974 and accepted by 10,227. 10,009 schoolchildren were Heaf-tested (for exposure to tuberculosis) and 1,423 returned as positive. BCG vaccinations were given to 7,554 schoolchildren. The percentage of positive Heaf tests has remained variable around 15% for the last ten years. The number of primary courses of diphtheria immunisation given in 1973 was 7,855. 1,359 of these and 3,988 booster doses were given in schools. The total of booster doses given was 5,424. The number of primary courses of tetanus immunisation given in 1973 was 8017. 3,988 of 5461 booster doses were given in schools. The number of primary courses of poliomyelitus vaccination given in 1973 was 8,215 of which 1,355 were given in schools. Of the 5387 booster doses given, 3,934 were given in schools. A total of 3,328 girls between their 11th and 14th birthday received rubella immunisation in 1973 of which 3,229 were given in schools. The purpose of this vaccination was to protect girls against rubella before they reach child bearing age.
**Tuberculosis**

The number of new cases of tuberculosis found in 1973 was 169, with 153 pulmonary and 16 non-pulmonary cases, 67% being male and 33% female. This gave an incident rate of 0.27 per 1,000 for cases of pulmonary tuberculosis and 0.03 per thousand for non-pulmonary. There were 1821 patients on the register and 213 had been removed including 46 cases where diagnosis had not been completed. There were 23 deaths from tuberculosis in 1973, 18 from pulmonary tuberculosis and 5 from non-pulmonary tuberculosis. The Mass Radiography Section conducted 13,103 X-ray examinations at Kingsway House and 38,042 examinations using the Mobile Unit. The number of cases of active pulmonary tuberculosis discovered was 40 (22 at Kingsway House and 18 at the Mobile Unit), 21 of which were Liverpool residents. Despite modern advances in preventive and therapeutic medicine we were unable to reduce the incidence of tuberculosis in the City below an average of 185 cases per annum over the past 5 years. It is therefore clear that any relaxation of anti-tuberculosis measures in the preventive field, based perhaps on the impression that tuberculosis is now a rare disease, would be most unwise.

**1973 Social Services Department**

**Occupational Therapy**

Payscales had led to difficulties in recruitment and Senior Therapists had applied for posts elsewhere. Occupational Therapy as a discipline had an image problem as patients saw it as diversional or social activity, not as having a role in the overall management of physical illness and disability. This was seen particularly around discharge options when treatment was having no further benefit, which would have been transfer to a Craft Centre or an Elderly Person's Day Care Centre or discharge home. The programme of extra-mural activities provided for patients in Units included swimming, gardening, horse-riding and a choir directed by the head occupational therapist. Members of staff also assisted with the care and entertainment of patients on holidays at Caernarvon and Barmouth in the summer. A new Unit was to be opened in Speke in 1974. Educational facilities were to be provided at the Longmoor Lane Unit for disabled school leavers who wished to compensate for prolonged absence from school. The head occupational therapist and the medical officer attended the Paraplegic Unit at Southport as needed, to plan for care within the community for those Liverpool residents to be discharged from the hospital.
1973 Environmental Health and Protection Department

Housing and Slum Clearance
During the year 17 Compulsory Purchase Orders were confirmed following 10 Public Inquiries. 2,956 houses were confirmed for purchase and 2,222 families rehoused. 67 dwellinghouses occupied by 91 families were considered unfit for human habitation. A total of 129 houses were reviewed resulting in demolition orders made in respect of 39 and 88 closing orders. 16 closing orders were rescinded where owners had carried out required works. Since the 1957 Rent Act more than 39,000 visits had been made by public health inspectors to dwellinghouses and more than 9,000 applications for certificates of disrepair had been received. Only 5 applications were made in 1973. The City Council recommended that certain houses requiring substantial repairs to bring them up to a reasonable standard should be eligible for limited improvement grants offered at the same time as Repairs Notices are served. A total of 669 notices for repairs to be carried out to dwellings were issued during 1973. The City Council again considered applications for loans on mortgage from prospective owner/occupiers and 1,413 houses were inspected for this purpose.

Atmospheric Pollution
The Environmental Health department continued its involvement in the National Survey for Air Pollution and the daily mean concentrations of sulphur dioxide and smoke were determined at five sites throughout the City. An analysis of the results obtained at the Woolton site over the past ten years showed a decrease in the yearly mean concentrations of 40% for smoke and 37% for sulphur dioxide. A pilot study was carried out in Church Street to monitor the kerbside concentrations of lead and benzpyrene in connection with a proposed pedestrianisation scheme. The monitoring programme would be repeated when the road has been closed to traffic and an indication of the contribution made by road traffic to the air pollution levels in the city will be indicated by the results. A further smoke control order came into operation on 1st May 1973, making a total of 23 smoke control orders covering some 89,900 premises. A total of 9,362 visits were made and 1,883 appliances were converted to smokeless combustion.

2013 Health Improvement

Healthy Ageing
The transformation of services for older people is important to improve health outcomes and manage the increasing costs of an ageing population. Liverpool's population is living longer with an expected 9% growth in the number of people over 65 by 2021, with strongest growth in those aged 70-75 and over 85. As the population ages there will be more people living with multiple long term conditions placing more demand on health and social care. As
the working age population reduces correspondingly, there will be less people available to take caring roles when there is greater need. The aim of the LCC/LCCG Healthy Ageing programme is to keep people in Liverpool living at home for longer by positively maximising independence supported by carers, families, communities and services. Five key areas for change are care homes; reablement; dementia; carers and supportive end of life care. An example of the change of focus in reablement will be the establishment of frailty units in our hospital trusts, staffed by a geriatrician led multi-disciplinary team and recognised as a front line service.

**Healthy Homes**

The Healthy Homes programme was set up to help reduce social and health inequalities arising as a result of poor housing in Liverpool. There is a large and growing body of evidence linking adverse physical and mental health effects with poor housing and the experience of fuel poverty, with increased risk of cardiovascular and respiratory diseases, depression and anxiety. In the last five years environmental health officers have carried out health and safety inspections at more than 4,000 properties leading to more than £5m worth of improvements being carried out by private landlords to their properties as a result. Work ranges from removing the causes of mould to eliminating life-threatening structural defects. During the inspections the Healthy Homes team is also able to address common health and lifestyle issues for families and where appropriate to refer them into local services. By the end of 2013 the team had undertaken nearly 32,000 initial assessments in homes, completed over 17,000 household surveys and made 23,000 referrals to partners. These actions enable tenants to live in healthier, warmer and safer homes and provides encouragement to live healthier lives.

