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Director of Public Health Annual Report 2017-18:

"Protecting the health of Medway's population: now and for the future"

Infectious diseases and foodborne illnesses

1) What is the current situation in Medway?

Reporting infectious (communicable) diseases

- Some diseases are of particular public health importance as they can spread easily to others (e.g. norovirus) or may mean that others could be at risk of becoming unwell (e.g. food poisoning). Medway Council teams (e.g. Environmental Health) and other partners (e.g. Public Health England) have an important role in reducing the spread of such diseases when they occur and providing advice and support to prevent the likelihood of re-occurrence.
- There is a legal requirement for certain infectious diseases that may have public health implications to be reported to a "Proper Officer", who can take further action if needed. In Medway, the council's proper officer function is discharged through arrangements with Public Health England. Specialist staff 'Consultants in Communicable Disease Control" (CCDCs) are responsible for managing outbreaks of communicable disease. These CCDCs are directly employed by Public Health England and work with other specialist staff in a dedicated Health Protection Team that covers the Kent and Medway area. The CCDCs are in regular contact with Medway Councils Environmental Health Team and Director of Public Health.
- The diseases which have to be notified (reported) to the proper officer are listed in Table 1. Notification of these diseases should take place when a clinician suspects (diagnoses) a person as having one of these diseases. Early notification of a disease to the Health Protection Team means public health action to stop the spread of disease, can be started as soon as possible.

Table 1: Diseases notifiable to proper officers under the Health Protection (Notification) Regulations 2010

▪ Acute encephalitis	▪ Malaria
▪ Acute infectious hepatitis	▪ Measles
▪ Acute meningitis	▪ Meningococcal septicaemia
▪ Acute poliomyelitis	▪ Mumps
▪ Anthrax	▪ Plague
▪ Botulism	▪ Rabies
▪ Brucellosis	▪ Rubella
▪ Cholera	▪ Severe acute respiratory syndrome (SARS)
▪ Diphtheria	▪ Scarlet fever
▪ Enteric fever (typhoid or paratyphoid fever)	▪ Smallpox
▪ Food poisoning	▪ Tetanus
▪ Haemolytic uremic syndrome (HUS)	▪ Tuberculosis
▪ Infectious bloody diarrhoea	▪ Typhus
▪ Invasive group A streptococcal disease	▪ Viral haemorrhagic fever (VHF)
▪ Legionnaires' disease	▪ Whooping cough
▪ Leprosy	▪ Yellow fever

Source: Public Health England. Notifiable diseases and causative organisms: how to report

In addition to the diseases listed in Table 1, doctors should also notify the Health Protection Team of:

- any other infection which could present significant harm to human health; or
- any contamination (e.g. chemical or radiological) which could present significant harm to human health.
- laboratories also have a responsibility to notify the Health Protection Team of organisms which are of public health importance so further actions can be taken.

Infectious diseases in Medway

- Table 2 summaries the number and rate of notifiable diseases in Medway that were reported to the Kent Health Protection Team during 2016 and 2017.
- It is important to note the number of suspected cases of a disease will be more than the number of confirmed cases of a disease. This is because doctors err on the side of caution. They report diseases to the Health Protection Team as soon as they spot them, so quick action can be taken to stop the spread of an infectious disease in the community. Laboratory testing is undertaken on samples taken by doctors, which confirms whether a specific disease is present. This then leads to the actual number of cases of a specific disease being revised down/or up.

Food poisoning

- Campylobacter, followed by salmonellosis (illness caused by salmonella) are among the most common reasons for illness in Medway reported to the Kent Health Protection Team (see Table 2).
- Both campylobacter and salmonella are bacteria that can cause food poisoning. Campylobacter is often found on raw or undercooked meat, especially chicken. Salmonella is often found on raw or undercooked meat, raw eggs and dairy.
- Not everyone with food poisoning may see a health professional, and therefore the true number of people who may get infected could be higher than the reported data.
- In addition to notifications shown in table 2, laboratories also have requirements to report certain organisms including campylobacter to the Kent Health Protection Team (when these are found in laboratory samples, for example from patients who have seen a healthcare professional). This data shows there were 266 cases of campylobacter in Medway in 2017 and 25 cases of salmonellosis [2].
- Partners in Medway are taking a range of actions to tackle foodborne illnesses. These actions and things that we can all do to protect ourselves and our families from foodborne illnesses are described in more detail later in this chapter.

