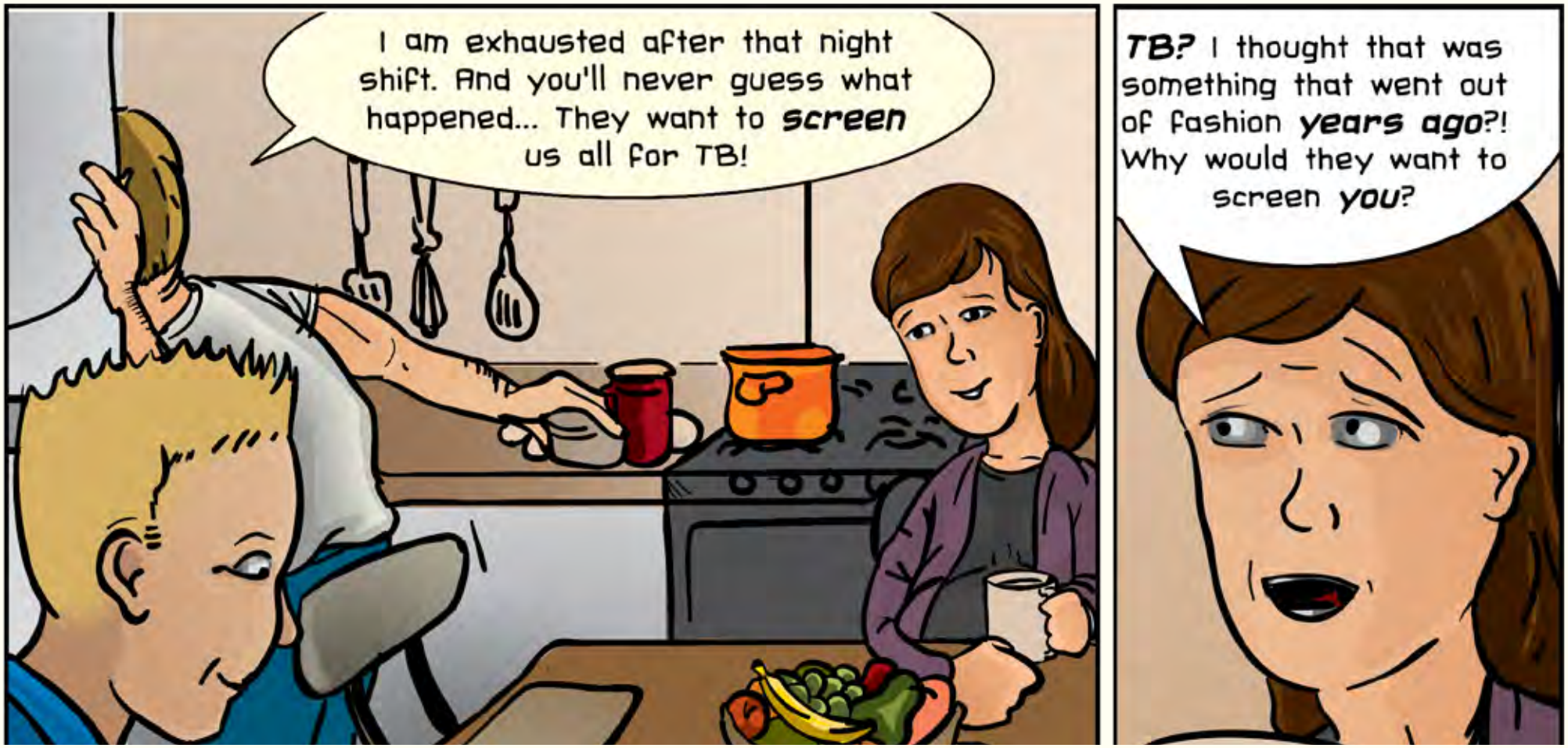


PROTECTING HEALTH – A HIDDEN AGENDA

Director of Public Health Annual Report 2014

PUBLIC HEALTH WARWICKSHIRE

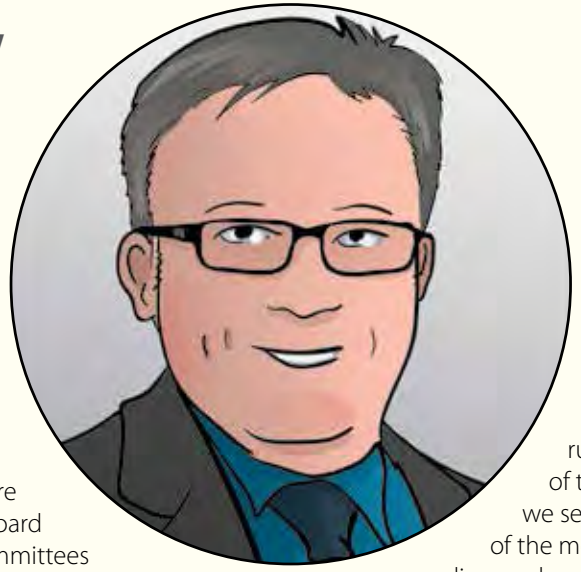
Warwickshire County Council

Working for Warwickshire

CONTENTS

INTRODUCTION

The transition of Public Health into local authorities in April 2013 brought new responsibilities for health, including health protection.[1] Health protection relates to planning for emergencies, and guarding our population against communicable diseases as well as a range of environmental hazards.



The health protection function is, however, not new to local authorities. Environmental Health, Trading Standards and Regulatory Services already work to protect health by monitoring food safety, improving health and safety in the workplace, promoting animal health and welfare, and ensuring that goods sold to the public are safe and fit for purpose. The challenge for local authorities now lies in delivering broader health protection functions in a new health landscape, in which there are multiple organisations with responsibilities relating to health protection.

The Directors of Public Health, on behalf of their local authorities, are responsible for ensuring there are plans in place to protect the health of the population from threats ranging from relatively minor outbreaks to full-scale emergencies.[1] This includes plans for communicable disease, infection control, sexual health, environmental health, emergency planning, screening and immunisation programmes. Therefore, the local authority role in health protection is one of assurance, which requires a robust means of providing support and challenge to partners, and advocacy on behalf of the local population. Key partners are identified in the recommendation section.

One of the ways in which this assurance is exercised is through the Arden Health Protection Committee, which provides a forum for partners to discuss successes, challenges, risks, and identify areas where joint work is likely to be of benefit in tackling particular problems. Some of the successes of the Committee relate to joint work carried out between NHS England and the local authority to promote the uptake of seasonal flu vaccination, work carried out to reach agreement among partners about how we work together in the event of an outbreak or public health incident, as well as joint work with social care colleagues to protect people and reduce demand on services during the winter.

However the assurance role of the local authority doesn't end there. We are looking to the Health and Wellbeing Board and Health Overview and Scrutiny Committees to take on the health protection challenge, to challenge ourselves in Public Health and our external partners regarding the work we are doing to protect population health and to champion health protection priorities through their own work. Both the County Council and the District and Borough Councils have many staff who come into contact with members of the public on a daily basis, and are ideally placed to disseminate key health protection messages. We are particularly challenging the Health and Wellbeing Board to consider health protection not only as a health priority, but also a commissioning priority, where appropriate, for the health and social care system. This report is written for Council Members, Council Officers, Health and Wellbeing Board members and our wider health protection partners. Importantly, we would also like to ask members of the public to see the role they can play in protecting their own health and that of their families.

The title of this report "Protecting Health – A Hidden Agenda" reflects the fact that a great deal of health protection work can be unseen and taken for granted. All of the work that goes into planning for emergencies, preventing and managing outbreaks, and ensuring screening and immunisation programmes are running well, tends to be out of the sight of the populations we serve. We no longer see some of the most dangerous communicable diseases because of our successful childhood vaccination programmes. Screening programmes work to identify those at risk of serious illnesses that early on may cause no symptoms. We may not appreciate when we buy food from a shop or outlet that there are professionals working to ensure it is safe and of high quality. It is hoped that this report, although it does not comprehensively describe all health protection work which is being undertaken, highlights some key areas of importance.

Dr John Linnane
Director of Public Health

RECOMMENDATIONS

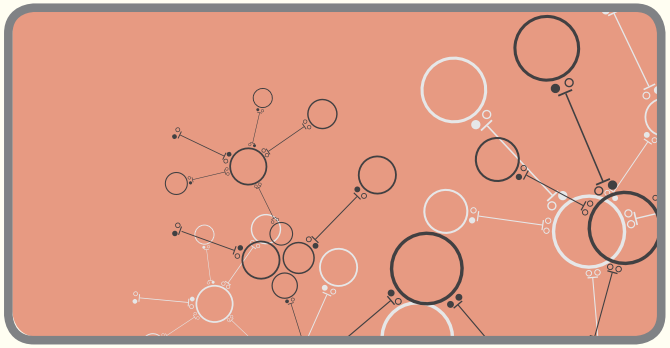
Tuberculosis (TB)

Professionals should be vigilant for TB, particularly those working with vulnerable populations such as the homeless, drug and alcohol misusers and recent migrants from countries with high numbers of new cases. Refer on to the Community Nursing Service if you suspect TB: [2-4]

• Clinicians suspicious of TB can make an urgent referral to the TB Clinics at all our local hospitals through the respiratory secretaries.

• Clinicians and other professionals may also wish to discuss with the Community TB Nursing Service at the City of Coventry Health Centre (Tel: 02476 961 351), or email geh-tr.ardentbservice@nhs.net

Partners are requested to support the establishment and activities of the TB Control Board in Warwickshire and Coventry, and to prioritise TB in commissioning priorities, particularly with regard to screening of new entrants and HIV positive patients.



Emergency Planning & Outbreaks

Health and social care commissioners must ensure that support required in relation to an outbreak or incident, i.e. staff resource and equipment for investigation and treatment, are detailed in contracts with providers of services. Providers and commissioners to ensure the requirements can be met.

Efforts to reduce communicable disease and improve environmental hazard control should be considered a crucial part of the commissioning processes of all health and local government commissioners. For example, specifying outcomes required for the management of communicable diseases, e.g. Hepatitis B, Hepatitis C and TB in secondary care, and prioritising air pollution reduction initiatives.

Partner organisations to ensure they are meeting their responsibilities with regard to reducing the impact of hot and cold weather on the health of Warwickshire residents, as outlined in National Heatwave and Cold Weather plans, and to support Warwickshire Warm and Well initiatives through advice giving and signposting individuals to appropriate services.

Immunisations

Ensure sharing of information between NHS England, Public Health England, and the local authority to provide assurance and allow opportunities for joint working to promote vaccination uptake and to resolve problems identified in delivering vaccination programmes.

Continue to actively promote immunisation uptake across Warwickshire, using school entry as an opportunity to check the vaccination status of children.

Partners to work together to promote the uptake of new immunisations as programmes are introduced, e.g. Meningococcal C vaccination amongst University students.[5]

Key

- Health & Wellbeing Board
- Health Overview & Scrutiny
- County Council & Provider Services
- District & Borough Councils, Housing & Partners
- District & Borough Councils, Environmental Health & Partners
- Public Health
- Social Care Commissioners & Providers
- Emergency Planning (multiagency)
- Public Health England
- NHS England
- Clinical Commissioning Groups
- Primary Care
- Community & Secondary Care (NHS)
- Drug & Alcohol Services
- Voluntary & Community Sector

Blood-Borne Viruses

Professional awareness needs to be raised in primary and secondary care, sexual health, and drug and alcohol services, with regard to who to screen or test for blood-borne viruses, and how to manage and refer positive cases, working to improve uptake of testing and vaccination. [6-8]

Ensure a robust system is in place for those most at risk (e.g. household and sexual contacts of known hepatitis B positive patients, babies born to Hepatitis B positive mothers etc.) to have their entire course of vaccinations.

Ensure a seamless pathway for people from diagnosis (in a range of services) to treatment of Hepatitis B and Hepatitis C through appropriate commissioning and strong referral pathways between services.

Screening

Work to maximise uptake in all screening programmes, through the sharing of detailed information between organisations (NHS England, Public Health England and Local Authorities), allowing targeted messages to be delivered to the appropriate groups and particularly to groups with low uptake.

Screening messages to become a more routine part of disease prevention messages communicated through health, social care, community and voluntary sector professionals to members of the public.

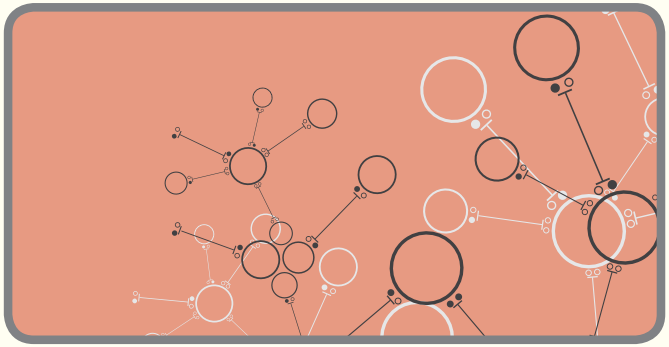
Sexual Health

Ensure that the new model of sexual health services enables increased access to comprehensive sexual health services in one place, works to reduce sexual health inequalities across the County, and has effective referral pathways to and from related services, e.g. termination of pregnancy services, drug and alcohol services etc.

Partners to continue to focus on signposting high risk groups for HIV testing in order to improve early diagnosis rates. [9]

Improve Chlamydia diagnostic rates through promotion of and delivery of targeted screening and testing in sexual health services and in community venues across the County, in order to reduce the overall number of new cases.

Continue the roll out of Spring Fever, and Respect Yourself programme work across the County and marketing of the programmes. (www.respectyourself.info)



Handwashing & Preventing Infections

Develop plans to embed teaching about infections and the importance of handwashing in school curricula.

Ensure infection control features in all contracts held with clinical or care providers, including primary and secondary care, social care, as well as licensed food venues, and ensure that contractual obligations are being met.

Maintain improvements in hospital and care home infection control by providing regular feedback to staff regarding the outcomes of infection control audits. [10]

Partners to work together to implement the recommendations of the Chief Medical Officer's Antimicrobial Resistance Strategy. [11]

Seasonal Flu

Commissioners of health and social care providers to have seasonal flu vaccination of staff identified as a "duty of care" priority in their contracts. [12]

Support is required from all partners for the seasonal flu campaign for 2014/15, to be based on "what worked" from the 2013/14 campaign, with a continued focus on clinical risk groups under the age of 65, pregnant women, carers, children and health and social care staff.

CHAPTER 1. TUBERCULOSIS

The nature of the challenge

Tuberculosis, or TB, is unfortunately not a problem of the past. It is a disease that can affect the lungs and cause a persistent cough, blood in the phlegm, fever, night sweats, and weight loss, and can cause death if not treated.[13] However, it can also (in around 50% of cases in the UK)[14] cause illness in many other parts of the body, making it difficult to diagnose.

TB is unusual because only 5% of people develop illness at the time they are infected.[15] In about 50% of people, TB causes a hidden or "latent" infection, which can make them unwell and infectious at a point later in their life.[16] People with latent infection don't have any symptoms, but people who have active disease (with symptoms of a cough) and aren't being treated, can infect up to 10-15 other people on average.[15]

Although the number of new TB cases reported every year was high at the beginning of the 20th century in England (mainly due to poor living and environmental conditions) a large decrease in numbers was seen over the course of the century until the mid-1980s (Figure 1).[17, 18] Since then the number of new cases has been increasing on an annual basis, largely due to migration, with the highest numbers found in urban areas.[17-19] Two thirds of TB cases seen in the UK occur in people born outside of the UK, and who were infected in their country of origin.[14] There is now a programme in place to test people for active disease before they come to the UK,[20] but the real challenge lies in making sure we have ways of detecting people with hidden or "latent" infection and treating them so that they don't develop active disease.

There are very effective treatments for TB and so the focus has to be on picking up the infection early, when it is still latent. Although the Bacillus Calmette–Guérin (BCG) vaccination protects against the most serious forms of TB in young children, it is not as effective in preventing respiratory TB [21]

(which is more common). Since 2005, BCG vaccinations have been given to babies and children who are more at risk of infection, for example because their parents or grandparents are from an area where active cases are reported commonly.[21] [22] The search for a more effective vaccination is ongoing.[22]

In Warwickshire the number of new cases of active TB seen every year is relatively low when compared to national and regional rates (Figure 2). 161 cases of active disease and 137 cases of latent infection were diagnosed in total between 2011 and 2013. The highest rates are seen in Rugby Borough, Nuneaton and Bedworth Borough, and Warwick District (Figure 2).[23] However, TB remains an extremely important public health problem, because the illness tends to affect some of our most vulnerable populations, including the homeless, alcohol and drug misusing communities, as well as people who have come from countries where there are a high number of new cases of the disease.