**Every Contact Counts**

Making Every Contact Count (MECC) encompasses a range of behaviour change methodologies, which enable the public health workforce in its widest sense to empower healthier lifestyle choices and explore the wider social determinants that influence all of our health. The primary goal of MECC training is to add to the skills of front-line staff in initiating and responding to opportunities to deliver brief advice and brief interventions about health and health-related lifestyle issues across all appropriate interactions with people accessing services. The MECC training programme scales up the number of workers who have been trained rapidly so that the MECC approach will be consistent through organisations. Liverpool have designed and implemented a ‘Train the Trainer’ programme as the most effective way for those who experience this level of training to be able to deliver cascaded training within their own organisations. The programme is a delivery vehicle to the wider workforce for prioritised issues within the city, such as Alcohol Identification and Brief Advice, including training, education and awareness campaigns. An Every Contacts Counts guide is made available to all cascaded trainees which keeps them updated with information on current key health messages and services to which they can signpost.
**Sexual Health**

Liverpool partners aim to improve citizen's sexual health by reducing inequalities, improving outcomes and creating an environment where people are able to make informed decisions about relationships and sex. The Sexual Health Strategy Group champions and leads the work of implementing the strategy - in particular, sexually transmitted infection diagnosis and treatment, HIV late diagnosis, chlamydia screening, teenage pregnancy and increasing take up of long acting reversible contraception (LARC). Public Health works closely with partners across all sectors as commissioners for sexual health services that must be provided in all areas of the country as well as seeking innovative local solutions. Public Health has contributed to the strategic specification of abortion services for the city as well as commissioning insight work to understand why LARC is not offered routinely as an option in primary care. Although there have been many positive gains (for example, destigmatising chlamydia screening), there is still some way to go to ensure that Liverpool's population has equitable access to the services it needs. Action to achieve this includes co-ordinated training for primary care staff, promoting Public Health England's 3Cs programme (chlamydia, condoms, contraception) and improving the HIV testing available to men who have sex with men.

**2013 Public Health Healthcare**

**Skin cancer**

In 2013 Public Health, together with partner organisations, launched the city's first skin cancer strategy focused on three groups at greatest risk: sunbed users, outdoor workers and children. Implementation work has enabled Public Health to use the wide range of local authority functions to change behaviours in our city. Cancer Research UK found that 50% of girls aged 15-17 in Liverpool have used a sunbed compared to 11% nationally and a social marketing campaign ‘The Look to Die For?’ was launched to reduce the number of teenage girls using sunbeds in the city. The campaign focused on influencing behaviours personally through schools, social media and events; socially, by influencing the sunbed culture in the city through parents, beauticians and the fashion industry; and environmentally, by enforcing current legislation and lobbying for greater regulation and the powers to license sunbed salons. Outdoor workers in the city are typically male and are twice as likely as indoor workers to be diagnosed with non-melanoma skin cancer. Public Health worked with local employers, Cancer Research UK and the Health and Safety Executive on a communications toolkit for employers of outdoor workers containing resources and targeted advice to encourage sun smart behaviours in the workforce.
2013 Wider Determinants

Workplace Wellbeing
The Workplace Wellbeing Charter was first developed and piloted in Liverpool in 2008 and launched in 2009 to engage employers in investing in the health and wellbeing of their workforce in order to benefit both workers and organisation. There is strong evidence to show how having a healthy workforce can result in higher energy, increased creativity, reduced sickness absence, lower staff turnover and boosts in productivity. This is good for employers, workers and the wider economy. There are substantial financial and performance benefits for organisations which value and care for employees. The Charter can be used as a public health tool to improve workplace health and wellbeing and utilised as a management tool to audit, plan for improvements, and gain external recognition for participating organisations. The goals of the Charter include delivering tangible benefits through impact on attendance rates, retention and performance. Organisations of all sizes can use the Charter standards to work through three levels of award recognition. In 2014 Public Health England formally adopted the Charter and it has been revised to ensure it is universally applicable. The Charter is now the National Workplace Wellbeing Award scheme for England, offering free resources and support from local providers. www.wellbeingcharter.org.uk

Health Visiting and School Nursing
The public health reforms in April 2013 included steps to bring public health nursing back under the jurisdiction of local authorities. The commissioning of School Nursing transferred to the city council in April 2013 and it will be joined by Health Visiting and the Family Nurse Partnership in October 2015 as the bedrock for public health nursing in the city through the 0-19 years Healthy Child Programme. Health Visiting and School Nursing are universal services that are concerned with the promotion of health and the prevention of ill health for all children and young people. The Family Nurse Partnership is a targeted service provided to young, first time mothers through pregnancy to the age of 2 years. These are all rooted in public health, working with and through families and communities to promote the health and wellbeing of the next generation using evidence based interventions. There is a strong emphasis on supporting parents with some of the practical and emotional skills necessary with a positive approach to nurturing a child through their early years and beyond. This includes collaborative working across services and sectors to respond to family needs, recognising that healthy parenting and care for children, providing early help where it is needed and responding to concerns are key to a child’s future life prospects.
Bridging Inequality Gaps
In Liverpool, 34% of children and young people are classed as living in poverty. During the school term many of these children are able to access free school meals and breakfast clubs which are not available during school holidays. The Mayoral Action Group for Health Inequalities recognised this and combined funding from Liverpool CCG, the Mayoral hardship fund and Public Health to deliver food through a ‘Play Healthy’ Scheme. Public Health mapped Liverpool Play Partnership’s play schemes, encouraging communities without provision to bid for resources to provide breakfast, lunch and an afternoon ‘food’ activity for children over school holidays. Merseyside Play Action Council ran the bidding process, with food distribution charity FareShare Merseyside ensuring each play-scheme had access to affordable high quality healthy foods to maximise their resources. The first ‘Play Healthy’ Scheme was delivered in summer 2013 when over 6,500 children and, in some cases, their families, accessed a variety of healthy foods for breakfast, lunch and afternoon activity. The play scheme network also supported ‘Simply Advice’, a programme giving fast access to Citizen's Advice Bureau services via a dedicated phone line. The 'Play Healthy' scheme now also runs during Easter and Christmas school holidays.

Vitamin D: Meeting Health Needs
Vitamin D is an essential nutrient that contributes to healthy, strong bones and helps control the amount of calcium in the blood. Vitamin D deficiency can cause various problems in children, including hypocalcaemic seizures, fractures and Rickets. Emerging evidence suggests that it may also help in the prevention of other conditions in adulthood and later life. Vitamin D deficiency appears to be a re-emerging problem in the UK, due to changes in the ethnic demography of the population; inadequate sunlight exposure and a diet low in vitamin D. Liverpool clinicians have already indicated an increase including a small number of local Rickets cases. Public Health has been working with partners to roll out an extension to the Healthy Start vitamins scheme. Funding has been provided by Liverpool CCG for two years and they are dispensed by Liverpool Community Health (Health Visitors and Health Centres), Liverpool Women's Hospital (Midwives) and Children's Centres. Vitamins are now provided free for all pregnant women from 10 weeks, new mothers up to 1 year after delivery and all children from 1 month up to 2 years.

Breastfeeding
Breastfeeding is associated with significant health benefits for children such as reduced likelihood of: infections, type 2 diabetes, obesity, sudden infant death, eczema and asthma, as well as a decreased cancer risk for women. Furthermore, investment in supporting mothers to breastfeed is associated with improving the quality of life for women and educational outcomes for children as well as providing economic benefit for the NHS and wider society. Although the percentage of babies that are breastfeed locally is starting to increase, Liverpool still has one of the lowest rates of breastfeeding in England. Public Health has commissioned a range of initiatives to increase breastfeeding rates in the city. Support has been provided to Liverpool Women's Hospital, Liverpool Community Health Trust and Liverpool Children's Centres enabling them to work towards achieving UNICEF Baby
Friendly Status – with the aim of improving services for mothers and babies. It is a focus on partnership working that will lead to Liverpool becoming a truly breastfeeding friendly city. For example, Public Health runs a Breastfeeding Welcome scheme which is growing as more local businesses come on board to welcome breastfeeding women. In conjunction with Liverpool CCG Public Health have also commissioned a local peer support service, Bambis, who employ local mums both in hospital and the community to provide one-to-one help with breastfeeding to other mothers.