Vaccine preventable diseases

- Some diseases can be prevented by vaccination. There were a very small number of suspected cases of these types of diseases in Medway over the past two years (see Table 2).
- Mumps was the most common of these diseases reported in Medway, although numbers are still small (see Table 2). Twenty-one suspected cases of mumps were reported to the Kent Health Protection Team in 2017. Less than five of these cases were confirmed following laboratory analysis as being mumps. [1]
- Mumps is a virus and cases are most often reported among young adults (usually born between 1980 and 1990) who may have been too old to receive mumps vaccination when it was introduced in 1988. [3] The NHS routine childhood vaccination programme includes vaccination against mumps. You can read more about this in the chapter on vaccination.

- The number of confirmed cases of measles in Medway was also lower than the suspected number reported (less than five suspected cases notified in 2017, of which zero cases were confirmed by laboratory results). [1]

Table 2: Selected notifiable diseases reported to Public Health England in Medway, the South East and England

Infection	Rate per 100,000 people and (number of cases) 2017*			Rate per 100,000 people and (number of cases) 2016**		
	Medway	**South East**	**England**	**Medway**	**South East**	**England**
Vaccine preventable						
Measles	1.1 (<5)	1.6 (142)	3.0 (1693)	5.0 (14)	2.1 (190)	3.0 (1641)
Mumps	7.4 (21)	14.1(1282)	13.9 (7722)	8.6 (24)	9.0 (813)	9.3 (5160)
Whooping cough	0.7 (<5)	6.8 (621)	5.9 (3302)	2.2 (6)	9.3 (838)	8.2 (4553)
Rubella	0.7 (<5)	0.6 (59)	0.7 (362)	0.4 (<5)	0.6 (58)	0.6 (343)
Gastrointestinal						
Campylobacter	8.9 (25)	11.8 (1069)	7.4 (4100)	7.9 (22)	10.7 (965)	5.1 (2815)
Cryptosporidium	0 (0)	0.4 (40)	0.4 (223)	0.7 (<5)	0.4 (34)	0.5 (271)
E coli 0157	0 (0)	0 (0)	<0.1 (15)	0 (0)	<0.1 (<5)	<0.1 (6)
E coli VTEC	0 (0)	0.2 (20)	<0.1 (22)	0 (0)	0.2 (19)	<0.1 (24)
E coli unspecified	0 (0)	0.2 (21)	<0.1 (27)	0 (0)	<0.1 (<5)	<0.1 (10)
Giardia	0 (0)	0.9 (82)	0.6 (329)	0 (0)	0.9 (83)	0.5 (263)
Salmonellosis	4.6 (13)	1.1 (100)	0.9 (495)	5 (14)	1.4 (123)	1 (557)
Other						
Hepatitis A	0 (0)	0 (0)	<0.1 (<5)	0 (0)	0 (0)	<0.1 (6)
Hepatitis E (acute or chronic)	0 (0)	<0.1 (<5)	<0.1 (14)	0 (0)	0 (0)	<0.1 (<5)
Legionnaire's disease confirmed	<1.8 (<5)	n/a	n/a	<1.8 (<5)	n/a	n/a
IGAS (Streptococcal group A invasive infection)	1.8 (5)	n/a	n/a	4.6 (13)	n/a	n/a
Meningococcal disease confirmed	2.1 (6)	n/a	n/a	<1.8 (<5)	n/a	n/a

Source: Public Health England. Notifiable diseases: annual reports 2016 and 2017; Source - meningococcal disease/IGAS/legionnaire's disease: Public Health England, Kent Health Protection Team, HPzone, 2017
** Office for National Statistics. Population projections 2017*
*** Office for National Statistics. Population estimates mid-2016*
N/A – regional and national comparator data not available for this data source

Meningococcal diseases

- Meningococcal diseases are caused by bacteria (meningococcus). Many people carry these bacteria harmlessly in their throats, but for some people, it causes disease. Fortunately these types of infection are relatively rare in England. But when they occur it can be very serious, leading to meningitis (inflammation of the lining around the brain) and septicaemia (blood stream infection).
- There are different types (groups) of meningococcal disease. Vaccines have been developed to protect against some forms of the disease and form part of the NHS routine vaccination

programme in England. Vaccination is offered to protect against the following types of meningococcal bacteria: groups B, A, C, W and Y.