In Warwickshire and Coventry, the Community TB Nursing Service support patients with TB with their medications, and test people who live in close contact with those with infectious TB in order to pick up other people who may be infected. The number of household and close contacts tested in 2013/14 in Warwickshire and Coventry was 678.

In 2007, an outbreak of TB in the homeless community in Leamington Spa and Rugby was identified. Large screening events to identify the contacts of cases were held in order to manage the outbreak. In total 36 cases were associated with the outbreak and there were 6 deaths. This highlights the ongoing importance of professionals needing to remain vigilant for cases of TB, particularly given how infectious it is, and the difficulties there can be in diagnosis.

What is currently being done?

Key partners are responding to a national consultation on how to tackle the rising problem of TB at a national level.[24]

A TB Strategic Board is being set up which will oversee all the TB prevention and management activities in Warwickshire and Coventry, to make sure there are safe plans in place.

The best ways of identifying people with hidden or "latent" disease are being considered at a national level, whilst a number of local programmes are being evaluated elsewhere in the country. [25- 27]

New ways of ensuring that TB patients get high quality care are being launched in Warwickshire and Coventry (cohort review process). [28]

Public and professional awareness raising campaigns related to TB will continue to be undertaken by the Community TB Nursing Service in Warwickshire, in partnership with Coventry Citizen's Advice Bureau.

Work is ongoing to make sure that babies who are eligible for the BCG vaccination receive it.

Figure 2: Tuberculosis rate (active cases) per 100,000 population, Warwickshire, West Midlands and England, 2004 to 2012

Source: Public Health England, Annual report on Tuberculosis in the West Midlands, 2012, pg. 18

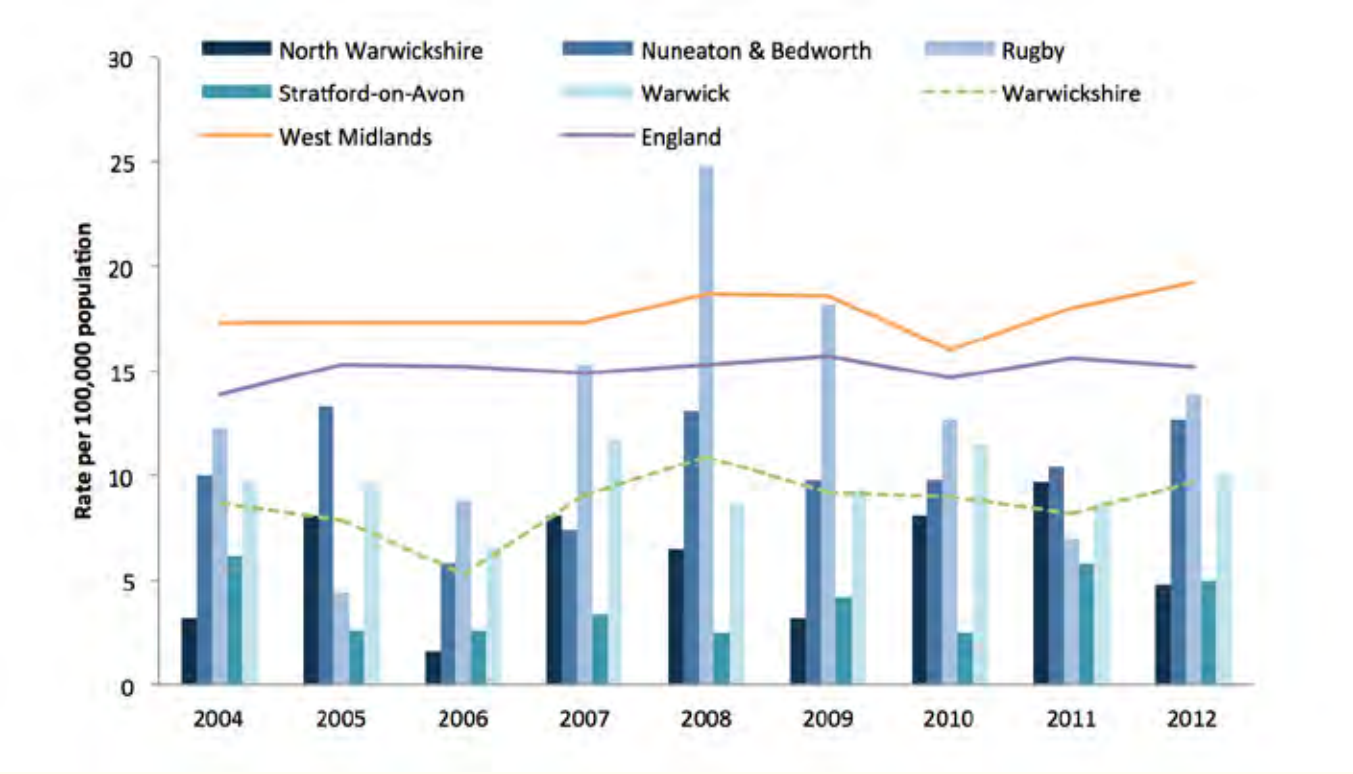
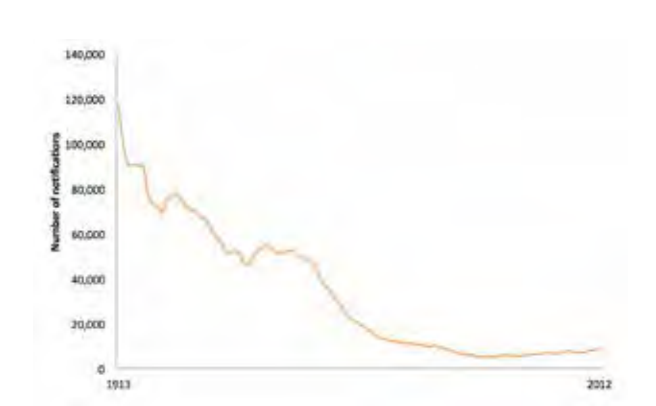


Figure 1: History of Tuberculosis notifications, England and Wales, 1913-2012

Source: Public Health England, 1913- 1982 Statutory Notifications of Infectious Diseases (NOIDs); 2010-2012 Enhanced Tuberculosis Surveillance (ETS)



RECOMMENDATIONS

TUBERCULOSIS

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Clinicians suspicious of TB can make an urgent referral to the TB clinic through the respiratory secretaries at Warwick hospital.

Clinicians and other professionals may also wish to discuss with the Community TB Nursing Service at the City of Coventry Health Centre (Tel: 02476 961 351), or email ge-tr.ardentbservice@nhs.net

Partners are requested to support the establishment and activities of the TB control board in Warwickshire and Coventry, and to prioritise TB in commissioning priorities, particularly with regard to screening of new entrants and HIV positive patients.

CHAPTER 2: EMERGENCY PLANNING AND OUTBREAKS

The nature of the challenge

A key role of the Director of Public Health is to ensure there are plans in place to protect the health of the population. This includes protecting people from the health impacts of communicable diseases (diseases that can be passed from person to person), environmental hazards such as air pollution and extremes of weather (for example heatwaves, cold weather and flooding), as well as other emergencies which can have a significant impact on the health of the population, such as those which result in a large number of casualties. [29]

This role involves working closely with a wide range of professionals in and outside the Local Authority, who are responsible for putting plans in place to prevent these problems, [30] but also for responding in the case of an outbreak, incident or emergency that affects the health of the population.

Although it is crucial for plans to be in place which describe how we respond to these situations, our efforts need to focus on preventing them. This could mean preventing outbreaks by ensuring that the population is protected by vaccinations, or reducing the impact of extreme weather by supporting people to adequately insulate and heat their homes in the winter.

Responding to outbreaks

One of the key challenges in ensuring we reduce the risk posed by communicable diseases to the population, lies in how organisations work together in responding to outbreaks or incidents. This might be a measles outbreak on a traveller site, a flu outbreak in a care home, or a TB incident. Over the last year, an agreement has been developed between a number of partner agencies, which covers these types of scenarios, based on national guidance and work originally carried out in Staffordshire. The agreement reflects changes in the NHS that have taken place since April 2013, which were outlined in my annual report last year, and importantly identifies "who does what" in the event of an incident. [32]

The scale of the challenge is highlighted in Tables 1 and 2, which show the range of communicable disease infections and outbreaks reported to the local Health Protection Team (Public Health England) over the last year in Warwickshire. The Health Protection Team are responsible for managing communicable diseases and outbreaks that are notified to them.

As is seen, hospitals and care homes are common environments for outbreaks to occur. It is, therefore, crucial that there are strict measures in place for reducing the spread of infection in these settings. This is discussed in more detail in Chapter 7.

Environmental Hazards and Extremes of Cold Weather

With regard to environmental hazards, air pollution is a key priority for a number of areas in Warwickshire. It was covered in detail in my last annual report, which can be found on our website and so will not be discussed further in this report. [33, 34]

Work has also been ongoing in Warwickshire for a number of years to reduce the risk that cold weather poses to health, including causing health complications for people with heart and lung conditions, as well as having a negative impact on mental wellbeing. [35] Every year, detailed planning takes place prior to the winter to put in place measures to minimise the impact of cold weather on the population and on health and social care services. Part of this involves communicating information to frontline health and social care services to ensure they are protecting their most vulnerable patients or service users, and that key messages are being conveyed to the public. [36] Fuel poverty is an important public health problem, with 13% (or 30,120) of households in Warwickshire having a higher than average energy bill, which would leave them below the official poverty line. In small areas in Rugby Borough, Warwick District and Nuneaton and Bedworth Borough, over 25% of households are in this position (Figure 3). Understanding where these problems lie helps us target interventions to support those most in need.

Campaign work aimed at keeping people warm and well, ensuring eligible people receive their flu jabs, as well as longer term work considering the financial support available to people in fuel poverty, home insulation schemes, and

providing information and guidance regarding switching energy suppliers, are all important components of this work. Similar types of preparation also take place for hot weather.

What is currently being done?

The Agreement for Emergency Preparedness and Service Delivery in response to a significant Public Health incident or outbreak has been completed, with an outbreak plan also being developed.[24]

The 'Coventry, Solihull and Warwickshire Resilience Team', who maintain a range of emergency plans for the three authorities, recently held a scenario based exercise to test the above agreement, and have increased capacity in the team to take on more responsibility for public health work in this field.

Groups consisting of members from a number of organisations currently exist to oversee emergency planning, and outbreak and environmental hazard management, such as:
Arden Local Health Resilience Partnership – co-ordinates and ensures that all organisations with a responsibility for health have effective emergency plans in place, that they are tested, and that partners work together in responding to an emergency.

Warwickshire Local Resilience Forum - brings together senior representatives of the emergency services, local authority partners, NHS bodies and others to prepare for and respond to emergencies as part of national arrangements.

Warwickshire Warm and Well Steering Group – brings together a number of county, district and borough councils, and third sector partners, to oversee work and interventions that aim to reduce excess winter deaths, unnecessary hospital admissions and social care referrals.

A number of communicable disease strategy groups.

Pandemic flu is still one of the highest rated risks to the population identified at a national level and planning activities are taking place.

Preparations are being made for the coming year to support cold weather planning with interventions aimed at reducing fuel poverty in Warwickshire, alongside other linked work,

Table 1: Infections reported to Public Health England, Warwickshire residents, 2011 to 2013
Source: Public Health England, Notifiable Diseases reported to Public Health England, Warwickshire residents, January to December 2013 compared to the same period in 2011 and 2012 (includes possible, probable and confirmed cases)

Type of Infection	Infection	2011	2012	2013
Gastrointestinal	Campylobacteriosis	261	278	276
	Cryptosporidiosis	10	25	5
	E.coli infection, VTEC	<5	<5	<5
	Hepatitis A	0	<5	<5
	Hepatitis E	16	5	<5
	Other GI	23	33	40
	Salmonellosis	43	36	33
	Typhoid/Paratyphoid	<5	<5	<5
Vaccine preventable	Measles	34	44	59
	Mumps	93	84	100
	Pertussis (Whooping Cough)	5	89	50
	Pneumococcal infection	26	16	19
Other	Hepatitis B	215	117	114
	Hepatitis C	115	74	88
	iGAS (Invasive Group A Streptococcal) infection	<5	7	16
	Legionellosis	<5	<5	6
	Meningococcal infection	13	12	18
	Other	61	50	51
	PVL-associated staphylococcal infection	<5	<5	<5
	Streptococcal Group A infection, non-invasive or unspecified	25	54	59
	Tuberculosis	78	74	80
Total Warwickshire infections		**1035**	**1011**	**1027**

Table 2: Incidents/outbreaks report to Public Health England by principal context, Warwickshire, January to December 2013

Source: Public Health England, Outbreaks and Incidents reported to Public Health England, Warwickshire residents, January to December 2013 compared to the same period in 2011 and 2012

Principal Context	Cluster	Exposure	Issue	Outbreak	Total
Care home	2	0	0	30	32
Congregation	0	0	0	1	1
Food Outlet/Restaurant	0	0	0	2	2
Hospital	1	0	0	30	31
Nursery	1	0	0	4	5
School	0	0	1	1	2
Other	4	4	25	3	36
Total	**8**	**4**	**26**	**71**	**109**

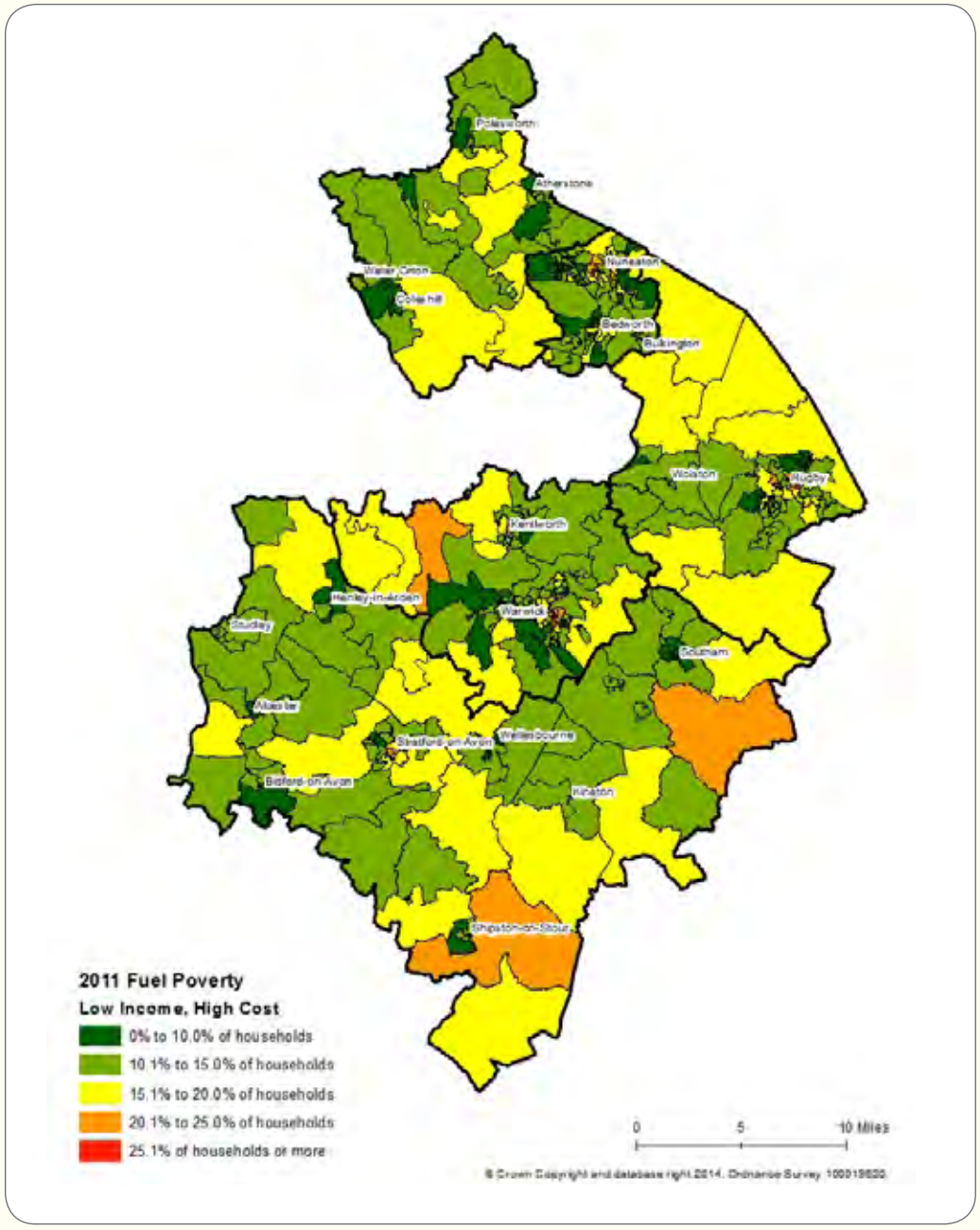
Please note that definitions of Cluster, Exposure and Outbreak can be found in the Glossary. An issue relates to a situation which needs ongoing monitoring and action.

such as that related to Seasonal Flu vaccination uptake (see Chapter 8). Campaign work last winter in Warwickshire included the "Feel Well in Winter" campaign, a Norovirus campaign (aimed at nurseries, schools and care homes),[38,39] and the "Warm and Well" campaign.[40] See below (Image 1) for some of the resources that were produced to support the campaign.