2013 Health Protection

Communicable Disease
Liverpool was one of the first areas to recognise and address illness and death arising from communicable disease in the nineteenth century. In the twentieth century focus moved to the reduction of non-communicable disease such as cancer and cardiovascular disease as much of the previously dominant communicable disease was contained or eradicated. In the twenty-first century communicable diseases that were thought to be no longer a public health priority are re-emerging in areas that have been very little affected for decades. Although tuberculosis cases in Liverpool are stable it is now seen as a disease of deprivation, found in disadvantaged populations as well as in those with links to areas where it is still rife. Measles outbreaks are seen more frequently as not enough children in the population were vaccinated at certain times to achieve the levels of immunisation needed to prevent it spreading. There were over 300 cases of measles in Liverpool in a 2012 outbreak. Such re-emerging diseases require increased public health surveillance, together with diseases with changing cyclical forms such as influenza, and new threats such as SARS and Ebola. Additionally, some of these communicable diseases are now doubly threatening as they emerge in forms resistant to available antibiotics.

Climate Change
Climate change has considerable impact on our physical and social environment. Public health accepts that human action is a major contributing factor to current climate change and its emerging adverse effects. Air pollution is one of the best known contributors caused by emissions which either directly or through chemical reactions in the atmosphere lead to negative impacts on human health and ecosystems. Reductions in emissions are achieved through regulatory controls and other action such as reducing fuel use and changes to industrial processes. The effects of climate change have the potential to affect health through flooding, drought and other chaotic and extreme weather events. If air quality, food, clean water and sanitation is compromised this can lead to increases in the prevalence of certain diseases and possible epidemics. The populations affected are likely to be some of the largest and poorest, with significant public health impact if there are waves of migration into less affected areas. Public health contributes to climate change adaptation emergency planning, but mitigation is equally important. Changes in behaviour such as making a more sustainable transport choice to cycling, which is a low carbon impact and calorie burning way of getting around, help towards mitigating climate change.
Chapter Four
Public Health development over four decades

The first decade

Although the designation ‘community physician’ was used in the 1973 Act, there was little clarity on what that role entailed in a new NHS structure that was looking to ‘management’ as a means of achieving efficiencies. The community physician was a member of a multi-disciplinary management team working to ‘decision by consensus’ whereby no member’s recommendations had any more weight than any other. It was not obvious how the two areas of community medicine: administrative management of hospital health services; and epidemiological investigation and evaluation of community health, could be carried out by the same function, especially with the reduced emphasis on prevention and the environment that followed the loss of the medical officer of health role.

In 1974 Marc Lalonde, the Canadian Minister of National Health and Welfare, published A New Perspective of the Health of Canadians\(^\text{11}\) in which he posited the importance of good health for quality of life and social progress. Lalonde put improvements in health care, standard of living, public health protection and medical science on one side of an equation for raising health standards against environmental pollution, urban living, lack of exercise, the abuse of alcohol, tobacco and drugs, and excess food intake. Health care was to be only one of four priorities together with understanding human biology, changing the environment to promote health and reducing self-imposed lifestyle risk, recognising that these changes would need to be the concern of the Canadian people themselves to be successful, and that they would have to be provided with the appropriate information to understand the issues. The overall contribution of human behaviour and environment to ill health and death were set out in financial terms, in relation to the rising costs of healthcare, which was still not equitably accessible to the whole population. The importance of chronic ill health and accidents versus the previous focus on infectious disease was highlighted. The Canadian government’s goal would “continue to be not only to add years to our life but life to our years, so that all can enjoy the opportunities offered by increased economic and social justice.”

The concepts of promoting health, preventing ill health and reducing personal and environmental risk spread rapidly and Prevention and Health: Everybody’s Business\(^\text{12}\) was published in 1976. It reviewed past success in preventing disease and promoting healthy living and recommended action which could improve on that success such as stopping smoking, reducing traffic accidents, changes to diet, less alcohol, flouridation of water for dental health, immunisation and health screening to detect disease in its first stages. The Prevention and Health\(^\text{13}\) White Paper then set out government policy and proposed action on health education, smoking, child health, dental health, diet, exercise, alcohol, drugs, family planning, pollution and accidents.

In 1978, the WHO produced the Declaration of Alma Ata\(^\text{14}\) which challenged all the countries of the world to attain Health for All by the Year 2000, reducing the massive inequality in the health status of the developed and developing world. Health was defined as a state of complete physical, mental and social wellbeing, not just the absence of

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\(^{11}\) Lalonde M A New Perspective on the Health of Canadians Government of Canada Ottawa

\(^{12}\) DHSS Prevention and health: everybody’s business London: HMSO

\(^{13}\) DHSS/DES Prevention and health Cmnd 7047 London: HMSO

\(^{14}\) WHO Declaration of Alma-Ata in International Conference on Primary Health Care Alma-Ata, USSR
disease or infirmity, and primary health care as universal, provided according to need, and involving the community in the planning and implementation process. A Global Strategy for Health for All by 2000\textsuperscript{15} was published in 1981.

The 1981 report of the Working Group on Inequalities in Health, known as 'the Black Report'\textsuperscript{16} found that there were marked differences in mortality rates and use of health services by class for age and sex, and in some cases, health in lower classes had deteriorated rather than improved, in relation to the health of higher classes. Inequalities were attributed to differing socio-economic environments, and the report made recommendations for action across government not just in health.

The 1980 Health Services Act\textsuperscript{17} had given the Secretary of State the power to make changes in the local administration of the NHS. The removal of the area tier was proposed, supposedly to make services more local, and came into effect in 1982 with the move to 192 district health authorities. The senior community physicians who had had most difficulty adjusting to working in the NHS mostly took the opportunity to retire early at this restructuring, amounting to 20\% of the total number and costing the Treasury an unexpected 54 million pounds. This meant that there were no further job losses despite the lost posts. There was little indication as to what was further expected of community medicine in this structure.

**The second decade**

In 1984 the measures proposed by the Griffiths NHS Management Inquiry were implemented, including an NHS Management Board, general managers at all levels of the NHS and major cost improvement programmes. It was made clear that the management duties of community physicians would be accountable to the new general managers and many felt that they no longer had a public health role. By the autumn of 1984 there were nearly 200 community physician vacancies.

The beginnings of a 'new' public health started to appear in England in 1986. A Green Paper, *Primary Health Care. An Agenda for Discussion*,\textsuperscript{18} proposed improvements to primary health care, making it more responsive to the public and more involved in prevention and the promotion of health and incentives to deliver were written into the new GP contract.

The WHO European Healthy Cities initiative also started in England with the designation of Liverpool as a founder city working towards the WHO concept of health and health equity for all.