- In Medway, there were six laboratory confirmed cases of meningococcal disease in 2017 (table 2). Nationally and in Medway, meningococcal B disease was the most common type of meningococcal disease in 2017 [4, 5]. Vaccination for this type of disease (MenB vaccine) was introduced across England in 2015 (for babies) as part of the NHS routine vaccination programme.

Outbreaks of infectious diseases in Medway

- An event is considered to be an outbreak if:
  1. two or more people experience a similar illness and are linked by place or time (e.g. three people in the same school class who become unwell with flu in the same week); or
  2. a greater than expected rate (amount) of illness compared with what is usual for that place and time (e.g. higher than usual number of people with scarlet fever in the same school).
- There were 140 outbreaks in Medway over the last 5 years (see Figure 1).
- The most common type of outbreaks in Medway are gastrointestinal diseases. The majority of these outbreaks (93%) were norovirus, with 70 norovirus outbreaks in Medway in the last 5 years.
- For outbreaks of norovirus, a number of these may be "suspected" norovirus outbreaks based on symptoms and history, as laboratory confirmation of norovirus is not usually required.
- "Rash" includes a number of different diseases, including chicken pox, scarlet fever, hand food and mouth disease, and rashes caused by scabies mites. There were 62 of these types of outbreaks in Medway over the last 5 years. The most common reason for these types of outbreaks were scarlet fever, hand foot and mouth disease, and chicken pox.
- There were very few outbreaks of seasonal flu over the last five years in Medway reported to the Kent Health Protection Team (see Figure 1).