Image 1: Warm & Well winter warm checklist, Feel Well Guide & Handwashing poster.

Figure 3: Low income high cost fuel poverty, Warwickshire, 2011

Source: Department of Energy & Climate Change, 2011 sub-regional fuel poverty data: low income high costs indicator



RECOMMENDATIONS

EMERGENCY PLANNING AND OUTBREAKS

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Partner organisations to ensure they are meeting their responsibilities with regard to reducing the impact of hot and cold weather on the health of Warwickshire residents, as outlined in National Heatwave and Cold Weather plans, and to support Warwickshire Warm and Well initiatives through advice giving and signposting individuals to appropriate services.

CHAPTER 3: IMMUNISATIONS

The nature of the challenge

Immunisations have been heralded as one of the biggest medical advances of the 19th and 20th centuries, sitting alongside sanitation and the discovery of antibiotics and anaesthaesia.[41] The current childhood immunisation programme we have in the UK has meant that some of the most serious communicable diseases are now rare in the UK.[42] However, examples such as the recent outbreaks of polio being declared in Syria, and the potential for other vaccine-preventable diseases to emerge in other parts of the world, it is crucial we make sure we continue to maintain good uptake of all immunisations.[43]

Vaccinations work by causing us to become immune to the diseases they protect against. This occurs because live organisms (bacteria/viruses) or inactivated (not live) parts of organisms are used to make up vaccinations.[44] If a certain proportion of people are immunised against an infection, the rest of the population are protected (because it is much less likely they are going to come into contact with someone who has the illness). This is known as "herd immunity".[37] The problem comes when certain groups or populations do not take up vaccinations, and disease spreads much more easily. This was partly responsible for the national measles outbreak in 2012.[45]

Whilst the uptake of childhood immunisations in Warwickshire is now generally high, and greater than the national 95% target,[46] it is only in recent years that the uptake of the Measles, Mumps and Rubella (MMR) vaccination has approached what is required for herd immunity. Please see Figures 6-9 for immunisation uptake at small area level in Warwickshire. The uptake of childhood immunisations has generally increased over the years in Warwickshire, however the greatest increase has been seen in the uptake of the MMR vaccination from 90.9% to 96.5% between 2009 and 2013. This is significant given the substantial drop in MMR vaccination uptake from the late 1990s, following the false claims by researchers linking MMR vaccination and autism.

One of the challenges related to promoting uptake of vaccinations is that people tend to view the risk of something "being done to them" as much higher than risks they decide to take for themselves with their health.[47] This is partly why vaccinations have created a great deal of controversy over the years.

Figures 4 and 5 show the effects of the pertussis (whooping cough) and measles outbreaks in 2011to 2013. The response in both cases was to set up temporary vaccination programmes. From October 2012, all pregnant women have been offered pertussis vaccinations, in the knowledge that mothers temporarily "pass on" immunity to their newborns. This was due to the increase in the number of cases and deaths in infants in 2011 and

Figure 4: Rate per 100,000 of confirmed Pertussis cases by month, Warwickshire, West Midlands and England 2011 to 2013
Source: Public Health England, Field Epidemiology Service and West Midlands East Health Protection Team, 2013

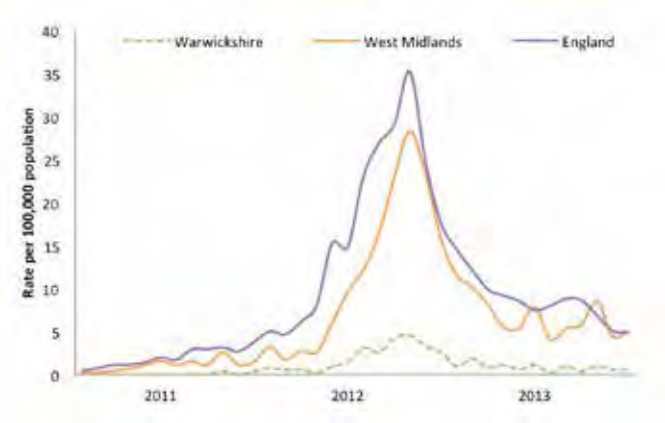
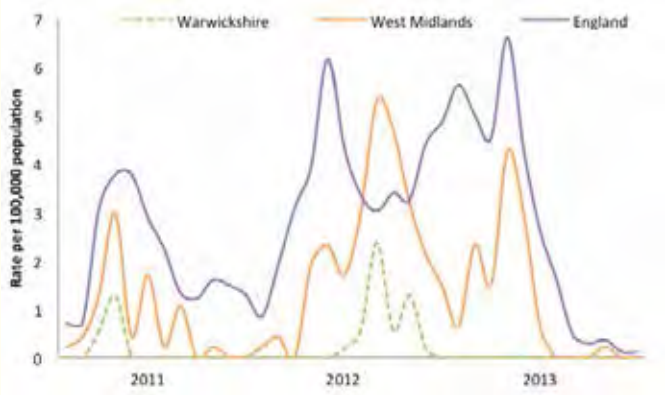


Figure 5: Rate per 100,000 of confirmed Measles cases by month, Warwickshire, 2011 to 2013
Source: Public Health England, Field Epidemiology Service and West Midlands East Health Protection Team, 2013



2012.[48] From April 2013 MMR vaccinations were offered to all 10-16 year olds, who had not been previously vaccinated, due to the large number of cases in this age group as part of a national outbreak which started in 2012.[49] The subsequent reduction in both pertussis and measles cases, due to these successful public health campaigns, can be seen for Warwickshire, the West Midlands and England in Figures 4 and 5.

In addition to these temporary vaccination programmes, a number of new vaccination programmes have recently been introduced, such as the rotavirus vaccination programme for infants, and shingles vaccination programme for older adults.[50] Making sure that enough vaccine is available, that staff are appropriately trained and that the right people receive invitations is a continual challenge for commissioners and providers of these programmes.

What is currently being done?

Ongoing work is taking place across Warwickshire and Coventry, Herefordshire and Worcestershire to put in place new immunisation programmes, including the shingles vaccination and the roll out (plans are awaited) of the seasonal flu vaccination programme to all 2-16 year olds (see Chapter 8).

Work is also taking place to ensure that all staff involved in immunisations both in primary care and in school settings are appropriately trained, to minimise the risk of immunisation incidents.

> In addition to these temporary vaccination programmes, a number of new vaccination programmes have recently been introduced.

Figure 6: 5-in-1 vaccination uptake (Diphtheria, Tetanus, Pertussis, Polio, Haemophilus Influenzae B), 5 year olds, Warwickshire, 2013
Source: Public Health England, Cover of Vaccination Evaluation Rapidly (COVER), 2013

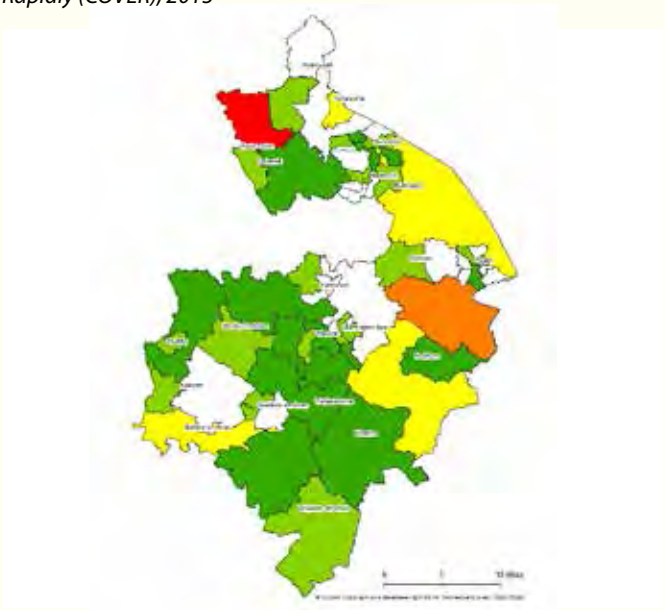


Figure 7: Haemophilus Influenzae B/Meningitis C vaccination uptake, 5 year olds, Warwickshire, 2013
Source: Public Health England, Cover of Vaccination Evaluation Rapidly (COVER), 2013

Figure 8: Measles, Mumps and Rubella (MMR) vaccination uptake, 5 year olds, Warwickshire, 2013
Source: Public Health England, Cover of Vaccination Evaluation Rapidly (COVER), 2013

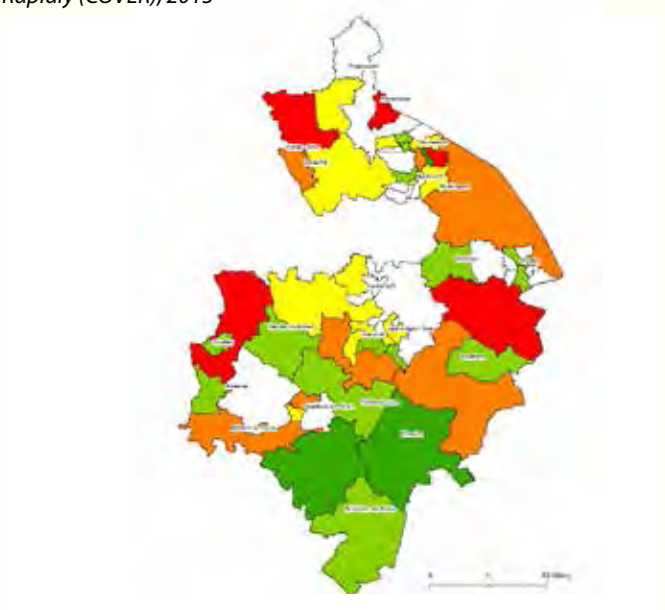
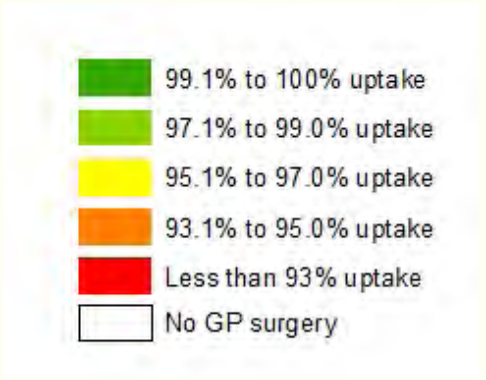
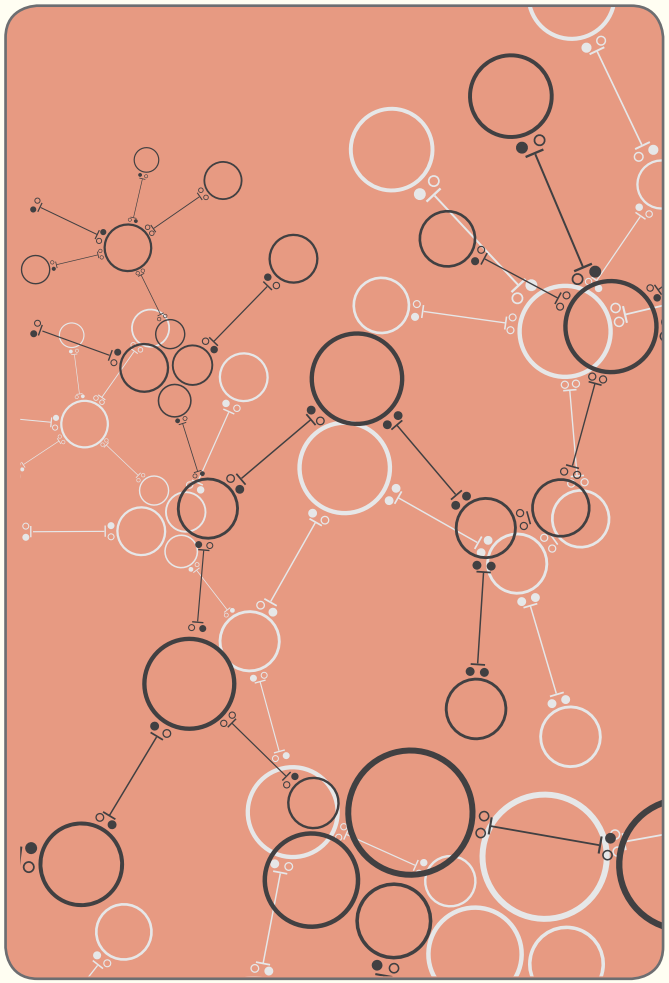


Figure 9: Pneumococcal vaccination uptake, 5 year olds, Warwickshire, 2013
Source: Public Health England, Cover of Vaccination Evaluation Rapidly (COVER), 2013





RECOMMENDATIONS

IMMUNISATIONS

Partners to work together to promote the uptake of new immunisations as programmes are introduced, e.g. Meningococcal C vaccination amongst University students.[5]

Ensure sharing of information between NHS England, Public Health England, and the local authority to provide assurance and allow opportunities for joint working to promote vaccination uptake and to resolve problems identified in delivering vaccination programmes.

Continue to actively promote immunisation uptake across Warwickshire, using school entry as an opportunity to check vaccination status of children.

CHAPTER 4: BLOOD-BORNE VIRUSES

The nature of the challenge

Blood-borne viruses cause infections that are carried in the blood, and can be transmitted from one person to another. Three of the most common are Hepatitis B (Hep B), Hepatitis C (Hep C) and HIV. As HIV is covered in Chapter 6, this section will focus on Hep B and Hep C.

Hep B and Hep C are both silent, because they can be present without people knowing about it. They can both be transmitted through unprotected sexual intercourse (Hep C less easily than Hep B), bites and scratches, childbirth (mother-to-baby transmission), sharing needles (commonly among intravenous drug users), and through exposure to contaminated items such as razors, toothbrushes, tattooist's needles, and equipment used for body piercing.[8, 52] Notably, transmission of Hep B to a baby during birth can lead to long term illness in 90% of babies of highly infectious mothers.

Both Hep B and Hep C can become long-term infections, but people with Hep B are more likely to clear their infection completely (10% of Hep B cases become long-term, in contrast to 80% of Hep C).[52] However they can both cause serious complications, such as scarring of the liver (cirrhosis) and liver cancer. These two diseases are common in all African countries and many parts of Asia, Eastern Europe and the Pacific Region.[53] Hep C is very common among intravenous drug users.[54]

Transmission of Hep B can be prevented through a course of vaccinations. These are offered to household contacts of people with Hep B, babies born to mothers with Hep B, intravenous drug users, healthcare workers and a number of other high-risk groups.[55] Although there is no vaccination for Hep C, it is more easily cured than Hep B, with treatment aiming to clear the virus completely.[56] However curative treatment is not always successful.

> Transmission of Hep B can be prevented through a course of vaccinations.

Compared with other local authorities in the West Midlands, the number of cases of Hep C in Warwickshire is low, but there are higher numbers of Hep B cases than in other rural local authority neighbours (Table 3). However, these infections often cause no symptoms in the early stages, can be passed from one person to another, and affect some of our most vulnerable communities, such as injecting drug users, and migrants from countries where Hep B and Hep C are common. This is what makes them important.

One of the biggest challenges related to blood-borne viruses lies in the number of different health settings that those most at risk present to. All intravenous drug users who use drug misuse services should be offered a test for Hep B and C viruses. Those who are not infected with Hep B virus should be vaccinated to protect against the infection. Sexual Health Clinics also see certain populations at risk (including men who have sex with men (MSM), those who have multiple sexual partners or who change partners frequently, and patients infected with HIV), as do maternity services and general practice. National guidance outlines where and who should be screened.[53] It is also crucial for those people who are diagnosed to be appropriately referred on and treated.

A further challenge lies in the fact that the Hep B vaccination requires a course of 3 or 4 injections with intervals of several months between each.[55] This means that there have to be good systems in place to make sure this happens, particularly for babies who are born to infected mothers, given the illness is much more severe in babies and young children. Currently NHS England and Public Health England have the role of ensuring that vaccinations take place as they should.

What is currently being done?

An Arden Hepatitis B/C strategy group exists and is made up of public health professionals, sexual health clinicians, gastroenterologists, microbiologists, GPs, drug and alcohol service providers and third sector organisations e.g. Hepatitis C Trust and British Liver Trust. A strategy and action plan have been developed.[57]

An easy guide for GPs is being developed through the strategy group to give information about who and how to screen/test for Hep B, and some primary care training is proposed.