The Committee of Inquiry into the Future Development of the Public Health Function, chaired by Donald Acheson, was set up after two badly controlled outbreaks of infection from salmonella food poisoning and legionnaire's disease. The Committee published its 1988 report *Public Health in England*,\textsuperscript{19} which effectively recognised that community medicine had been unable to achieve its functions within the structures that defined it, together with the need for a long term view which frequently conflicted with immediate

\textsuperscript{15}1981 WHO *Global strategy for health for all by the year 2000.* (WHO Health for All series No 3.) Geneva
\textsuperscript{17}1980 Health Services Act (c.53)
\textsuperscript{18}1986 DHSS *Primary Health Care: An Agenda for Discussion* Cmd.9771
\textsuperscript{19}1988 *Public Health in England: the report of the Committee of inquiry into the Future Development of the Public Health Function.* (Cm. 289) London: HMSO
pressures on health authority management. ‘Public Health’ was re-introduced as the strategic function for the growing prevention agenda and public health medicine as the specialty. The report recommended that the responsibilities of the Director of Public Health and their colleagues would be:

- To provide epidemiological advice to the district general manager and the district health authority on the setting of priorities, planning of services, and evaluation of outcomes
- To develop and evaluate policy on prevention, health promotion, and health education involving all those working in this field
- To undertake surveillance of non-communicable disease
- To coordinate control of communicable disease
- Generally to act as chief medical officer to the authority
- To prepare an annual report on the health of the population
- To act as spokesperson for the health authority on appropriate public health matters
- To provide public health medical advice to and link with the local authorities, family practitioner committees, and other sectors in public health activities

The Department of Health published The Health of the Nation. A Strategy for Health in England, identifying the key areas for preventive action as coronary heart disease and stroke, cancers, mental illness, HIV/AIDS, sexual health, and accidents, but with a strong medical bias for interventions.

### The third and fourth decades

A change of government in 1997 saw the start of frequent cycles of structural reorganisation and management models in the NHS that continued through the change of government in 2010 to create the organisational landscape of 2013. The first Public Health minister was appointed and reducing health inequalities became a policy objective with cross government department action promised on areas including low wages and poor housing. Our Healthier Nation: A Contract for Health set ten year health targets with the intention of breaking the cycle of ill health due to poverty and deprivation. The 1998 report of the Independent Inquiry into Inequalities in Health chaired by Donald Acheson, looked at socio-economic, ethnicity and gender effects on health, and made high level recommendations such as the reduction of income inequalities.

The Department of Health published a report on the Chief Medical Officer's Project to Strengthen the Public Health Function in England which concluded that a "strong, effective, sustainable and multidisciplinary public health function" was needed to deliver on health improvement and reducing health inequalities through addressing the wider determinants of health. The public health workforce was defined as 'strategic' public health specialists, 'hands-on' public health practitioners, and the wider public health workforce that was essentially anyone whose role made a difference to local health and wellbeing. The emphasis on a multidisciplinary workforce was reinforced by the decision that specialists in public health did not need to be medically qualified, could be members of the Faculty of Public Health and become Directors of Public Health.

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Ref:

21 1998 DH Our Healthier Nation: a contract for health Cm 3852
22 1998 DH Report of Emerging Findings of the Chief Medical Officer’s Project to Strengthen the Public Health Function in England London
The 1999 White Paper *Saving Lives: Our Healthier Nation* set targets for reducing deaths from heart disease, cancer, suicides, and accidents. Health Action Zones were proposed for the most deprived areas in England to facilitate the development of health improvement plans.

The *NHS Plan* published in 2000 was a wish list of actions on health and care. However, a change was signalled by the emphasis on partnership to achieve public health aims, including working with Local Strategic Partnerships and towards the goals of the Neighbourhood Renewal Strategy.

*Shifting the Balance of Power* aimed to make frontline functions the most important delivery vehicles for the *NHS Plan* which would give PCTs major public health responsibilities. The scope of a modern public health system was outlined as:

- Health surveillance, monitoring and analysis
- Investigation of disease outbreaks, epidemics and risks to health
- Establishing, designing and managing health promotion and disease prevention programmes
- Enabling and empowering communities and citizens to promote health and reduce inequalities.
- Creating and sustaining cross-governmental and inter-sectoral partnerships to improve health and reduce inequalities
- Ensuring compliance with regulations and laws to protect and promote health.
- Developing and maintaining a well-educated and trained, multidisciplinary public health workforce
- Ensuring the effective performance of NHS services to meet goals in improving health, preventing disease and reducing inequalities
- Research, development, evaluation and innovation
- Quality assuring the public health function system for improving health and inequalities:

Local Area Agreements were introduced with each area selecting from a set of national indicators and negotiating performance targets. This was the last set of prescriptive targets imposed on local areas. The health and wellbeing partnership emphasis continued through the requirements for Joint Strategic Needs Assessments outlined in the *Commissioning Framework for Health and Wellbeing* and then Joint Health and Wellbeing Strategies as Health and Wellbeing Boards took Shadow form. The benefits of joint working were exemplified by the creation of Joint Director of Health posts between local authorities and PCTs. Regardless of where the public health staff were located, both organisations had access to the Public Health function at executive level in making strategic decisions.

The report in 2002 by Derek Wanless for the Treasury on what funding the NHS would need long-term found that the costs of demand for future healthcare would be reduced by good public health prevention policy. The resulting massive increase in NHS spending funded the implementation of the *Choosing Health: making healthier choices easier* White Paper, but did not make the impact needed to prioritise prevention over healthcare as

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23 1999 DH *Saving Lives: Our Healthier Nation Cm.4386*
24 2000 DH *NHS Plan a plan for investment* NHS: London
25 2001 DH *Shifting the Balance of Power: Securing Delivery* Department of Health
28 2004 DH *Choosing Health: making healthier choices easier* London: Department of Health
much of the funding was spent elsewhere. Choosing Health reiterated the individual's responsibility for their health, focusing on lifestyle issues such as smoking, drinking, healthy diet, exercise and sexual health. It was the last specific public health policy before the 2010 Healthy Lives, Healthy People strategy was produced as part of the Liberating the NHS reform, based strongly on the work of Michael Marmot on social determinants of health.

The 2010 Health and Social Care Bill included the following reforms:

- clinically led GP commissioning groups with responsibility for the majority of NHS spend;
- an independent NHS Commissioning Board;
- the abolition of SHAs and PCTs;
- integration between NHS and local authority services to be promoted through new Health and Wellbeing boards;
- a new body, Public Health England (PHE), to lead on public health at the national level;
- local authorities to lead the local public health function;
- the Director of Public Health to be a statutory post;
- the majority of public health staff in the NHS to move into the local authority with some responsibilities moving to PHE.

The heavily amended and controversial Bill was passed in March 2012.

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30. 2010 Marmot, M Fair society healthy lives London
31. 2012 The Health and Social Care Act 2012 (c 7)
Chapter Five
Public Health Activity: new and different

There are several elements of public health activity that have changed since 1974 or their importance was not as well known then as now. This chapter demonstrates some of the activity, partnerships and processes of 2013 that would not have been in the Report on the Health of the City in 1974.

One area that saw rapid growth in public health prominence is that of lifestyle behaviours such as unhealthy eating, alcohol or substance misuse and lack of physical activity which are risk factors for premature disease and death. This has been partly because their causal link to disease is much better understood but also because they have become much more visible in society with binge drinking in urban centres, increasing levels of obesity, particularly in children, and legislation on tobacco use. Disability adjusted life years (DALYs) can be a measure of how much earlier people may become ill or die at a population level for each risk factor and what proportion of the overall burden of disease within populations is the result of each risk factor. Research by the Institute for Health Metrics and Evaluation shows the overall burden of disease in the UK which can be attributed to the top 15 risk factors, accounting for two thirds of the burden of disease. The prevalence of key lifestyle behaviours in Liverpool are also shown emphasising the importance of prevention in improving health and wellbeing.