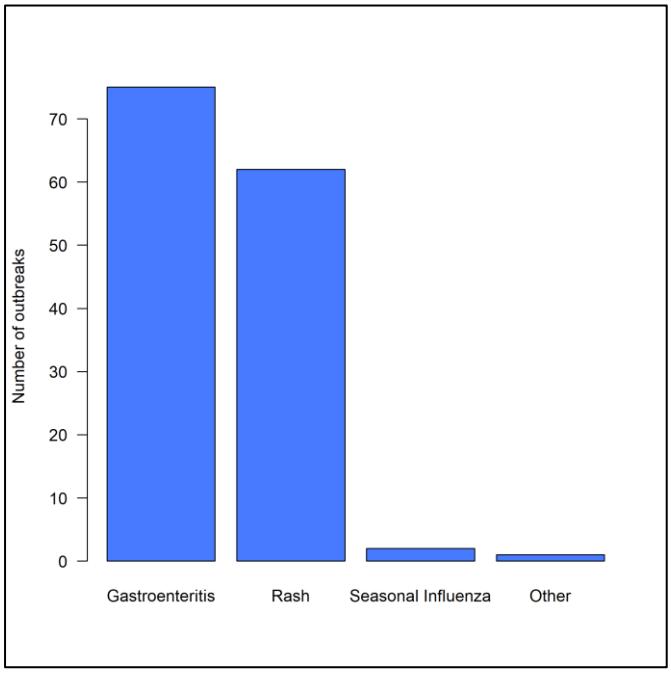


Figure 1: Number of outbreaks in Medway by disease category, 2013-2017

Source: Kent Health Protection Team. HPZone

Settings where outbreaks take place

- By notifying the Kent Health Protection Team of outbreaks, settings such as schools, nurseries, care home and tourist attractions can receive support in managing an outbreak and stopping it from spreading further.
- When looking at settings in Medway where outbreaks take place, the places that most often notified the Kent Health Protection Team of outbreaks over the last 5 years were:
  - Care homes (34% of the total outbreaks in Medway);
  - Schools (31% of the total outbreaks in Medway);
  - Nurseries (27% of the total outbreaks in Medway).
- There were very few notifications of outbreaks of disease from other settings in Medway, e.g. hospitals, other community settings and visitor attractions.
- Care homes in Medway are most likely to report outbreaks of gastroenteritis, particularly norovirus.
- Schools and nurseries in Medway are most likely to report outbreaks of diseases causing rashes (e.g. scarlet fever, hand foot and mouth, and chicken pox), followed by norovirus.
- Hospitals are responsible for preventing and managing any outbreaks that take place in hospital settings (rather than the Health Protection Team). More information is available in the health care associated infections chapter.

2) What are partners doing to protect the health of Medway's population?

The Kent Health Protection Team receive notifications of infectious diseases and offer the following support:

- Provide advice and guidance to settings, such as care homes, schools and childcare settings, about how to stop outbreaks spreading and prevent them happening again. This could include advice about cleaning and infection control or advising if individuals need to stay away from work or school for a period of time to stop illness spreading.
- Provide advice to individuals who have an infectious disease about how they can stop it spreading to others in their family or workplace. This may also include actions such as arranging vaccinations or medication (prophylaxis) to people they have been in contact with to prevent them becoming unwell.
- For significant outbreaks, the Kent Health Protection Team organise "Outbreak Control Teams" to investigate and address an outbreak. These involve partners including the Council (Public Health and Environmental Health), communications and members of affected organisations. The team agree actions to reduce the outbreak spreading further and identify ways to prevent it happening again. This can include actions, such as investigating the source of the outbreak, taking samples to confirm what is causing an illness, issuing information to the public and organising vaccinations or medication (prophylaxis) to reduce the chance of others becoming unwell.
- Share regular information with partners about trends and cases of infectious diseases in Medway. This includes sharing daily information with the Director of Public Health at Medway Council about any issues affecting Medway.

Environmental health

Medway Council's Environmental Health team undertake a wide range of duties to protect the health of the population in Medway, particularly around illnesses from food and infectious diseases. This includes:

- Food safety: There were 1847 food businesses in Medway in 2017. Environmental Health ensures food businesses in Medway are safe places to eat. This includes undertaking food hygiene inspections (and ratings) of food businesses in Medway, supporting businesses with food hygiene training and education, and investigating any food safety complaints or incidents (around 300 food complaints a year are received and investigated in Medway). A key achievement in 2017 was increasing the proportion of Medway food businesses that have a "very good" or "good" food hygiene rating from 90% to 93%.
- Infectious diseases and port health: The Environmental Health team work with Public Health England to respond to outbreaks of infectious disease, for example by visiting organisations and taking samples. The team also carry out ship inspections and issue ship sanitation certificates at Rochester and Chatham Ports, to ensure that ships do not carry imported diseases into Medway.
- Environmental Health also protects the health of Medway's residents from the harmful effects of noise and have an important role in health and safety.

3) What can people in Medway do to protect their health?

Protect yourself from food poisoning

- Check the "score on the door" before eating out. Stay safe from food related illness by eating at restaurants with the highest food hygiene ratings. Search for restaurants in Medway on the Food Standards Agency Website. [6]
- When preparing food, follow these simple tips to reduce your risk of becoming unwell:
  - Wash your hands with soap and water before preparing food and after handling raw foods.
  - Keep raw meat separate from other food. Bacteria from raw meats can contaminate other foods and make you unwell. Keep raw meat on the bottom shelf of the fridge, covered to avoid it dripping onto other foods.
  - Make sure that poultry, pork, burgers, sausages and kebabs are cooked thoroughly, with no pink meat inside.
  - Don't wash raw meat before cooking it, as this can spread bacteria around your kitchen.
- Find other tips on how to protect yourself from illness from food on the NHS food safety webpage. [7]