Table 3: Number of laboratory reports of Hepatitis B and C, West Midlands, 2005 to 2012

Source: Public Health England, Hepatitis B and C Laboratory Reports - (NB. Numbers less than 5 have been supressed to maintain confidentiality)

Upper tier local authority	2005		2006		2007		2008		2009		2010		2011		2012	
	HEP B	HEP C	HEP B	HEP C	HEP B	HEP C	HEP B	HEP C	HEP B	HEP C	HEP B	HEP C	HEP B	HEP C	HEP B	HEP C
Birmingham	29	265	17	177	140	189	134	231	130	239	170	241	209	206	228	230
Coventry	<5	16	57	20	156	72	116	73	105	133	125	146	152	121	125	94
Dudley	6	36	21	43	23	32	19	61	21	38	30	29	20	29	20	39
Herefordshire	7	15	<5	6	9	25	15	14	7	7	6	31	11	27	9	27
Sandwell	10	14	15	25	26	38	<5	56	12	7	<5	15	11	<5	7	11
Shropshire	<5	17	9	24	13	48	12	37	16	52	13	28	12	34	15	35
Solihull	<5	8	<5	<5	7	6	8	6	<5	8	<5	<5	10	12	9	<5
Staffordshire	21	79	19	81	31	57	17	38	43	92	26	34	24	41	14	40
Stoke-on-Trent	11	11	27	8	39	5	59	<5	41	112	53	92	46	118	47	76
Telford and Wrekin	<5	0	<5	<5	7	6	11	9	<5	14	10	11	11	9	14	10
Walsall	<5	15	<5	23	13	7	33	23	26	40	24	24	23	32	15	21
Warwickshire	<5	0	12	<5	28	<5	44	5	29	8	40	13	34	35	48	42
Wolverhampton	<5	76	<5	38	<5	73	<5	70	<5	84	15	71	43	52	38	51
Worcestershire	20	22	11	40	22	50	27	48	24	30	35	44	18	52	21	57
West Midlands	**112**	**574**	**198**	**490**	**515**	**612**	**501**	**674**	**465**	**864**	**554**	**783**	**624**	**770**	**610**	**737**

RECOMMENDATIONS

BLOOD-BORNE VIRUSES

Professional awareness needs to be raised in primary and secondary care, sexual health, and drug and alcohol services, with regard to who to screen or test for blood-borne viruses, and how to manage and refer positive cases, working to improve uptake of testing and vaccination.[6-8]

Ensure a seamless pathway for people from diagnosis (in a range of services) to treatment of Hep B and Hep C, through appropriate commissioning and strong referral pathways between services.

Ensure a robust system is in place for those most at risk (e.g. household and sexual contacts of known Hepatitis B positive patients, babies born to Hepatitis B positive mothers etc.) to have their entire course of vaccinations.

CHAPTER 5: SCREENING

The nature of the challenge

Screening is a process of identifying apparently healthy people who may be at increased risk of a disease or condition. They can then be offered information, further tests and appropriate treatment to reduce their risk and/or any complications arising from the disease or condition. There are a number of national screening programmes currently run by NHS England and Public Health England: breast, bowel and cervical cancer screening, aortic aneurysm and diabetic retinopathy screening, and a range of antenatal and newborn screening programmes.

Although there are many tests we can do to diagnose a range of illnesses, we only screen for diseases if we know that when we pick them up early there is a good chance of a successful recovery. There are a number of important criteria that must be met related to the disease itself, the test, the treatment and the programme, before a screening programme is established.[58] It is important to note that screening identifies people at higher risk of disease, who then go on to have further tests to establish if they have the disease or not.

No screen test is 100% reliable. However, it is important to keep the proportion of people who might have false positive (wrongly identified as potentially having the disease) and false negative results (wrongly identified as not likely to have the disease) small. It is also important to look at who benefits most from being screened, and therefore screening programmes are often run for people in particular age groups. Screening programmes should do more good than harm. This is why at the moment there is no recommended national screening programme for prostate cancer, for example, as we do not know which individuals diagnosed through screening are likely to benefit from the treatments available. Table 4 outlines some of the key evidence related to the adult screening programmes. This evidence is constantly being reviewed, and there are national plans to consider the evidence for ovarian and lung cancer screening in 2015.[59]

In Warwickshire, the uptake of breast cancer screening (78.3%), cervical cancer screening (75.3 %) in 2013, and access to diabetic retinopathy screening for 2011/12 (86.4%) are all higher than the national average (76.3%, 73.9% and 80.9% respectively). This is a good thing, but the overall figure can hide much lower uptake figures in particular population groups.[59] Deaths from breast cancer and from bowel cancer have also reduced significantly in Warwickshire, by about 38% and 47% respectively between 1995-7 and 2008-10, although this is likely to relate to a number of other factors including screening and better treatments.[60]

Over the course of 2012, the "Are you ready for your Screen Test" campaign was run across Warwickshire and Coventry, which focused on promoting uptake of the three cancer screening programmes: breast, bowel and cervical cancer screening programmes.

Screening programmes themselves need to be run well to make sure that the right people are invited for screening at the right time intervals, and that people with positive results are appropriately referred on for further testing. Screening alone is clearly not the answer to reducing illness and death related to the conditions described. However, it goes hand in hand with efforts to prevent illness through reducing smoking, obesity, problem drinking and other lifestyle behaviours.[59]

> "Screening is a process of identifying apparently healthy people who may be at increased risk of a disease or condition.

What is being done?

A new Diabetic Retinopathy Eye Screening programme is being commissioned by NHS England for Warwickshire, Coventry, Herefordshire and Worcestershire.

There are ongoing visits taking place to assess the quality of all of the screening programmes provided in the Warwickshire, Coventry, Herefordshire and Worcestershire Area.

There are a number of IT systems being put in place which will allow screening programmes to capture information more efficiently.

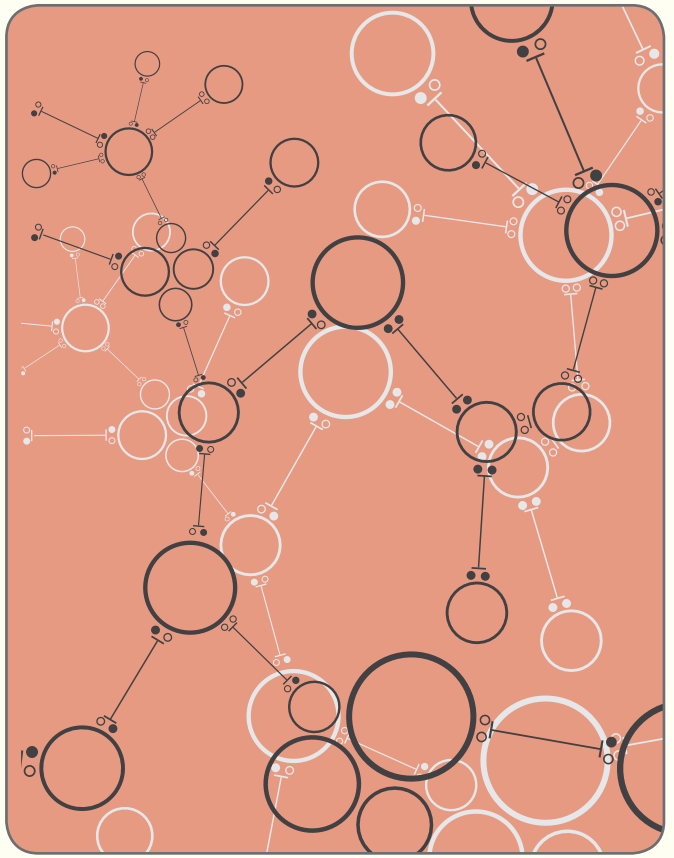


Table 4: Evidence related to adult screening programmes

Screening programme	Epidemiology	Benefits and risks of screening
Breast Cancer Screening [61] Test: Mammogram (X-ray of the breasts) Follow up tests (if positive): Further mammogram Ultrasound scan of breast Biopsy in some people (small sample taken from breast with needle)	Breast cancer is the most common type of cancer in the UK. About 12,000 women in the UK die of breast cancer every year.	Screening saves about 1 life from breast cancer for every 200 women who are screened. This adds up to about 1,300 lives saved from breast cancer each year in the UK. About 3 in every 200 women screened every 3 years from the age of 50 to 70 are diagnosed with a cancer that would never have been found without screening and would never have become life-threatening. This adds up to about 4,000 women each year in the UK who are offered treatment they did not need. This means that for every 1 woman who has her life saved from breast cancer, about 3 women are diagnosed with a cancer that would never have become life-threatening.
Bowel Cancer Screening [62] Test: Stool sample Follow up test (if positive): Colonoscopy (thin flexible tube with camera passed into back passage)	1 in 20 people will develop bowel cancer during their lifetime. It is the third most common cancer in the UK, and the second leading cause of cancer deaths.	Regular screening reduces the risk of bowel cancer by 16% About five in 10 people who have a colonoscopy will have a normal result. About four in 10 will be found to have a polyp, which if removed may prevent cancer developing. About one in 10 people will be found to have cancer when they have a colonoscopy. For most people, having a colonoscopy is a straightforward procedure. However, as with most medical procedures, there is the possibility of complications.
Cervical Cancer Screening [63] Test: Smear test (sample of cervix) Follow up test (if positive): Colposcopy (examination of the cells of the cervix using a magnifying instrument) with possible biopsy (sample taken from cervix)	Around 750 women die of cervical cancer in England each year. However many of those who develop it have not been screened regularly. Due to cervical screening, cervical cancer is now an uncommon disease in this country.	Early detection and treatment can prevent around 75% of cancers developing but, like other screening tests, it is not perfect. It may not always detect early cell changes that may lead to cancer. In around one in 20 tests, the cells cannot be seen properly under the microscope and the test must be taken again. Research suggests that up to 4,500 lives will be saved each year in England by cervical screening.

Screening programme	Epidemiology	Benefits and risks of screening
Diabetic Retinopathy Screening [64] Test: Photographs of back of eye	There are nearly 2.5 million people with diabetes identified by GP practices in England. It is estimated that in England every year there are around 4,200 people at risk of blindness caused by diabetic retinopathy, and there are 1,280 new cases of blindness caused by the diseases.	The screening programme, based on studies in other countries, has the potential to reduce the numbers of new cases of blindness in England from an estimated 1,280 to 256, saving the sight of more than 1,000 people a year. On rare occasions, screening can miss changes that could threaten sight, although every effort is made to reduce the risk of this happening. The eye drops used to dilate the pupils during the screening test may cause some temporary symptoms and very rarely, they can cause a sudden, dramatic rise in pressure within the eye.
Abdominal Aortic Aneurysm Screening (AAA) [65] Test: Ultrasound test	Around 1 in 25 men in England aged between 65 and 74 have an abdominal aortic aneurysm. Most of these are small and not serious. However, small AAAs can increase in size and develop into large AAAs which can rupture: a medical emergency that is often fatal.	It is estimated that the programme will reduce the death rate from ruptured AAA among men aged 65 and over by up to 50 per cent, eventually preventing around 2,000 premature deaths per year.

RECOMMENDATIONS

SCREENING

Work to maximise uptake in all screening programmes, through the sharing of detailed information between organisations (NHS England, Public Health England and Local Authorities), allowing targeted messages to be delivered to the appropriate groups and particularly to groups with low uptake.

Screening messages to become a more routine part of disease prevention messages communicated through health, social care, community and voluntary sector professionals to members of the public.

CHAPTER 6: SEXUAL HEALTH

The nature of the challenge

Efforts to improve sexual health in Warwickshire are aimed at reducing the rates of teenage pregnancy and sexually transmitted infections e.g. Chlamydia, Gonorrhoea, Syphilis and HIV (including the late diagnosis of HIV).[66] Since April 2013, Public Health in local authorities have had responsibility for commissioning sexual health services (not including HIV treatment services). We know that the best way of delivering these services is by making sure that people entering a service get advice, screening and treatment for sexually transmitted infections, but also contraceptive advice and treatment, all in the same place and preferably in the same appointment.[66] Users repeatedly tell us that it is important that there is easy access in the community to Emergency Hormonal Contraception and Chlamydia screens [67] and that young people receive sex positive advice (which acknowledges natural curiosity and encourages openness) wherever they use sexual health services. Developing innovative sex positive educational programmes which teach children and young people about healthy sexual relationships is also a priority.[66]

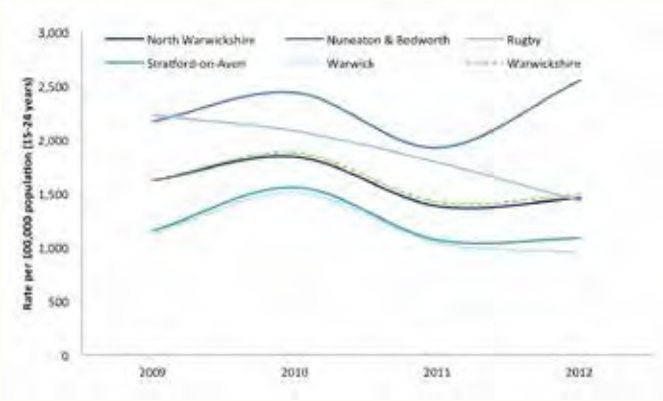
Currently in Warwickshire, contraceptive services and sexually transmitted infection services are provided separately and in different locations around the County. Over the course of 2014/15 a new service will be commissioned, which will bring together these services in accessible locations across the County. Being able to access services easily is something service users tell us they want, and so it is proposed that people will be able to book appointments online, but drop in appointments will also be available.[68] We are looking to improve the opening hours of services, so they are open outside of working and school hours, and that they are in locations that are easy to get to, wherever you live in Warwickshire.

Sexually transmitted infections

Chlamydia is one of the most common sexually transmitted infections and many cases are asymptomatic (do not have any symptoms). However, it can cause serious problems such as infertility, ectopic pregnancy and pelvic inflammatory disease.[69] Testing and diagnosis rates for Chlamydia are going up in Warwickshire (meaning we are detecting more cases, rather than there necessarily being more infection), particularly since the Chlamydia Screening Programme started in 2003. However, there is much variability between districts and boroughs in terms of rates (Figures 10 and 11). Although Nuneaton and Bedworth Borough has the highest rates in the County (and highest positive test rates), more people from Nuneaton and Bedworth Borough are tested than in other districts and boroughs which may partly explain this (Figure 12).

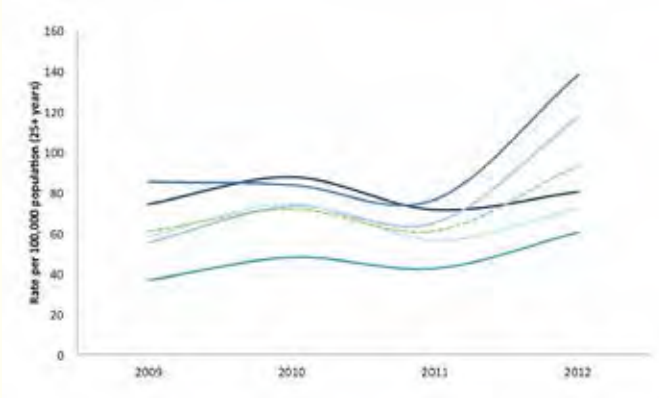
HIV remains an important problem also, particularly in those at highest risk, i.e. Men who have sex with Men and Black African

Figure 10: Chlamydia Diagnostic Rate per 100,000 population aged 15-24 years, Warwickshire, 2009 to 2012
Source: Public Health England, Chlamydia Testing Activity Dataset, 2009 - 2012



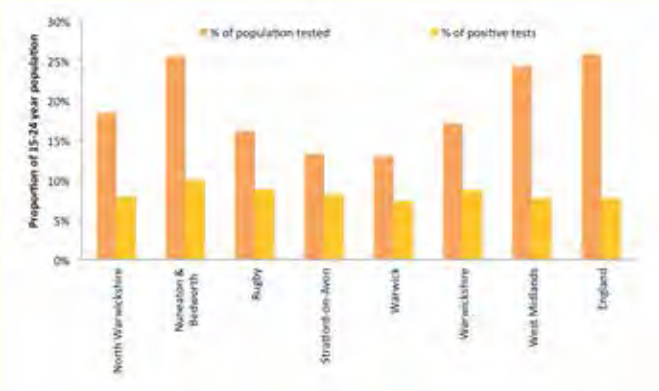
Please note, due to reporting, 2012 data cannot be compared to previous years.