There is a tendency for risk factors to cluster, meaning that the presence of one risk factor makes a second more likely and so on. This clustering underlines the importance of taking a person centred approach, and understanding how these different behaviours interact is crucial to improving the health of local people, and in reducing health inequalities. The graphic on the next page presents key facts about factors affecting the health and wellbeing of the population of Liverpool across the lifecourse.
Health and Wellbeing in Liverpool across the Lifecourse: Key Facts

**Healthy Start Early Years**
- Almost 6,000 births a year in the city
- Just under 8% of babies are born with a low birth weight
- Around 1 in 6 mothers are smokers at the time when the give birth
- Levels of breast feeding are improving but remain low compared to other areas, with less than a third of babies being breastfed at 6 weeks
- Uptake of MMR at 2 years is comparable to England, but on a downward trend
- More than a third of children aged 5 have poor oral health
- Childhood obesity is increasing among Reception (28.4%) and Year 6 (39.1%)
- Levels of Children in Need are the highest among Core Cities
- Around a third of children in Liverpool live in poverty (25,360 children)

**Healthy Transition**
- Around 1 in 10 children experience some form of mental disorder (5,500 children)
- More than half of children achieve 5 GCSEs grade A* to C (inc English & Maths)
- There are around 1,500 NEETs in Liverpool
- Levels of teenage pregnancy are falling, with 278 conceptions in 2012
- Prevalence of sexually transmitted infections are higher in Liverpool than in the North West or England. Levels peak in the late teens and early 20s.

**Healthy Adulthood**
- A quarter of adults in Liverpool smoke (98,000 people)
- 30,150 adults drink at levels of increasing risk, with a further 11,500 drinking at high risk
- Over half of adults in the city are overweight or obese (55%)
- 1 in 4 adults have fast food at least once per week
- 2 in 3 adults are classed as physically inactive
- 1 in 10 people have 2 or more long term conditions (49,500 people)
- Number of people with long term conditions:
  - CHD = 3.5%
  - Diabetes = 4.8%
  - Stroke = 1.7%
  - Depression = 11.4%
  - Severe Mental Illness = 1.3%
  - Dementia = 0.6%

**Healthy Ageing**
- Life Expectancy in 2010-12:
  - Males = 76.1 years
  - Females = 80.2 years
- Men and women born in the least deprived areas of Liverpool live around 10 years longer than their counterparts born in the most deprived areas.
- Healthy Life Expectancy in 2010-12:
  - Males = 59.2 years
  - Females = 59.1 years
- Around 2,700 people have been diagnosed with Dementia
- 1 in 3 older people will fall each year, leading to almost 2,000 hip fractures.
- Upto 16% of older people suffer from loneliness (14,100 people)
- Almost 25,000 older people have a long term illness that limits their day to day activities a lot.
**Living longer in better health**

Life expectancy (LE) is the average number of years a person can expect to live, if in the future they experience the current age-specific mortality rates in the population. Healthy life expectancy estimates the average number of years that a person can expect to live in 'full health' without the effects of disease and/or injury. While continued gains in life expectancy should be viewed positively, we also need to consider the impact of potentially living longer in poor health. Inequality in life expectancy exists between Liverpool and the rest of England, and within the city. Inequalities arise through the circumstances in which people grow, live, work, and age, and access healthcare and other social systems contributing to health. There is a clear association between lower levels of life expectancy and increasing levels of deprivation. Local analysis has explored the contribution of disease or injury to life expectancy at the level of the 18 Liverpool CCG neighbourhood areas. Between 2009 and 2013 Liverpool had an average LE of 79.09 years. When compared to this; City Centre/Vauxhall had the largest LE gap (42 months), followed by Everton/Great Homer Street (40 months), then Anfield (25 months). Cancer was the disease group with the greatest contribution to the LE gap in those three neighbourhoods at approximately 30%. While life expectancy at birth is improving in Liverpool this does not translate into years of good health. Healthy LE for 2010-12 in Liverpool is 57 years for men, compared to 64 nationally, and 59 for women compared to 65 nationally. Healthy LE aged 65 is 6.3 years for men (37.9% of remaining life in 'good' health) and 6.9 years for women (35.9%). This burden of ill health within the city has significant implications in terms of unmet need and demand for health and social care services. However, effective preventive interventions can reduce risk of poorer health at all points in the lifecourse.

**Commissioning for Population Health**

Commissioning is the strategic process between assessment of need and procurement of services. Public health commissioning translates need at a population level into evidence based plans for the best way to meet need within resources for maximum impact and specifies outcomes providers will have to achieve. Public Health commissioning in local authorities addresses all three of the public health areas; health improvement, healthcare and health protection and aims to reduce health inequalities and improve health and wellbeing. Public health commissioners in the local authority commission specific Public Health services, such as sexual health services, or drug misuse treatment services and will also influence other commissioning where possible to deliver public health aims, through the commissioning process, service provision and outcomes. In Liverpool the Health and Wellbeing Board promotes integration and joint working, particularly through Section 75 agreements to align funding with partner commissioners. This should reduce costs, address need better and help to make services more equitable. The new local public health commissioning function has brought NHS and local authority partners together in new ways with positive benefits for population health.
Population Health Intelligence

The collection and application of data is one of the cornerstones of Public Health and epidemiology, shaping interventions and policy. A well known example from 1854 was when John Snow was able to identify the cause of the Cholera outbreak in Broad Street through monitoring of the distribution of cases, leading to shutting down the water supply. Today the use of large scale IT systems in modern health services has led to a step change in our ability to collect and process large quantities of data and information about individuals’ health as members of groups with particular characteristics. The move from paper records to computerised systems in General Practice allows us to identify patterns in the health of the local population in ways which were simply not possible even a decade ago. One example of the use of this information is in the management of long term conditions such as Hypertension (high blood pressure) which is the second largest risk factor for premature death in the UK. Of 66,803 patients in Liverpool who have been diagnosed with Hypertension 90% have had their blood pressure monitored in the last 9 months, and 77% have blood pressure within the optimal range. This tells us that there are over 15,600 patients whose blood pressure is outside that optimal range and who may need review. Through research and statistical modelling, we are able to calculate how many people in the city may have undiagnosed Hypertension. We estimate that just over half (55%) of adults with Hypertension in Liverpool are known to their doctor. Being able to monitor care pathways like this means that it is possible to improve earlier diagnosis rates and primary care management, thereby improving health outcomes for both the patient and the population as a whole.

Pharmacy Needs Assessment

From April 2013, Health and Wellbeing Boards (HWB) in local authorities became responsible for developing and updating the Pharmaceutical Needs Assessment (PNA) for its population. NHS England (NHSE) is now responsible for the administration of the pharmaceutical services regulations. The PNA is a primary tool for NHSE and local commissioners, supporting the decision making process for pharmacy applications and ensuring that commissioning intentions for services are incorporated into local planning cycles. The PNA presents a picture of community pharmacies and other providers of pharmaceutical services, reviewing the services currently provided against population need, identifying gaps in provision and making recommendations for future delivery. The PNA has been developed collaboratively on behalf of Liverpool’s HWB by a multi-professional steering group with representation from NHSE, Public Health Leads in the local authority, LCCG Pharmacy lead, the Local Pharmaceutical Committee and Healthwatch. The HWB must formally consult on the content of the PNA and it will be regularly reviewed in line with an integrated commissioning cycle, as well as when any changes to the pharmacy contractor list occurs. The final draft of the PNA was presented to the HWB in July, and the consultation process has begun. This first local authority responsible PNA is expected to be published by April 2015.
Nutrition and healthy weight
The vision for Liverpool is to halt the rise of obesity and for people to maintain a healthy weight through the life course. The Healthy Weight Strategy Group will champion and lead the work particularly, food and nutrition and links with the City Council's Physical Activity programme. Liverpool Healthy Weight Strategy builds on existing work across the city. Foundation Trusts, the Clinical Commissioning Group, community and voluntary sectors are working alongside the City Council to ensure new and innovative ways are developed. Liverpool has a multi-disciplinary adult weight management programme and a children, young people and families' weight management programme. There are many Liverpool programmes that support a positive culture of healthier lifestyles. We are all part of a journey to help provide a healthy environment within which healthy choices can be more easily made by individuals living and working in Liverpool.

Physical Activity and cardiovascular health
There is increasing evidence that physical activity is fundamental for a full and healthy life and that constant inactivity is bad for our health. Alongside traditional sport, Liverpool offers a range of opportunities to be active. We promote the use of parks and green spaces throughout the city; with helpful maps, cycling and play, green gyms, sports events and a range of free and low cost activities throughout the year. Recently participation in physical activity in Liverpool has increased but there is more to do. The Strategic Sport and Physical Activity Group is a sub-group of the Health and Wellbeing Board with a wide range of partners. They aim to increase participation in physical activity. Liverpool's leisure centres offer free or discounted access to activities for under 17s via the Futures Scheme. The Exercise for Health scheme includes some community leisure facilities and more health professionals can now refer onto the scheme. The city travel plan promotes active travel through a range of initiatives including school walking bus schemes, training and mentoring to build confidence in cycling. Liverpool has increased its number of cycle lanes and offers cycling maps, off road cycling and secure bike parking. The Mayor of Liverpool has also launched a bike hire scheme. Traffic calming and speed restrictions on residential roads encourage people to be out on the streets. A new Sport and Physical Activity Strategy will be launched in 2014 and outlines the benefits of physical activity. The strategy encourages and enables all residents to participate in routine daily physical activity, aiming to increase the number of people who have a healthy weight and to reduce overweight, obesity and non-communicable diseases.
Public Health: A New Responsible Authority (alcohol licensing)
In April 2013 Public Health were given a statutory responsibility as a Responsible Authority and therefore contribute to Local Authority Licensing decisions. Alcohol is a significant contributor to poor health and harms in many ways. It is a risk factor for liver disease, cardiovascular disease and many cancers. It is also linked to poor mental health, depression and dependence. Alcohol also drives social and health inequalities: people from more deprived groups suffer greater harms from alcohol. There is an association between the number of licenced premises and alcohol misuse. To reduce the harm from alcohol, we have to reduce its availability and this requires a proactive approach to licensing. This approach was recently deployed to achieve implementation of a Cumulative Impact Policy (CIP) within a Liverpool ward experiencing high social and health inequalities. This considers the number of premises selling alcohol and the impact of this provision. In 2013, Liverpool City Council Public Health working alongside its Responsible Authority colleagues in Licensing, Environmental Health; Trading Standards; Planning; Safeguarding Children and Merseyside Police submitted detailed evidence to Liverpool Licensing Committee outlining the relationship between alcohol misuse and wider determinants of health. This successfully resulted in implementation of a CIP that now affords more control over the number of licenced premises in the ward.

Tobacco and Nicotine
Liverpool's vision is of a city where children are not exposed to tobacco smoke, where smoking prevalence is decreasing and smoking is not 'the norm'. Smoke Free Liverpool leads this programme which includes stop smoking services, a young person’s lobbying group and removal of illicit and illegal tobacco from the streets. Smoking prevalence in Liverpool has reduced significantly from 35% in 2005 to 25% in 2013 and more than 324,000 cigarettes have been seized since 2010. The Tobacco Control Strategy examines what we do regarding tobacco control: through stop smoking services, but also about reducing the harm that smoking inflicts on others. Because of increased usage of e-cigarettes, the stop smoking service actively encourages users of the devices to attend sessions, with the aim of getting people both smoke and nicotine-free. We are campaigning to encourage people to use the services available by responding to their current needs. Liverpool's Health and Wellbeing Board agreed to implement the Local Declaration on Tobacco in Liverpool. This commits the City Council to act locally to reduce smoking prevalence and health inequalities through a range of actions.
Vulnerable Groups
Partnership approaches to socially excluded populations have required integration with existing strategic and operational groups involved in delivering services. Public Health has been represented on all forums/ networks engaging with populations at risk and has advised on accessing the JSNA process on identified issues which require additional intelligence/analysis. The Mental Health Making It Happen stakeholders group considers complex issues which heighten the burden of mental of distress such as dual diagnosis, the asylum seeker and refugee population and domestic abuse. Specific assessments of the needs of asylum seekers and refugees and victims of domestic abuse will be delivered in 2014. Public Health is a partner to the successful bid for £10 million of funding from the Big Lottery for the 'Liverpool Waves of Hope' Programme to develop services for people with multiple and complex needs in the areas of mental health, homelessness, offending and substance misuse issues. The partnership is led by Plus Dane Housing and procures services which aim to deliver mainstream systems change in five years. The emphasis of this work is the active engagement and participation of service users with lived experience in co-production of design and delivery of the programme, offering intensive and individualised support, recovery plans and accommodation solutions.

Preventing Violence
Violence is a major cause of ill health and poor wellbeing and a drain on health services and the wider economy. Preventing violence is a priority for public health, in partnership with the many agencies involved. Violence takes many forms as well as primary physical violence, it includes child maltreatment, partner abuse, elder abuse, bullying, hate crime and sexual violence. Liverpool's Gun Crime Prevention Partnership DISARM is strategically targeting violence prevention in the city, working in a holistic way across all crime categories in the most vulnerable localities in order to strengthen communities. Norris Green was the first targeted area and intensive support work with the community started in 2013. Norris Green is one of the most deprived areas of the city, with high child poverty, worklessness, violence, gun crime, drugs offences and is a hotspot for domestic violence. Interventions include immediate work with high risk families, additional domestic violence work with young people, domestic abuse awareness training, and community awareness raising about hate crime. Community coherence and resilience is addressed through improved communication including a Facebook site and a Community Newspaper. The area is now showing improvement across a range of measures, and work continues to change external perceptions of the area to match its improved status and confidence. This approach is to be applied in other areas of the city. Commissioning for violence prevention has greater impact integrated across adults and children's services. Breaking the cycle of individual and community experience of direct and indirect violence increases life chances and the ability to utilise other public health interventions aimed at improving health and wellbeing.
Chapter Six
Challenging Times

Public Health

Public Health as a function came back to prominence following the recognition that the 1974 reforms hadn’t just moved Public Health from one structure to another but had lost essential activity that wasn’t undertaken anywhere else. The ‘new’ Public Health function that arose in the 1980s was to lead on the acquisition and application of knowledge to initiate prevention action that recognised the causal contribution of social, economic and environmental determinants and the concept of equitable population health. The strategic public health advice and leadership functions became clearer as more people understood that operational public health services and public health information in individual interactions were aspects that the ‘wider’ public health workforce had the capacity and capability to deliver well. Taking a helicopter view and longitudinal perspective for the best population outcomes gives the Public Health function systems understanding that enables good cross-sectoral partnership working.