Figure 11: Chlamydia Diagnostic Rate per 100,000 population aged 25 years and over, Warwickshire, 2009 to 2012
Source: Public Health England, Chlamydia Testing Activity Dataset, 2009 - 2012



Please note, due to data collection changes, 2012 data cannot be compared to previous years.

Figure 12: Proportion of 15-24 year population who were tested and those who tested positive for Chlamydia, Warwickshire, 2012
Source: Public Health England, Chlamydia Testing Activity Dataset, January to December 2012



Ethnic minority groups. Although a treatable condition, it can still cause serious illness. Despite the numbers of cases diagnosed each year in Warwickshire being small, 60.5% of cases of HIV diagnosed between 2010 and 2012 were diagnosed late, i.e. at a stage at which treatment is much less effective (Figure 13). Of all the districts and boroughs, Rugby Borough has the highest proportion of people living with HIV: approximately 1.5 in every 1000 people.

Under 18 conceptions

The under 18 conception rate has been falling in Warwickshire overall for a number of years (Figure 14). There is variability from year to year and between districts and boroughs in terms of rates, with Nuneaton and Bedworth Borough being consistently high. However, there were some notable reductions seen in rates in several districts and boroughs in 2012.

What is being done?

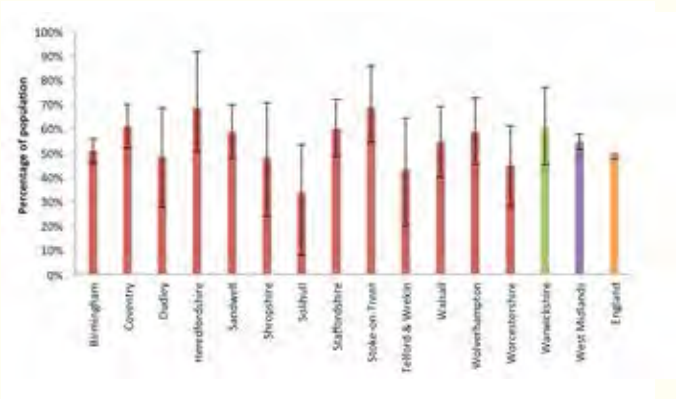
A new model for sexual health services is proposed in Warwickshire and is expected to be fully in place in 2016. It is important that this service continues to work to tackle some of the differences in outcomes seen across the County. [70]

The Respect Yourself health promotion programme engages with young people and schools. Its mobile app and website (www.respectyourself.info) were recently shortlisted for a National Sexual Health Award in the Best Young People's Resource section. Website licences are being offered to other local authorities, who can add their own local information to provide a cost effective (and evidence-based) solution to supporting young people's sexual health in their area.

The Spring Fever primary school programme is an innovative Relationships and Sex Education programme which is being rolled out in several primary schools in Warwickshire, providing them with an opportunity to improve the quality of their Relationship and Sex Education programme, as well as strengthening identification and safeguarding related to child sexual abuse.

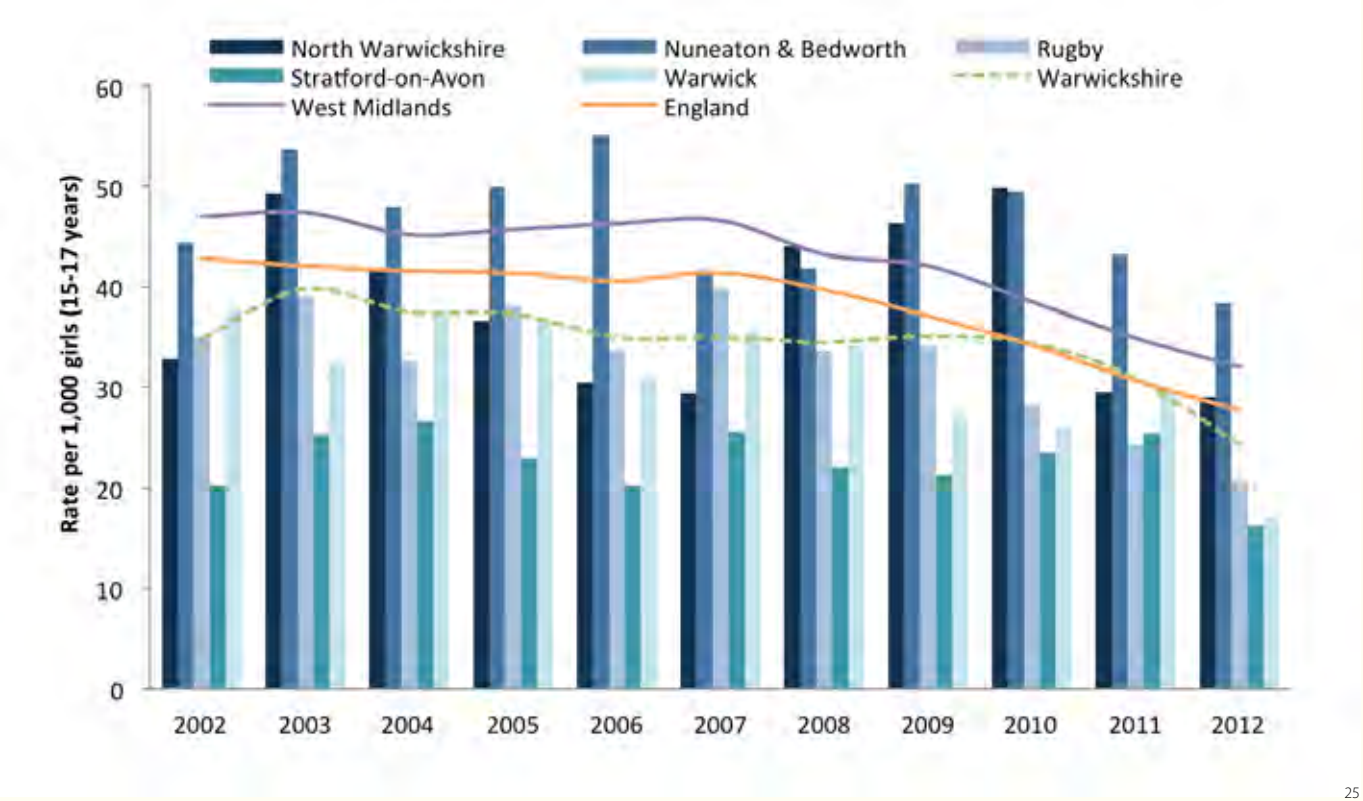
A community HIV testing service is currently provided in both Warwickshire and Coventry, which aims to raise awareness, reduce stigma associated with HIV, and encourage and deliver HIV testing in the community in high risk groups

Figure 13: Proportion of individuals diagnosed with HIV who are diagnosed at a late stage of infection, West Midlands, 2010-2012
Source: Integrated HIV surveillance data: SOPHID, HANDD, and CD4 Surveillance (HIV & STI Department, CIDSC, PHE)



> The under 18 conception rate has been falling in Warwickshire for a number of years.

Figure 14: Conception rate per 1,000 girls aged 15-17, Warwickshire, 2002 - 2012
Source: Office for National Statistics, Conceptions Statistics, England and Wales 2014



RECOMMENDATIONS

SEXUAL HEALTH

Partners to continue to focus on signposting high risk groups for HIV testing in order to improve early diagnosis rates.[9]

Ensure that the new model of sexual health services enables increased access to comprehensive sexual health services in one place, works to reduce sexual health inequalities across the County, and has effective referral pathways to and from related services, e.g. termination of pregnancy services, drug and alcohol services etc.

Improve Chlamydia diagnostic rates through promotion of and delivery of targeted screening and testing in sexual health services and in community venues across the County, in order to reduce the overall number of new cases.

Continue the roll out of Spring Fever, and Respect Yourself programme work across the County and marketing of the programmes.

CHAPTER 7: HANDWASHING AND PREVENTING INFECTIONS

Background

Washing hands with soap and water is one of the most effective ways of reducing the spread of infections, especially those that cause diarrhoea and vomiting, respiratory infections, as well as those that can be transmitted from open wounds.[10] This is why we call handwashing an 'infection control measure'.

A focus on handwashing alongside other infection control measures has led to the huge national decline in infections people acquire in hospital over the last 10 years.[71] Other measures include a focus on enhanced cleaning in hospitals, use of personal protective equipment (such as gloves and aprons), improvements in the use of antibiotics, and the priority given to hospitals to reduce healthcare associated infections (HCAI) with strict targets. For example, the frequency of HCAI dropped from 8.2% of patients in hospitals in England, in a study carried out in 2006, to 6.4% in 2011.[72] The two main types of infection originally focused on were MRSA and Clostridium difficile. MRSA is a bug that lives on the skin and in the nostrils and throat (even in many healthy people), so it can easily infect wounds and gain access to the blood stream. It is resistant to many of the antibiotics that we commonly use, so it can be very difficult to treat, and this can have serious consequences in people who are already unwell. Clostridium difficile can also live in healthy people, and is usually found in the gut. When people become unwell and are given antibiotics, this may sometimes lead to Clostridium Difficile taking over the gut and causing profuse diarrhoea and dehydration. Both of these infections can be passed from person to person through poor hand hygiene.

In Warwickshire the number of Clostridium Difficile cases in hospitals reduced from 766 in 2008/9 to 266 cases in 2012/13 (Figure 15). [73] The number of MRSA infections of the bloodstream has reduced from 38 cases to 7 cases per year in hospital settings between 2008/9 and 2013/14 (Figure 16).[74] However, a significant proportion of the Clostridium Difficile cases in 2013/14 were brought into hospital from the community, rather than being related to the hospital stay itself. Although the rate of infection in Warwickshire is higher than the West Midlands for both of these infections, these figures do not take into account the older population in Warwickshire, who are more vulnerable to infection. Handwashing in places of care and education, such as hospitals, care homes, schools and nurseries, is of particular importance. This is because of the ease with which infections are spread when there are a lot of people in close proximity to each other, especially those who may be vulnerable to infections.

Infection control measures become even more important over the winter period due to an increase in the circulation of tummy bugs such as Norovirus, as well as colds and flu. Norovirus is a highly infectious illness which causes projectile vomiting and diarrhoea.[75] The virus particles can stay in the environment for several days or even weeks. Although cleaning hands using alcohol based rubs is effective for reducing the risk of passing on some infections it does not work against Norovirus or Clostridium Difficile, and is less effective if hands are visibly dirty or contaminated. This is why hand washing with soap and water is a fundamental step in preventing the spread of these infections.

The battle against Norovirus is an ongoing one. In 2012/13 Warwickshire hospitals experienced ongoing outbreaks of Norovirus and as can be seen from the outbreak figures highlighted in Chapter 2, it is a persistent problem.

Figure 15: Rate per 100,000 population aged 2 years and over of C.difficile infection in hospitals in Warwickshire and West Midlands, 2007/08 to 2013/14
Source: Public Health England, Healthcare associated infections (HCAI), 2013

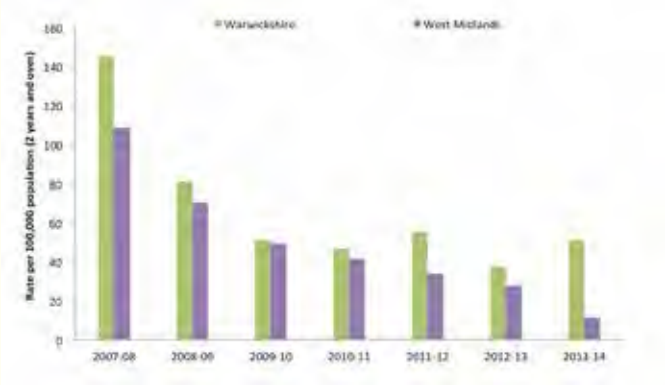


Figure 16: Rate per 100,000 population of MRSA bacteraemia in hospitals in Warwickshire and West Midlands, 2008/09 to 2013/14
Source: Public Health England, Healthcare associated infections (HCAI), 2013

However, fewer outbreaks were notified during the course of the 2013/14 winter season in Warwickshire, which is likely to be related to good planning and a relatively mild winter.

Over the course of last winter a number of campaigns were run in Warwickshire, including the 'Feel Well in Winter' campaign,[76] and a 'Say No to Norovirus' campaign.[77, 78] The latter was led by South Warwickshire Foundation Trust and was extended to cover care homes, schools and nurseries, as well as hospitals in both Warwickshire and Coventry. The message was a simple one: "Wash your hands with soap and water". The Feel Well campaign also delivered several key messages about the effectiveness of handwashing (particularly before eating and handling food, after coughing or sneezing, and after using the toilet), the importance of cleaning 'touch points' in the home, and the need to dispose of tissues properly. Vitally, it highlighted the need to defer visiting relatives in care homes or hospitals if unwell with a cold/flu or diarrhoea and vomiting, thus protecting a vulnerable population.

What is being done?

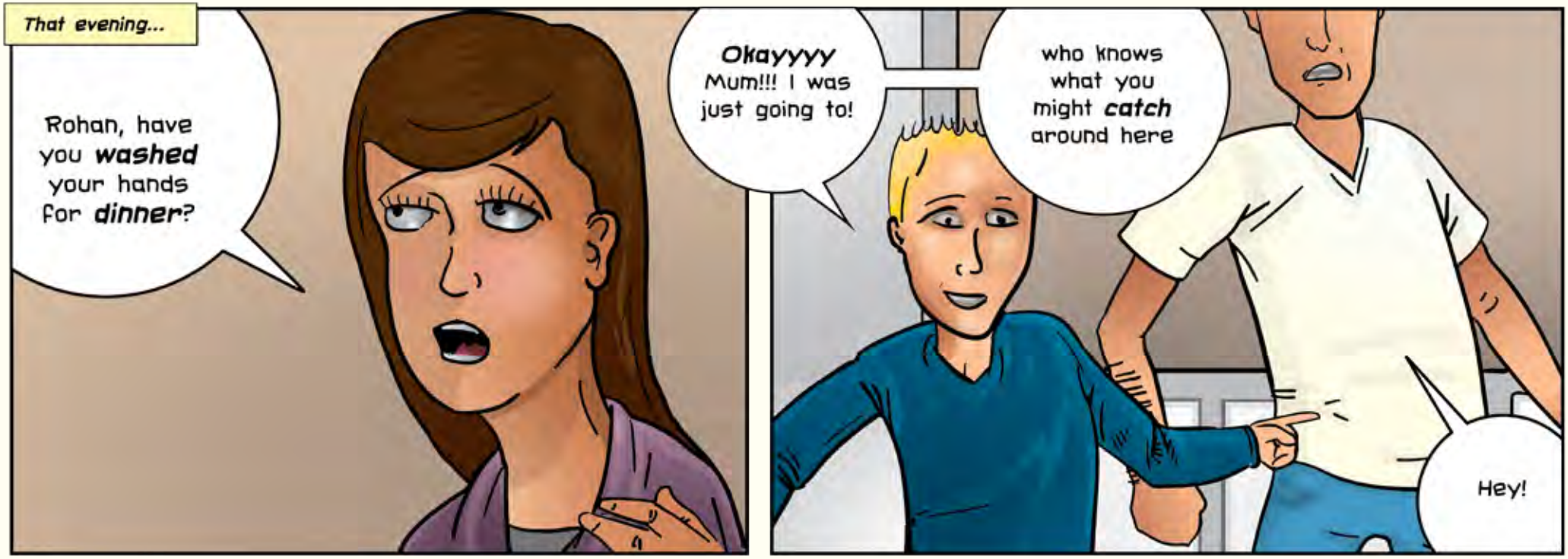
Winter campaigning which focuses on infection control particularly in relation to respiratory viruses and Norovirus.

A Norovirus plan for hospitals in Warwickshire was put in place for the winter 2013/14, and much less Norovirus activity was seen.

An infection control nurse currently provides practical support in Warwickshire to care home staff, and work is ongoing to maintain and improve infection control practices in care homes.

Ongoing work to maintain improvements in numbers of healthcare associated infections acquired in hospitals in Warwickshire.

> Washing hands with soap and water is one of the most effective ways of reducing the spread of infections.



RECOMMENDATIONS

HANDWASHING AND PREVENTING INFECTIONS

Develop plans to embed teaching about infections and the importance of handwashing in school curricula.

Ensure infection control features in all contracts held with clinical or care providers, including primary and secondary care, social care, as well as licensed food venues, and ensure that contractual obligations are being met.