The local Public Health function in Liverpool is fortunate that, unlike the move from the local authority to the NHS in 1973, there has been a good history of Public Health in the NHS joint working with the local authority: with social care through the Joint Health Unit and Section 75 agreements, and with all directorates and elected members through the Local Strategic Partnership, and neighbourhood working.

Some of the challenges for the Public Health function from 2013 include:

- Retaining a sustainable professionally qualified workforce to deliver the function
- Development of the governance model, city level policy framework and engagement structures for the Liverpool Sustainable City32 Health and Wellbeing Strategy process
- Better integration of the Public Health populations service function and the NHS Healthcare and local authority Social Care personal services functions to utilise resources across the health and well being system
- Refining the Joint Strategic Needs Assessment process to explore options for prioritisation within the current economic environment

Public Health has the opportunity to further define its own function from 2013 in a new context. Having learnt to work in partnership across sectors and organisations, and with an understanding of the health system that comes from working within it, we will hope to gain a similar understanding of our original home and its present inhabitants as we work together for the health and wellbeing of the people of Liverpool.

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Health, Care and Wellbeing

The city's overall challenge is to improve population health and wellbeing and reduce health inequalities at a time when both funding and human resources are scarce, and there is no immediate prospect of that changing. The continuing challenge is to build a sustainable population with the foresight and resilience to adapt to future challenges.

Liverpool's most obvious health inequalities are demonstrated by the differential gap in life expectancy between the city and the rest of England as well as across the city. Life expectancy at birth is used as an overarching measure of the health of the population. Figures 14 and 15 below show how there has been a steady increase in life expectancy in Liverpool, with males expected to live 4.9 years longer than they were in 1995-97 and females 3.3 years longer. Current life expectancy in Liverpool stands at 76.1 years for males and 80.2 years for females. This compares to national levels of 79.2 and 83.0 respectively.

![Figure 14 Trend in Life Expectancy at Birth: Males](image1)

![Figure 15 Trend in Life Expectancy at Birth: Females](image2)

*Source: Office for National Statistics & Public Health England*
The charts also show the trend in life expectancy within the most deprived and least deprived areas of the city, and it is apparent that the overall increase for Liverpool as a whole masks wide variation. Men born in the least deprived areas of Liverpool are expected to live 9.9 years longer than their counterparts in the most deprived areas. Encouragingly, this gap does appear to be narrowing, down from 10.7 years in 2002-04. In contrast, the life expectancy gap for females in Liverpool is widening, from 7.7 years in 2002-04 to 9.1 years in 2010-12. This has been driven by a levelling off in life expectancy among women in the most deprived communities in the city in recent years.

Causes of the Life Expectancy Gap

There is a significant gap in life expectancy between Liverpool and England, with males in the city living 3.1 years less and females living 2.8 years less the England average. Through monitoring different causes of death it is possible to identify which conditions are driving this gap, enabling commissioners and policy makers to target those areas where the greatest impact can be made.

Figure 16 below shows the main causes of the gap in life expectancy in Liverpool, broken down by gender. For both males and females, cancer accounts for the majority of the gap with an estimated 585 excess deaths among men and 418 excess deaths among women. Lung cancer accounts for the bulk of these.

Circulatory diseases, such as heart disease and stroke, are the second major cause of the life expectancy gap among males in Liverpool. However, among females, respiratory diseases such as COPD play a much larger role, accounting for 20% of the life expectancy gap, compared to 14% among men.

‘Other’ causes of the gap include infections and mental and behavioural disorders and accounts for 472 excess deaths in the city, compared to England.

This breakdown of the life expectancy gap is by condition, but it could be broken down in other ways. The majority of the life expectancy gap can be attributed to poverty, not just in monetary terms, but also in terms of opportunity and expectation.
Priority concerns for public health action

The major public health concerns for Liverpool require action across the 'new' Public Health System. Local action often combats effects but Liverpool's public health 'voice' needs to be heard highlighting economic, social and environmental issues that affect population health at all levels to contribute to the desire for change.

Concerns identified for continued action are:

Inequalities

The social injustice of recent welfare reform

The Welfare Reform Act was introduced in April 2013. The Act legislates for the biggest change to the welfare system for over 60 years and introduces a wide range of reforms to the benefits and tax credits systems such as the introduction of the 'bedroom tax' and benefit cap and the introduction of Universal Credit, which replaces many existing benefits. The impact of welfare reform has been felt across Liverpool, particularly in the most deprived households. The reforms make it even harder for those with the lowest incomes to make ends meet. It is also more likely to impact on large families on low incomes; carers; disabled people; tenants in private rented accommodation, and people in social housing under-occupying their accommodation.

In the longer term the reforms may increase demand for healthcare including: diabetes; arthritis and cancer; cardiovascular and respiratory illness; poorer mental health and general wellbeing, reductions in/disruption to health care access; and potential increases in avoidable winter mortality associated with fuel poverty.

School readiness of Liverpool children

In Liverpool 53% of children achieve a good level of development across all early learning goals, compared to 58% of children nationally. There is a significant gender gap (mirroring national patterns), with 62% of girls achieving a good level of development compared to 43% of boys.
Figure 17 above shows the percentage of children achieving at least the expected level of development, across the main areas of learning in 2013-14. Improvement in school readiness is essential as the foundation for Liverpool children to be able to achieve their potential across the lifecourse.

**Lifestyle – reducing morbidity and mortality**

In spite of some improvement, these remain a priority for continuing action, especially as poor health impacts can be compounded where there is more than one risk factor present.

**Tobacco**

Liverpool’s smoking prevalence fell by almost a third between 2005 and 2012; from 35.0%, to 24.5%. Over this period the number of smokers in the city decreased from 125,000 to 93,000. With a 2.3% annual reduction in prevalence there would be 78,000 smokers in Liverpool by 2020 which would represent a prevalence of 20.3%.

![Figure 18 Estimated number of smokers based on reducing trend](image)

Liverpool people are still affected by far too many conditions related to tobacco use leading to years of poor health and early deaths which could be prevented.

**Healthy Weight**

The rapid rise in overweight and obesity levels has predominantly resulted from individuals living in toxic environments which promote excessive calorie intake and decrease opportunities, motivation and the necessity for being physically active. Public health has raised awareness of this issue, with many people who try to achieve or maintain a healthy weight or reduce their cholesterol levels opting for low fat food options. However some food manufacturers are reducing the amount of fat in foods but adding sugar so that products are still tasty and appealing. The growing increase in sugar intake is causing serious health issues such as unhealthy weight; type II diabetes; coronary heart disease;
cancers of the breast, endometrium and colon; orthopaedic disorders and osteoarthritis; high cholesterol and heart disease. Sugar is also a major contributor to poor oral health, especially in children.

Levels of child overweight and obesity in Liverpool are increasing and this trend is particularly worrying among Reception year children where there has been a year on year increase over the last 4 years (Fig. 19).

By comparison rates have plateaued nationally. Liverpool has the highest levels of overweight and obesity among the Core Cities for children in both Reception and Year 6.

Results from the Active Peoples Survey indicate that levels of physical activity in Liverpool for adults over 16 years of age are increasing and are now higher than the national level with Liverpool at 37.2% and the national level at 35.7%. The forthcoming 2014 Physical Activity Strategy will contain action to continue this trend and increase participation for children so that engaging in frequent physical activity will continue through to adulthood.
**Alcohol**

![Graph](image-url)

**Figure 21 Admissions to hospital with alcohol related conditions**

Figure 21 shows that between 2008/09 and 2013/14 there has been a 7% reduction in the rate of alcohol related admissions [narrow measure] compared to a 3% increase nationally and regionally. Liverpool is currently ranked 29th highest out of 326 local authorities in England. The improvement will need to continue to close the gap with the regional and England averages. There are high social costs associated with alcohol-related admissions in addition to individual risk to health.

**Health protection**

**Antimicrobial resistance**

The advent of antibiotics as a treatment for bacterial infections has saved many lives. However, the overuse of antibiotics is one of the biggest threats to public health today. Bacteria which are resistant to antibiotics are emerging and spreading quickly. Without effective antibiotics risks will increase for those people prone to infections or undergoing treatments that increase the risks of infections such as surgery. The spread of antibiotic resistance is linked to the increase in use of antibiotics. They are often used unnecessarily for conditions the body can fight by itself like coughs, colds, sore throats and flu. To preserve effective antibiotics for as long as possible, we need to cut down on their use when they are not necessary. This includes improving the quality of antibiotic prescribing by clinicians as well as raising public awareness of the lack of benefit from antibiotics in the management of viral illnesses.

**Female Genital Mutilation**

Female genital mutilation (FGM), also known as female circumcision or ‘other injury to the female genital organs for non-medical reasons’ remains a continuing concern. FGM is illegal; it is an offence for anyone to perform FGM in the UK or to arrange for a girl to be taken abroad for it. The age at which the practice is carried out varies, but the most common age is between four and ten years of age. FGM can have a number of health

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33 Admission episodes for alcohol-related conditions - narrow measure (primary diagnosis or any secondary diagnosis with an external cause). The narrow measure of alcohol related admissions is less sensitive to the changes in clinical coding and therefore enables fairer comparison between levels of harm in different areas and over time. It is also more responsive to change resulting from local action on alcohol.
implications, including severe pain; urine retention; immediate fatal haemorrhaging; extensive damage of the external reproductive system; Vesico Vaginal Fistula; complications in pregnancy and child birth and difficulties in menstruation. In addition to these health consequences there are considerable psycho-sexual, psychological and social consequences of FGM. While we cannot be sure of the extent of FGM in Liverpool, its incidence is sufficient to make it a priority for action by raising awareness.

**Demographic**
Over the next 20 years, the biggest change in population in Liverpool will be the increase in those aged 60 and over. It is estimated that the number of people in this age group will increase by almost 30%, the equivalent of an additional 27,300 people. The number of elderly people 90 and over in Liverpool is projected to more than double over this period, to 5,900. There will be a considerable challenge in meeting the needs of varying older populations within resources. Some older populations are healthier, better informed and more active; others are living longer with complex co-morbidities, while the most cost intensive frail elderly population is continuing to grow. There is a double impact where older populations are affected by dementia.

**Burden of Disease: Co-morbidities**
The increasing prevalence of co-morbidities (people living with 2 or more long term conditions) is a major challenge facing the health and care system. People with multiple long term conditions require more complex care and support packages, and often face poorer health outcomes. Nationally, the overall prevalence of long term conditions is projected to remain relatively stable over the next 10 years, however the prevalence of comorbidities is expected to increase by more than 50%.

![Prevalence of Comorbidity in Liverpool](image)

**Figure 22** Prevalence of comorbidity in liverpool by age and deprivation

In Liverpool, 1 in 5 people have a single long term condition (equating to roughly 92,400 people), with just over 1 in 10 people having 2 or more long term conditions (equating to roughly 49,500 people). As expected, the prevalence of comorbidity increases with age, peaking at just over 70% for those aged between 85 and 89. However, there is a clear distinction between the most deprived and least deprived areas of the city, with the prevalence increasing at an earlier and faster rate among the most deprived communities.
Chapter Seven

Future View

There is no doubt that the long and varied history of public health over decades has shaped the service that we see today, but this process has not stopped with our move back into the Local Authority. It is very clear that if we are to meet the massive challenges that we face in enacting our statutory duties of improving the health of the Liverpool population and reducing health inequalities, we will have to continue to change as new opportunities arise.

The time for prevention has never been more obvious, with the Mayoral Commission on Health putting this at the heart of changes in the system to deliver better health, the focus on Living Well in the Healthy Liverpool Programme and the very recent *Five Year Forward View* from NHS England. But all of these are demanding real and major system and culture change, and Public Health will be a part of that leadership and delivery.

However, we know and have known for some time that we in the system cannot bring about change without engaging and empowering our third sector partners and communities and individuals themselves. Healthier lifestyles have to be made easier for people to choose, and they will only be able to do this if they feel able to take back some of the control over their health that has been lost over decades. How we engage with communities and call individuals to action will be a crucial part of changing our health outcomes.

We also know that there are major factors working against the efforts that we as a system can put into improving health, such as marketing and advertising of alcohol, foods high in fat, salt and sugars, and relaxed advertising standards to allow, for the first time, e-cigarettes to be advertised on television, after years of banning tobacco products.

That is why Public Health moving forward needs to use every opportunity and every avenue within the Local Authority to challenge practices that impact negatively on health. We are already doing this with the call for licensing of sunbed salons, public health intelligence input into cumulative impact policies around alcohol and selective licensing in the private rental sector, and we need to continue to do this.

Liverpool and the world is a very different place today compared with 1973. One of the biggest changes is the reliance on and continued development of technology to run and manage every part of our life. This has brought many benefits and also has the power to improve or undermine our efforts to improve health. Public Health systems need to understand its impact more and build on social media tools, telehealth and telemarketing approaches to promote lifestyle changes in a way that we have never done before.

Over the next year we will be working not just on our priority areas for action, described in Chapter 6, but on the vehicles for delivering change. This will include:

34 2013 http://liverpool.gov.uk/mayor/mayoral-commissions/health-commission/
• reviewing possible vehicles within the Local Authority responsibilities for changing health outcomes, including licencing, development of local byelaws, planning and commissioning of services
• developing an outward facing approach to our population through neighbourhoods and hubs, so that we can make every contact count, and engage communities and individuals on their doorsteps
• working with the Third Sector to help us unlock local assets for health and to develop meaningful dialogue around health improvement
• continuing to understand the role of wider determinants on health outcome, and to develop plans to influence these where possible
• developing an increased public health focus around pregnancy, infants and children, to maximise the opportunities to give every child the best start in life
• supporting the lobby for evidence based measures such as a minimum price of 50 pence per unit of alcohol and standardised packaging for tobacco
• modelling the size of changes that we need to see in the population to bring about improved health, and develop evidence based programmes to support that change

Along the way there will be difficult messages for public health to deliver to the system about what it needs to do to bring about change, and what we ourselves in public health need to do, but if we really want to achieve the level of health for our people of Liverpool that they rightly deserve, no matter where they live in the City, we will need to challenge.

Public Health has come home.