Maintain improvements in hospital and care home infection control, through providing regular feedback to staff regarding the outcomes of infection control audits.[10]

Partners to work together to implement the recommendations of the Chief Medical Officer's Antimicrobial Resistance Strategy.[11]

CHAPTER 8: SEASONAL FLU

The nature of the challenge

For healthy people, Seasonal Influenza (flu) can be unpleasant, with most people recovering within a week. However, for some people flu can be more severe and lead to complications. Free NHS flu vaccination by injection, commonly known as the 'flu jab' is offered every year to protect people most at risk of the flu and its complications. This includes:

- Anyone aged 65 or over
- Adults and children with chronic underlying health conditions
- Pregnant women
- Adults and children with weakened immune systems

Vaccination is also offered to people who are likely to be in contact with vulnerable populations. This includes carers and health and social care employees who deliver patient care. In 2013/14 a new nasal spray vaccination was offered to all children aged 2 and 3 that not only protects them, but also helps to prevent the spread of flu to their family and wider community. Over time, as the programme rolls out, all children between the ages of 2 and 16 will be vaccinated against flu each year with the nasal spray.

A new vaccination formula is developed each year, based on the strains of flu most likely to circulate in the colder months, meaning that eligible people need to get a new vaccination every year to ensure that they are protected. In Warwickshire, one in three people were entitled to a free NHS flu vaccination in 2013/14. Vaccinations were provided at pharmacies and GP practices across Warwickshire.

With the transfer of Public Health to Local Authorities (LAs) in April 2013, the responsibility for assurance of effective immunisation programmes locally sits with the LA Director of Public Health (DPH).[79] In 2013/14, Warwickshire County Council undertook a programme of assurance and promotion to maximise uptake of flu vaccination in Warwickshire, which is described below.

Who had their flu vaccination in 2013/14?

Flu vaccinations were provided in pharmacies and through GP practices aligned to three Clinical Commissioning Groups (CCGs) – South Warwickshire CCG (Stratford District and Warwick District), Warwickshire North CCG (Nuneaton and Bedworth Borough and North Warwickshire Borough) and Coventry and Rugby CCG (Rugby Borough). Data for flu vaccination uptake is provided by CCG area.

Table 5 shows the percentage uptake by CCG area for each patient group. The range (lowest uptake and highest uptake by GP practice) is also provided for people over 65, those clinically at risk, and pregnant women.

Although the over 65s in South Warwickshire were the only group to achieve over the national 75% target, many individual practices across all areas had uptakes in excess of 75% for over 65s, those clinically at risk, and pregnant women.

Table 5: Seasonal flu vaccination uptake, Clinical Commissioning Groups in Warwickshire, West Midlands & England, 2013/14
Source: Public Health England (2014) Seasonal flu vaccine uptake 2013/14 in GP registered patients for flu vaccinations given from 1 September 2013 to 31 January 2014 in England

Area	Aged 65 and over % age and range	Clinical at risk (6 months to 65 years) % age and range	Pregnant women % age and range	Age 2 (not including clinical at risk) % age and range	Age 3 (not including clinical at risk) % age and range
South Warwickshire CCG	77.4% (57%-83%)	59.4% (38-70%)	47.7% (26%-73%)	55.80%	49.90%
Warwickshire North CCG	72.0% (69%-88%)	53.5% (45%-80%)	42.8% (29%-80%)	35.70%	33.40%
Coventry & Rugby CCG	73.0% (60%-89%)	57% (39%-82%)	44.2% (23%-79%)	39.30%	39%
Regional Uptake	**73.9%**	**55.9%**	**41.8%**	**42.9%**	**40.7%**
England Uptake	**73.2%**	**52.3%**	**39.8%**	**42.2%**	**38.9%**

Across Warwickshire and Coventry:

- A total of 121,591 (74.3%) of over 65s were vaccinated.
- 5239 (45%) of pregnant women received a vaccination, including 64% of at risk pregnant women (e.g. pregnant women with diabetes and other clinical conditions)
- Uptake in clinically at risk adults is higher than in children. 58% of 16-65 year olds received a vaccination compared to 48% of 2-16 year olds, and 33% of 6 month to 2 year olds.
- Almost 2000 (52%) registered carers in Warwickshire received a vaccination.

It is difficult to compare uptake with previous years as reporting has changed from countywide to CCG wide figures.

113 Warwickshire pharmacies were commissioned to provide NHS flu vaccinations. The Local Authority advocated for pharmacies to be commissioned to provide flu vaccination in 2013/14 based on evidence and evaluation of a local pilot pharmacy scheme.

Pharmacies vaccinated a total of 5257 eligible residents in Coventry, Warwickshire, Herefordshire and Worcestershire, including 110 pregnant women. Although this is a small number compared to the number vaccinated in General Practice, it is important as it represents a number of people that may not have accessed vaccination otherwise. Reasons for choosing pharmacies included more convenience and being unable to attend their GP, with 488 stating that they had never had a flu vaccination before.

Flu vaccination for health and social care workers is also recommended, and provides benefits including reducing the chances for flu to spread to vulnerable people and reducing sickness absence through winter.

Employers are responsible for funding flu vaccination for staff. At Warwickshire County Council, 280 staff members who provided direct patient care were identified in the workforce and offered vouchers for flu vaccinations at local venues. This was funded by Public Health. Staff were invited to provide feedback on the voucher scheme. Twenty five responses were received with staff members commenting on the convenience of the service. Some staff who were entitled to free NHS flu vaccinations returned vouchers.

Improvements were seen in the uptake of seasonal flu vaccination among staff in hospitals in Warwickshire, with 51.4% of frontline staff in South Warwickshire Foundation Trust being vaccinated (compared with 37.3% in 2012/13), 56.6% of frontline staff in George Eliot Hospital NHS Trust (compared with 43.6%), and 57.9% in UHCW (compared with 46.5%). It is essential that these improvements continue.

What is currently being done?

For the flu season in 2013/14, the role of Warwickshire County Council included:

Ensuring the availability of convenient opportunities for people to be immunised through advocating for pharmacy provision.

Supporting the plans of GP practices by providing information about the numbers they needed to vaccinate.
Writing to care home and home care services managers expressing the importance of ensuring their staff were vaccinated.

Providing vouchers for pharmacy flu vaccinations for all directly employed Local Authority health and social care staff.

Delivering a promotional campaign through health and Local Authority partners. The campaign used materials that had been developed through a regional campaign and adapted with local information. The messages and images had been tested on audiences and this meant that additional time and money was not spent on developing new resources. A website with information for each target group was developed and materials were distributed to pharmacies, GP practices, libraries, sports centres, children's centres and hospitals. Real life experiences of Warwickshire residents were shared with local media and resulted in an interview on local BBC TV news, a local radio interview and articles in local press. (Sample material, right).

An evaluation of the assurance and promotional campaign in 2013/14 is being undertaken in partnership with Coventry University and the NHS England Screening and Immunisation Team. The evaluation uses views and opinions of people providing flu vaccination, people entitled to flu vaccination (qualitative research), and evidence from flu vaccination programmes across the world to provide practical recommendations to plan the future delivery of Local Authority vaccination assurance.

RECOMMENDATIONS

SEASONAL FLU

Commissioners of health and social care providers to have seasonal flu vaccination of staff identified as a "duty of care" priority in their contracts.[12]

Support is required from all partners for the seasonal flu campaign for 2014/15, to ensure it is based on "what worked" from the 2013/2014 campaign, with a continued focus on clinical risk groups under the age of 65, pregnant women, carers, children and health and social care staff.

PROTECTING YOUR HEALTH: WHAT CAN YOU DO?

Always wash your hands with soap and water after going to the toilet, after touching animals, before eating food and after you have coughed or sneezed, to protect you and your family from tummy and cold and flu viruses.

Check that you and your children are up to date with your immunisations. It is the best way to protect you and your family from some serious illnesses.[81]

1 in 3 people in Warwickshire are entitled to a free flu vaccination. If you are aged 65 years or over, have a chronic health condition, are pregnant, are a carer, or have children aged 2, 3, or 4, make sure you get immunised before the winter. Vaccinations are available from September each year. [82]

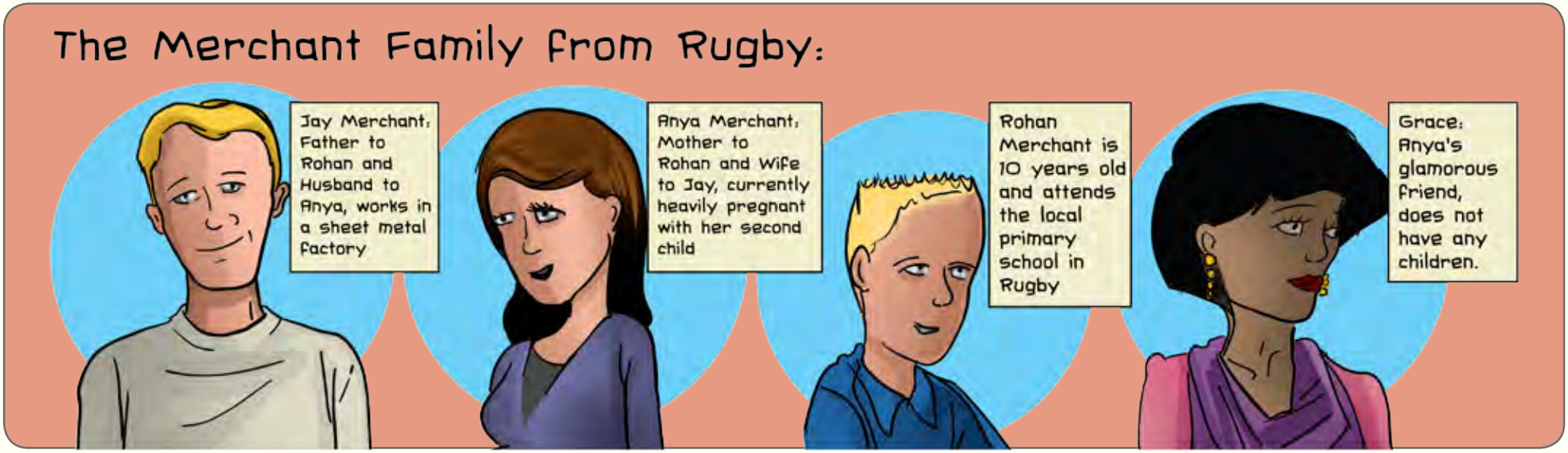
Are you ready for your screen test? Screening can save lives. Find out about screening programmes and how you can be screened.[56-65, 83-85]

Reduce the risk of getting a Sexually Transmitted Infection and stay safe in your relationships by using a condom. Find out how you can get screened for infections and what other contraceptive options might be good for you.[79]

Make sure you stay safe when you are travelling abroad. See your GP or go to a travel clinic at least 6 weeks before you go away for advice and any immunisations or medications you may need to take.[86]

Get informed about the symptoms of TB, and whether you might be at risk of Hepatitis B or C - talk to your GP if you are concerned. [4, 7, 8, 87-90]

Protect yourselves by keeping warm and well this winter, and looking after neighbours.[40] Keep your home warm, and find out the best way to do that and what support is available by ringing Act on Energy on 0800 988 2881.



The characters in this story are fictitious and bear no relation to any persons living or dead.

APPENDIX 1: ANNUAL REVIEW

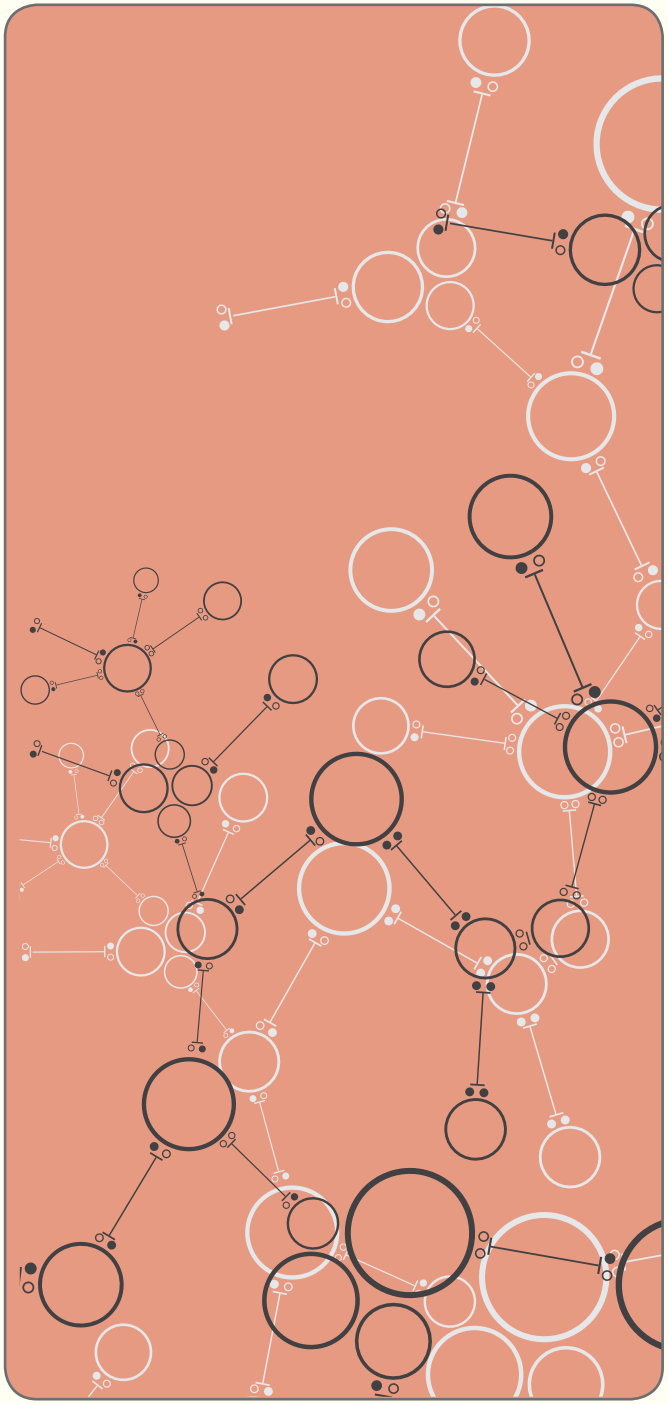
- We received visits from Duncan Selbie, Chief Executive, Public Health England, in March and June 2014. His feedback to the Council was very positive describing a "first class public health team" and "much to be proud of".

- We continue to advise the three Warwickshire Clinical Commissioning Groups and five District and Borough Councils on Public Health issues. All are fully engaged in the JSNA, Health and Wellbeing Board and Strategy development.

- Working with the People Group we have established the Living Well with Dementia Portal (www.livingwellwithdementia.org). This is a one stop shop for information and support for people with dementia, carers, professionals and the public. It has been widely praised (including by Prime Minister David Cameron).

- Reading Well Books on Prescription is a service developed with Warwickshire Library Service. This offers a range of self-help books and CDs (including electronic downloads) on issues such as depression, stress and anxiety. Over 2011/12 almost 20,000 items were loaned as part of the scheme.

- We are an active training department with junior doctors, GP trainees, apprentices and a range of other Public Health trainees. A recent Health Education England Inspection rated the Department as excellent for Education and Training.



Achievements The following data is for the financial year 2013/14

Health Protection:

- **121,591** people (74.3%) aged 65 and over were immunised against seasonal flu across Warwickshire and Coventry
- **2,000** (52%) carers in Warwickshire received their seasonal flu immunisation
- **5,802** one year old babies were fully immunised against serious infection
- **2,689** girls have been fully immunised against HPV, the virus that causes cervical cancer
- Well over **95%** of all children are fully immunised against serious infection, some of best results in the West Midlands
- Public Health England, Environmental Health and NHS colleagues, managed **1,072** cases and 109 communicable disease outbreaks and incidents
- **32,500** people were treated in sexual health services
- **178,067** users engaged with our Respect Yourself website

121,591

people (74.3%) aged 65 and over were immunised against seasonal flu across Warwickshire and Coventry

Health Improvement

- **2,742** 4-week smoking quitters and **6,243** setting a quit date in 2013-14
- **2,320** people have been treated for alcohol and drug misuse
- All practices in Warwickshire are now delivering NHS Health Checks
- **10,877** NHS Health Checks have been carried out and 442 people with an undiagnosed chronic health condition
- **11,000** children were weighed as part of the National Child Measurement Programme (99% of Reception age children and 97% of Year 6 children)
- **877** referrals have been made to the Exercise on Referral programme with 247 completed and 483 still in progress
- **746** families of primary school age children took up the family Change4life service (around weight management)
- **2,004** walkers registered for the walking schemes as part of the exercise on referral project
- **257** children completed a 9 week structured weight management programme as well as 164 parents/carers
- **70.6%** of mothers initiated breastfeeding

2,742

4-week smoking quitters and

6,243

setting a quitting date in 2013-14

Mental Health and Wellbeing

- Working with Learning and Development (Warwickshire County Council), Public Health England and Health Education England we have developed an e-learning package to increase the skills of Making Every Contact Count with **1,002** NHS staff trained in MECC this year
- **932** individual appointments were provided to people through our Wellbeing Hubs to support their mental wellbeing (additional sessions were also provided through People Group contracts)
- **108** people with severe and enduring mental illness were supported to remain in work, and a further 39 individuals were supported to obtain paid employment (contract also with People Group)
- **987** instances of engagement with people using mental health services to seek their views and opinions about local mental health strategies, services and plans (contract also with People Group)
- **82** people received direct advocacy support to help them to complain about the treatment or care they received from the NHS
- We have developed a Warwickshire Public Mental Health and Wellbeing Strategy for 2014-16 which lists the three tier approach - promotion of mental health wellbeing, prevention and early intervention
- We worked with Warwickshire County Council colleagues to launch the Coventry and Warwickshire Living Well with Dementia Portal. Over **7,000** unique users accessed the pages between November 2013 and January 2014 with excellent feedback
- The Dementia Friendly Communities DVD has also been launched recently and has been used to raise awareness of Dementia Friendly Communities in Warwickshire

108

people with severe and enduring mental illness were supported to remain in work

Wider Determinants

• We hosted the second annual conference in December 2013 to promote closer working relationships between Public Health, Environmental Health, Trading Standards, Planning Licensing and Transport with over 100 delegates participating

• Over **1,000** people attended and participated in the two Big Day Outs that we coordinated with partners (September 2013 and April 2014)

• We work closely with the Districts & Borough councils to influence the planning decisions being made as these can influence physical and mental health as well as reduce inequalities. This is done through commissioning Health Impact Assessments and evidence reviews to support Local Plans

• We are building strong working relationships with District & Borough Housing departments through shadowing, involvement in the development of local Housing Strategies and delivering MECC training to housing officers

• We have developed four measured mile routes in Alcester - two link in with the newly built health centre

• We received a **£20,000** grant from the Ministry of Defence to to develop the 'Service to Civvy Street' project and due to its success, we have been asked to share the booklet with other Local Authorities in the West Midlands

• **170,000** 'Thermocards' were distributed as part of the Warm and Well in Warwickshire campaign to GPs, Libraries, Children Centres, Wellbeing Hubs, Ambulance Service, Fire & Rescue, Hospital Social Workers, Age UK, Reablement Team and Act on Energy

• We continue to provide health responses on behalf of the county with regards to the proposed HS2

• We are working with our partners in the county to streamline and prioritise our commissioning of the third sector

• We sit on the Warwickshire Financial Inclusion Partnership Board and subgroups to tackle poverty across the county

• We regularly present relevant local health information at community forums with the most recent ones being earlier this year

• We are responding to concerns from the public on air quality and working with stakeholders on ways forward.

Population Health

• We are an active partner on the Joint Strategic Needs Assessment (JSNA) Commissioning Group; promoting the JSNA across the County including; taking a lead on a number of Needs Assessments and developing a matrix to prioritise individual needs assessments

• We co-produced the 2013/14 JSNA Annual Update endorsed by the Health and Wellbeing Board

• The three year review of the JSNA has been launched with a stakeholder event in April and June

• We worked in partnership with Warwickshire Observatory to carry out the 'Living in Warwickshire Survey' with over **7,600** surveys completed (a response rate of 30%) to allow us to fill gaps in our knowledge around local people's needs

• We have developed the Warwickshire Health & Wellbeing Portal which provides a source of information to practitioners in Warwickshire with information about public health services available, this will be launched across the County in the Summer 2014

• We have developed, and are continuing to enhance "locality" health profiles that pull together local health intelligence at lower level geographical area within the County

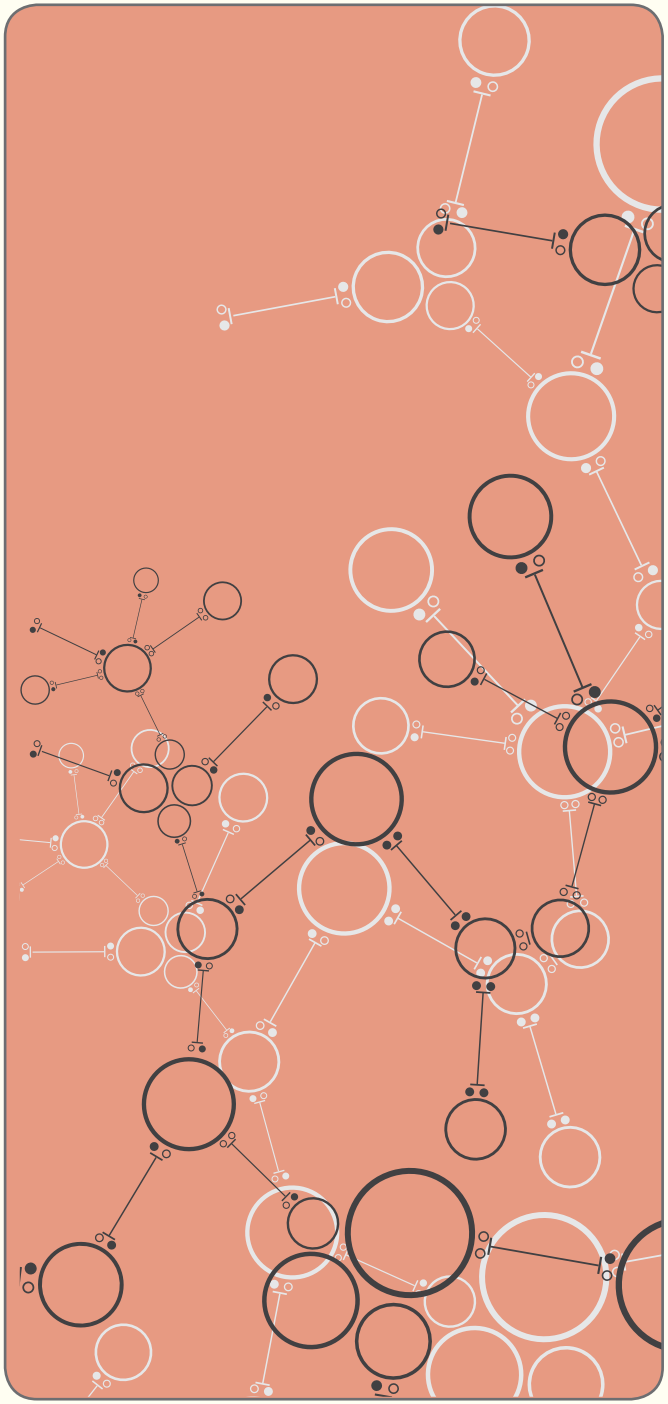
• We are embarking on a detailed piece of research around the impacts of the welfare reform in conjunction with Healthwatch as part of the JSNA work

• We supported the Health and Wellbeing Board to develop a performance dashboard to monitor key outcomes highlighted through the Interim Health and Wellbeing Strategy

• We have continued to update and develop the Public Health and Health and Wellbeing Board websites

7,600

'Living in Warwickshire' surveys completed



APPENDIX 2: HEALTH PROFILE FOR WARWICKSHIRE

While there are still significant health concerns within Warwickshire as highlighted in the updated Health Profile (Table 1) major achievements have been made in core areas of public health during the last 12 months in Warwickshire.

Health Profile

Domain	Indicator	Warwickshire 2013	England 2013	Trend	Variation across Districts	Data
Communities	Deprivation	5.8	20.3	↓	0.0 – 18.9	% living in deprivation
	Children in poverty	14.6	21.1	↓	10.5 – 20.4	%
	Statutory homelessness	1.9	2.3	↑	0.8 – 2.7	Rate per 1,000 households
	GCSE achieved (5A*-C inc Eng & Maths)	63.0	59.0	↑	53.8 – 69.4.8	%
	Violent Crime	9.6	13.6	↓	6.4 – 13.6	Rate per 1,000
	Long term unemployment	4.7	9.5	↑	2 – 8.3	Rate per 1,000
Children's and Young People	Smoking in pregnancy	19.7	13.3	↑	19.7	%
	Breast feeding initiation	72.7	74.8	↑	72.7	%
	Obese children (Year 6)	17.4	19.2	↑	14.3 – 19.9	%
	Alcohol-specific hospital stays (under 18)	63.9	61.8	→	44.1 – 82.1	Rate per 100,000
	Teenage pregnancy (under 18)	33.5	34.0	↓	23.4 – 47.6	Rate per 1,000
Adult's Health and Lifestyle	Adults smoking	19.1	20.0	→	12.8 – 22.9	%
	Increasing & higher risk drinking	23.3	22.3	→	22.1 – 116.5	%
	Healthy eating adults	28.2	28.2	→	22.6 – 32.6	%
	Physically active adults	55.3	55.3	↑	52.8 – 58.4	%
	Obese adults	25.5	25.5	→	21.4 – 29.8	%

Health Profile contd

Domain	Indicator	Warwickshire 2013	England 2013	Trend	Variation across Districts	Data
Disease and Poor Health	Incidence of malignant melanoma	14.0	14.5	↑	6.6 – 18.1	Rate per 100,000
	Hospital stays for self-harm	212.3	207.9	↑	162.3 – 312.6	Rate per 100,000
	Hospital stays for alcohol related harm	1,693	1,895	→	1,519 – 1,935	Rate per 100,000
	Drug misuse	6.2	8.6	→	3.3 – 8.4	Rate per 1,000
	People diagnosed with diabetes	5.4	5.8	→	4.8 – 6.7	%
	New cases of tuberculosis	8.8	15.4	↓		Rate per 100,000
	Acute sexually transmitted infections	612	804	↓	456 – 825	Rate per 100,000
	Hip fracture in over-65s	442	457	↓	425 - 491	Rate per 100,000
Life Expectancy and Causes of Death	Excess winter deaths	18.2	19.1	↑	15.2 – 21.3	Ratio
	Life expectancy – male	79.5	78.9	↑	77.7 – 80.7	Years at birth
	Life expectancy – female	83.5	82.9	↑	82.2 – 84.5	Years at birth
	Infant deaths	5.0	4.3	→	3.8 – 7.7	Rate per 1,000
	Smoking related deaths	162	201	↓	135 – 204	Rate per 100,000
	Early deaths: heart disease & stroke	52.8	60.9	↓	38.3 – 68.4	Rate per 100,000
	Early deaths: cancer	100.8	108.1	↓	90.8 – 111.8	Rate per 100,000
	Road injuries and deaths	56.5	41.9	↓	38.7 – 91.8	Rate per 100,000
Health Protection	Chlamydia	156.2	132.9	n/a	111.1 - 225.8	Rate per 100,000
	Gonorrhoea	23.2	25.1	n/a	7.5 – 118.5	Rate per 100,000
	Syphilis	2.2	3.1	n/a	0.8 – 6.0	Rate per 100,000
	Herpes	60.4	59.9	n/a	48.1 – 77.9	Rate per 100,000
	Warts	131.8	134.8	n/a	77.2 – 158.8	Rate per 100,000
	Flu Vaccinations in over 65s			↑	59.6-89.9	%

Finances

Many of the achievements of the last 12 months have been possible through services directly commissioned from the public health budget. A summary is provided below.
The grant for Public Health in 2013/14 was £21.2million and this ring-fence applies until 2016/17. In 2014/15, the Public Health grant has increased by £600,000 to £21.8million.
Public Health Warwickshire has a mandatory duty to provide key services as part of their Public Health responsibilities (clause 14 of the Health and Social Care Act 2014):

- **Child Measurement Programme**
- **NHS Health Checks**
- **Open access and confident Sexual Health services**
- **Healthcare Public Health advice to NHS commissioners**
- **Steps to protect the health of the local population**

As part of the transfer of Public Health Warwickshire into Warwickshire County Council, we agreed to fully review all commissioning activity to ensure that services support the wider inequalities agenda and that they target those in greatest need. This is a two year programme of work and it was agreed that any funds released from decommissioning services would be reinvested in agreed Public Health priorities. These include: Mental Health and Wellbeing, weight management and children's services.

In addition, £500,000 was held back as a contingency to meet prescribing and dispensing costs for Drugs and Alcohol and Smoking Cessation. In both cases, there was a lack of clarity over whether costs should be met by Warwickshire County Council or the National Health Service.

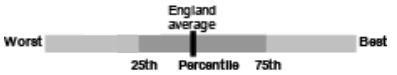
Public Health Warwickshire Finances, 2013/14

Source: Public Health and Warwickshire County Council Finance, 2014

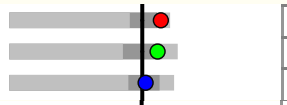
Services	Agreed budget £'000	Agreed changes £'000	Latest budget £'000	Final outturn £'000	Variation Over/(under) £'000
Public Health Leadership Management	2,636	(997)	1,519	1,519	(120)
Health Improvement	15,457	(138)	14,288	14,288	(1,031)
Health Protection	135	0	228	228	93
Population Health	32	25	47	47	(10)
Wider Determinants	3,786	1,060	3,774	3,774	(1,072)
Net service spending	**22,046**	**(50)**	**21,996**	**19856**	**(2,140)**

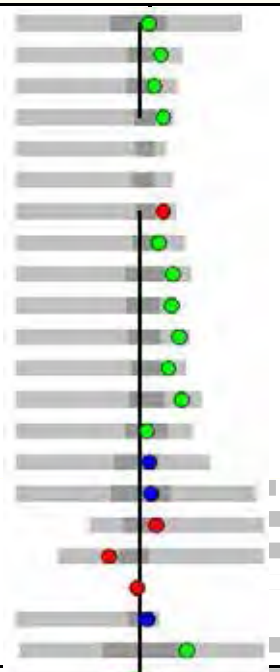
APPENDIX 3: THE PUBLIC HEALTH OUTCOMES FRAMEWORK - WARWICKSHIRE INDICATORS

- Significantly better than England average
- Not significantly different from England average
- Significantly worse than England average
- No significance can be calculated



		Indicator	Local Numbe	Local Value	Eng Avg	Eng Worst	England Range	Eng Best
Overarching	1	Healthy life expectancy at birth (males) (years)	n/a	66.4	63.2	55.0		70.3
	2	Healthy life expectancy at birth (females) (years)	n/a	66.3	64.2	54.1		72.1
	3	Life Expectancy at birth (males) (years)	n/a	79.8	79.2	74.0		82.1
	4	Life Expectancy at birth (females) (years)	n/a	83.8	83.0	79.5		85.9
	5	Gap in life expectancy at birth between each local authority and England as a whole (males) (years)	n/a	0.6	0.0	2.9		2.9
	6	Gap in life expectancy at birth between each local authority and England as a whole (females) (years)	n/a	0.8	0.0	2.9		2.9
Wider Determinants	7	Children in poverty (all dependent children under 20) (%)	15315	13.5	20.1	6.6		46.1
	8	Children in poverty (under 16s) (%)	13600	14.1	20.6	6.9		43.6
	9	School Readiness: Children achieving a good level of development at the end of reception (%)	2837	44.9	51.7	27.7		69.0
	10	School Readiness: Children with free school meal status achieving a good level of development at end of reception (%)	206	26.2	36.2	17.8		60.0
	11	School Readiness: Year 1 pupils achieving the expected level in the phonics screening check (%)	4346	71.7	69.1	58.8		79.0
	12	School Readiness: Year 1 pupils with free school meals achieving the expected level in the phonics screening check (%)	379	54.1	55.8	37.2		70.9
	13	Pupil absence (%)	976210	4.9	5.1	4.3		6.7
	14	First time entrants to the youth justice system (rate per 100,000)	190	370.9	537.0	151.0		1427.0
	15	16-18 year olds not in education employment or training (%)	660	3.6	5.8	2.0		10.5
	16	Adults with a learning disability who live in stable and appropriate accommodation (%)	810	72.6	73.5	96.6		96.6
	17	% of adults in contact with secondary mental health services who live in stable and appropriate accommodation (%)	1970	73.1	58.5	94.1		94.1
	18	Gap in the employment rate between those with a long-term health condition and the overall employment rate	n/a	9.5	7.1	21.7		21.7
	19	Gap in the employment rate between those with a learning disability and the overall employment rate	n/a	68.9	63.2	73.1		73.1
	20	Gap in the employment rate for those in contact with secondary mental health services and the overall employment rate	n/a	55.3	62.3	75.1		75.1
	21	Sickness absence - The percentage of employees who had at least one day off in the previous week (%)	n/a	1.3	2.2	0.6		3.5
	22	Sickness absence - The percent of working days lost due to sickness absence (%)	n/a	0.7	1.5	0.3		2.7
	23	Killed and seriously injured casualties on England's roads (rate per 100,000)	913	55.7	40.5	16.9		81.8
	24	Domestic Abuse (rate per 1,000)	n/a	17.1	18.8	30.2		5.6
	25	Violent crime (including sexual violence) - hospital admissions for violence (rate per 100,000)	708	43.2	57.6	9.3		167.8
	26	Violent crime (including sexual violence) - violence offences per 1,000 population	4188	7.7	10.6	27.1		4.1
	27	Violent crime (including sexual violence) - Rate of sexual offences per 1,000 population	380	0.7	0.8	2.0		0.3
	28	Re-offending levels - percentage of offenders who re-offend (%)	888	21.4	26.9	36.3		14.4
	29	Re-offending levels - average number of re-offences per offender	2371	0.6	0.8	1.3		0.3
	30	The percentage of the population affected by noise - Number of complaints about noise	3436	6.3	7.5	2.5		58.4

	31	Population exposed to road, rail and air transport noise of 65 dB(A) or more, during the daytime (%)	10730	2.0	5.4	29.8		29.8
	32	Population exposed to road, rail and air transport noise of 55 dB(A) or more during the night-time (%)	39900	7.6	12.8	57.5		57.5
	33	Statutory homelessness - homelessness acceptances (rate per 1,000)	510	2.1	2.4	11.4		0.2
	34	Statutory homelessness - households in temporary accommodation (rate per 1,000)	70	0.3	2.4	0.0		33.2
	35	Utilisation of outdoor space for exercise/health reasons (%)	n/a	14.0	15.3	0.5		41.2
	36	Fuel Poverty (%)	30120	13.0	10.9	3.8		18.0
	37	Social Isolation: adult social care users who have as much social contact as they would like (%)	n/a	44.5	43.2	31.9		53.5
	38	Loneliness and Isolation in adult carers (%)	n/a	40.3	41.3	58.5		23.9
Health Improvement	39	Low birth weight of term babies (%)	146	2.5	2.8	1.6		5.3
	40	Breastfeeding - Breastfeeding initiation (%)	4232	71.9	73.9	40.8		94.7
	41	Breastfeeding - Breastfeeding prevalence at 6-8 weeks after birth (%)	2716	45.1	47.2	17.5		83.3
	42	Smoking status at time of delivery (%)	1033	17.6	12.7	2.3		30.8
	43	Under 18 conceptions (rate per 1,000)	234	24.3	27.7	14.2		52.0
	44	Under 18 conceptions: conceptions in those aged under 16 (rate per 1,000)	43	4.6	5.6	2.0		-
	45	Excess weight in 4-5 and 10-11 year olds - 4-5 year olds (%)	1197	20.0	22.2	16.1		-
	46	Excess weight in 4-5 and 10-11 year olds - 10-11 year olds (%)	1567	30.9	33.3	24.1		44.2
	47	Hospital admissions from unintentional and deliberate injuries in children (aged 0-14 years) (per 10,000)	994	108.1	103.8	61.7		191.3
	48	Hospital admissions from unintentional and deliberate injuries in children (aged 0-4 years) (per 10,000)	461	146.1	134.7	76.0		282.4
	49	Hospital admissions from unintentional and deliberate injuries in young people (aged 15-24) (per 10,000)	892	136.4	130.7	63.8		277.3
	50	Emotional well-being of looked after children	n/a	13.3	14.0	21.5		21.5
	51	Excess Weight in Adults (%)	907	64.8	63.8	45.9		74.4
	52	Percentage of physically active and inactive adults - active adults	n/a	55.3	56.0	43.8		68.5
	53	Percentage of active and inactive adults - inactive adults	n/a	27.0	28.5	18.2		40.2
	54	Smoking Prevalence (%)	n/a	17.9	19.5	12.1		29.8
	55	Smoking prevalence - routine & manual (%)	n/a	29.2	29.7	14.2		44.3
	56	Successful completion of drug treatment - opiate users (%)	65	6.4	8.2	3.8		17.6
	57	Successful completion of drug treatment - non-opiate users (%)	38	29.9	40.2	17.4		68.4
	58	Recorded diabetes (%)	25929	5.7	6.0	8.4		8.4
	59	Alcohol related admissions to hospital	3134	575.8	636.9	365.0		1121.0
	60	Cancer screening coverage - breast cancer 9%)	48802	78.3	76.3	58.2		84.5
	61	Cancer screening coverage - cervical cancer (%)	104323	75.3	73.9	58.6		79.9
	62	Access to non-cancer screening programmes - diabetic retinopathy (%)	17909	86.4	80.9	66.7		95.0
	63	Take up of NHS Health Check Programme by those eligible - health check offered (%)	12668	7.7	16.5	0.7		42.5
	64	Take up of NHS Health Check programme by those eligible - health check take up (%)	5679	44.8	49.1	7.7		100.0
	65	Self-reported well-being - people with a low satisfaction score (%)	n/a	5.1	5.8	3.4		10.1
	66	Self-reported well-being - people with a low worthwhile score (%)	n/a	n/a	4.4	2.9		2.9
	67	Self-reported well-being - people with a low happiness score (%)	n/a	7.8	10.4	5.5		15.8
	68	Self-reported well-being - people with a high anxiety score (%)	n/a	17.6	21.0	10.9		29.0
	69	Injuries due to falls in people aged 65 and over (rate per 100,000)	2062	1899.1	2011.0	1178.0		3508.0
	70	Injuries due to falls in people aged 65 and over - aged 65-79 (rate per 100,000)	678	912.8	975.0	544.0		1826.0
	71	Injuries due to falls in people aged 65 and over - aged 80+ (rate per 100,000)	1384	4759.5	5015.3	2876.0		9119.0

Health Protection	72	Fraction of mortality attributable to particulate air pollution (%)	n/a	5.2	5.4	8.3		8.3
	73	Chlamydia diagnoses (15-24 year olds) - Old NCSP data (rate per 100,000)	927	1472.5	2124.6	5995.0		783.0
	74	Chlamydia diagnoses (15-24 year olds) - CTAD (rate per 100,000)	972	1484.9	1979.1	6132.0		703.0
	75	Population vaccination coverage - Dtap / IPV / Hib (1 year old) (%)	5745	97.7	94.7	79.0		99.0
	76	Population vaccination coverage - Dtap / IPV / Hib (2 years old) (%)	5815	98.7	96.3	81.9		99.4
	77	Population vaccination coverage - MenC (%)	5714	97.2	93.9	75.9		98.8
	78	Population vaccination coverage - PCV (%)	5725	97.4	94.4	78.7		99.0
	79	Population vaccination coverage - Hib / Men C booster (5 years) (%)	5473	95.0	92.7	77.0		98.3
	80	Population vaccination coverage - Hib / MenC booster (2 years old) (%)	5636	95.7	91.5	75.7		98.1
	81	Population vaccination coverage - PCV booster (%)	5711	97.0	92.5	75.1		97.5
	82	Population vaccination coverage - MMR for one dose (2 years old) (%)	5717	97.1	92.3	77.4		98.4
	83	Population vaccination coverage - MMR for one dose (5 years old) (%)	5565	96.6	93.9	82.1		98.3
	84	Population vaccination coverage - MMR for two doses (5 years old) (%)	5420	94.1	87.7	68.9		97.0
	85	Population vaccination coverage - HPV (%)	2616	87.4	86.1	62.1		96.2
	86	Population vaccination coverage - PPV (%)	69560	70.2	69.1	55.3		77.0
	87	Population vaccination coverage - Flu (aged 65+) (%)	79150	74.1	73.4	65.5		80.8
	88	Population vaccination coverage - Flu (at risk individuals) (%)	27831	53.6	51.3	44.2		68.8
	89	People presenting with HIV at a late stage of infection (%)	24	60.0	48.3	80.0		0.0
	90	Treatment completion for TB (%)	n/a	84.4	82.8	0.0		0.0
	91	Incidence of TB (rate per 100,000)	49	8.9	15.1	112.3		0.0
	92	NHS organisations with a board approved sustainable development management plan (%)	3	42.9	59.0	100.0		100.0
Healthcare & Premature Mortality	93	Infant mortality (rate per 1,000)	75	4.0	4.1	1.1		7.5
	94	Tooth decay in children aged 5	n/a	0.6	0.9	0.4		2.1
	95	Mortality rate from causes considered preventable (rate per 100,000)	2655	166.9	187.8	136.2		340.5
	96	Under 75 mortality rate from all cardiovascular diseases (rate per 100,000)	1029	71.5	81.1	55.7		144.7
	97	Under 75 mortality rate from cardiovascular diseases considered preventable (rate per 100,000)	693	48.1	53.5	29.3		95.2
	98	Under 75 mortality rate from cancer (rate per 100,000)	1891	130.8	146.5	113.5		207.3
	99	Under 75 mortality rate from cancer considered preventable (rate per 100,000)	1026	70.9	84.9	53.8		134.9
	100	Under 75 mortality rate from liver disease (rate per 100,000)	236	16.1	18.0	10.3		41.6
	101	Under 75 mortality rate from liver disease considered preventable (rate per 100,000)	204	13.8	15.8	9.0		38.2
	102	Under 75 mortality rate from respiratory disease (rate per 100,000)	359	25.3	33.5	20.5		81.6
	103	Under 75 mortality rate from respiratory disease considered preventable (rate per 100,000)	182	12.8	17.6	7.9		45.0
	104	Mortality from communicable diseases (rate per 100,000)	938	60.4	64.8	47.0		97.9
	105	Suicide rate (rate per 100,000)	156	9.6	8.5	4.8		14.5
	106	Emergency readmissions within 30 days of discharge from hospital (%)	5955	11.2	11.8	8.8		14.5
	107	Preventable sight loss - age related macular degeneration (AMD) (rate per 100,000)	83	82.8	110.5	225.2		12.8
	108	Preventable sight loss - glaucoma (rate per 100,000)	24	8.3	12.8	34.5		3.0
	109	Preventable sight loss - diabetic eye disease (rate per 100,000)	16	3.4	3.8	15.8		0.9
	110	Preventable sight loss - sight loss certifications (rate per 100,000)	170	31.1	44.5	82.5		5.1
	111	Hip fractures in people aged 65 and over (rate per 100,000)	618	555.6	568.1	403.1		808.4
	112	Hip fractures in people aged 65 and over - aged 65-79 (rate per 100,000)	156	214.2	237.3	121.8		401.7
	113	Hip fractures in people aged 65 and over - aged 80+ (rate per 100,000)	462	1545.8	1527.6	1108.0		2150.0
	114	Excess Winter Deaths Index (Single year, all ages)	286	19.0	16.1	2.1		30.7
	115	Excess Winter Deaths Index (single year, ages 85+)	138	23.2	22.9	-7.6		53.1
	116	Estimated diagnosis rate for people with dementia (%)	n/a	n/a	48.7	n/a		n/a

APPENDIX 4: GLOSSARY

Abdominal aortic aneurysm: a weakness in the wall of the largest blood vessel that takes blood away from the heart, in this case as it passes through the tummy.

Active Disease: the disease is present in the body and is actively causing damage and symptoms.

Anaesthesia: a way of removing the feeling of pain, either by 'putting a patient to sleep' or by numbing nerves whilst the patient is awake.

Assurance: in the context of the role of the Director of Public Health refers to giving confirmation that suitable process and plans are in place.

Asymptomatic: a condition or disease that is not causing any symptoms, but may still require treatment.

Bacillius Calmette-Guerin vaccination: a vaccination to protect against tuberculosis (TB).

Cluster: groups of relatively uncommon events of diseases in a particular area and/or in a particular space in time in numbers that are believed or perceived to be greater than could be expected by chance (a possible link only, as compared to an outbreak, where link is highly probable or confirmed).

Colonoscopy: a test whereby a camera is inserted into the back passage, in order to look for any disease in the large intestine.

Commissioning: the process of ensuring that health and care services are provided so they meet the needs of the population; it includes a number of stages including assessing population needs, prioritising outcomes, procuring products and services, and evaluating outcomes. The concept of commissioning is expanding to include the way decisions are made about directing investment as well as direct service commissioning.

Communicable disease: a disease that is transmitted through direct contact (for example touching) or indirect contact (for example coughs and sneezes) with an infected individual.

Deprivation: covers a broad range of issues and refers to unmet needs caused by a lack of resources of all kinds, not just financial, and can be defined in a broad way to encompass a wide range of aspects of an individual's living conditions. These may include: employment, education, health, housing, crime and many more.

Diabetic Retinopathy: a type of eye disease that develops in people with diabetes. It is progressive and can lead to blindness.

Disseminate: to spread (usually information) widely.

Emergency: a wide range of events cause health emergencies, including natural hazards, accidents, outbreaks of disease and terrorist attacks. Emergencies can be minor events that threaten the health and lives of local communities or major events that affect the whole population.

Emergency hormonal contraception: a tablet of synthetic hormone that reduces the risk of pregnancy if taken within 72 hours (Levonelle) or 120 hours (ellaOne) of unprotected sex.

Environmental hazards: is a state of events which has the potential to threaten the surrounding natural environment and adversely affect people's health.

Epidemiology: is the study of how often diseases occur in different groups of people and why. Epidemiological information is used to plan and evaluate strategies to prevent illness and as a guide to the management of patients in whom disease has already developed.

Exposure: the process by which a biological, chemical or radiological agent comes into contact with a person in such a way that the person may develop the relative outcome, such as a disease.

Frontline health and social care services: any services that provide health care or social care support (for example GPs, hospitals and care home workers) to individuals.

Healthcare associated infections: infections that are usually picked up by patients from a hospital or healthcare environment.

Herd immunity: refers to the broader effects of vaccination in a community, and is achieved if enough members of a particular population have been vaccinated against a disease. It dramatically reduces the pathogen's ability to infect another host (or person) and in turns means that people who aren't vaccinated now have some measure of protection against the disease.

Incidence: Measures new cases of disease over a particular time period and is expressed in person-time units e.g. 2 per 1,000 people per year

Infection control: a measure taken to prevent or reduce the spread of infections. An example of this is hand washing.

Intravenous drug user: a person who deliberately injects drugs into their bloodstream (usually heroin).

Laboratory report: the result of a test after it has been processed and analysed in the laboratory e.g. Hepatitis B result after taking a blood test.

Latent infection: an infection that is present in the body, but is not actively causing damage or producing symptoms.

Measles Mumps and Rubella vaccination (MMR): a vaccination against the diseases measles, mumps and rubella.

Mortality: the number of deaths in a given population, location or other grouping of interest, usually over a particular period of time.

Norovirus: winter vomiting disease.

Outbreak: an incident in which two or more people experiencing illness are linked in time and/or place and there is a greater than expected rate of infection compared with the usual background rate for the place and time where the outbreak has occurred.

Pandemic flu: pandemics arise when a new virus emerges which is capable of spreading over a wide area, crossing international boundaries. Unlike ordinary seasonal influenza that occurs every winter in the UK, pandemic flu can occur at any time of the year.

Partner agencies: organisations which have close links and work together to deliver mutually agreed outcomes.

Poverty line: the most commonly used way to measure poverty is based on incomes. A person is considered poor if his or her income level falls below some minimum level necessary to meet basic needs. This minimum level is usually called the "poverty line". What is necessary to satisfy basic needs varies across time and societies. Therefore, poverty lines vary in time and place, and each country uses lines which are appropriate to its level of development, societal norms and values.

Prevalence: measures existing cases of disease and is expressed as a proportion e.g. 1% of the population.

Disease prevention message: a message that communicates to the general public the ways in which they can reduce the possibility of ill health by means of engaging in healthy behaviours, ensuring that they are fully vaccinated, and taking part in routine screening programmes.

Proportion: a type of ratio in which the numerator is included in the denominator. The ratio of a part to the whole, expressed as a 'decimal fraction' (e.g. 0.2), as a 'common fraction' (1 in 5 or 1/5), or as a percentage (20%).

Respiratory infection: a cough, cold or chest infection.

Respiratory: a collective word for the lungs and other organs of breathing.

Rotavirus: a common cause of tummy bug, particularly in children.

Sanitation: conditions relating to public health, especially the provision of clean drinking water and adequate sewage disposal.

Screening/screening programme: NHS national screening programmes are recommended to test whether you are at an increased risk of developing a condition that will help to catch and treat serious conditions sooner. There are different screening programmes recommended at different stages of life including during infancy and childhood, early adulthood, during pregnancy, middle years and later years.

Statutory homelessness: homelessness is often considered to apply to people 'sleeping rough'. However, most statistics on homelessness relate to statutorily homelessness i.e. those households which meet specific criteria of priority need set out in legislation (for example: Housing Act 1977, Hosing Act 1996 and the Homeless Act 2002), and to whom a homelessness duty has been accepted by a local authority. Such households are rarely homeless in the literal sense of being without a roof over their heads, but are more likely to be threatened with the loss of, or are unable to continue with, their current accommodation.

Uptake: the proportion of individuals taking or making use of something that is available e.g. the uptake of flu immunisations.

Vaccination: an injection that can be given to prevent a person being infected with a specific disease.

Vulnerable population: are defined as those at greater risk for poor health status and health care access.

NOTES

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