Protect yourself from infectious diseases

- Protect yourself from infectious diseases by making sure you are up to date with routine vaccinations offered free by the NHS and speaking to your health professional if you have missed any. You can check which vaccinations are offered and when on the NHS Choices vaccinations webpage. [8]
- Women who are thinking of becoming pregnant and who aren't sure if they have had two doses of the measles, mumps and rubella (MMR) vaccination may wish to check their vaccination record. Ask your GP for the vaccination if you haven't received it. Catching rubella in the early stages of pregnancy can cause problems with the baby, including eye problems, deafness and heart problems. If you are already pregnant, speak to your healthcare professional about having a flu and whooping cough vaccination to protect your baby.
- If you are travelling abroad, check if any extra vaccinations are needed on the NHS Choices travel vaccinations webpage [9] to avoid becoming unwell while you are away.

Protect yourself and others if you think you have an infectious disease

- If you think you or your child has an infectious disease, speak to your healthcare professional who can advise on any actions that may be needed to avoid the illness spreading to others. This could include things such as staying away from work or school until you are no longer infectious, extra hygiene at home or medicines.
- If you think you or your child has measles, it's best to phone your GP and make them aware you will be visiting, as they may need to make arrangements to stop others becoming unwell, for example organising a separate room.

How schools, care homes and other settings can protect themselves from outbreaks of infectious diseases

- Care homes, residential homes, schools and childcare settings can protect the health of staff, residents and students with good infection control arrangements (see guidance below).
- If a care home, school or other setting in Medway suspects they may have an outbreak of infectious disease (e.g. scarlet fever, measles, diarrhoea and vomiting), contact the Kent Health Protection Team as soon as possible on 0344 225 3861 (select option 1, then option 1 again). The team will be able to give advice and support to reduce the risk of the outbreak spreading further.
- Guidance for care homes on infection control can be found on the GOV.UK website. [10] Guidance for schools and other childcare settings on preventing and managing infectious diseases can also be found on the GOV.UK website. [11]

4) What are the areas to focus on in the future?

- Continue to increase the proportion of businesses in Medway with good hygiene ratings.
- Continue to increase awareness of ways to prevent outbreaks and reduce risk of them spreading among key organisations, including schools and childcare settings.

5) Recommendations

- It is recommended that Medway Council continue to work with local food businesses to increase the proportion of businesses with a "good or "very good" food hygiene rating.
- It is recommended that the Kent Health Protection Team (Public Health England) investigate opportunities to deliver infection control training to schools and childcare settings in Medway.
- Public Health is piloting work in 2018, working with care homes around a "healthy settings" charter. It is recommended that infection control or awareness about notification of infectious diseases be included in this charter.

6) References

[1] Public Health England (2018). *Field Epidemiology Service, confirmed cases.*

[2] Public Health England (2018). *Kent Health Protection Team,* SGSS.

[3] Public Health England (2014). *Mumps: the green book, chapter 23.* Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/147975/Green-Book-Chapter-23-v2_0.pdf

[4] Public Health England (2017). *Invasive meningococcal disease in England: annual laboratory confirmed reports for epidemiological year 2016 to 2017.*

[5] Public Health England (2018). *Kent Health Protection Team, HPzone.*

[6] Food hygiene ratings for businesses. Available at: http://ratings.food.gov.uk/

[7] NHS. *Food safety and home hygiene.* Available at: https://www.nhs.uk/Livewell/homehygiene/Pages/Homehygienehub.aspx

[8] NHS Choices. *Vaccinations*. Available at: https://www.nhs.uk/Conditions/vaccinations/

[9] NHS Choices. *Travel vaccinations*. Available at: https://www.nhs.uk/conditions/travel-vaccinations/

[10] Department of Health and Social Care and Public Health England (2013). *Care homes: infection prevention and control.* Available at: https://www.gov.uk/government/publications/infection-prevention-and-control-in-care-homes-information-resource-published

[11] Public Health England (2018). *Health protection in schools and other childcare facilities.* Available at: https://www.gov.uk/government/publications/health-protection-in-schools-and-other-childcare-facilities

Seasonal influenza

1) What is the current situation in Medway?

- Seasonal influenza (flu) is a viral illness, which can lead to fever, aches, exhaustion, sore throat and headaches. It spreads very easily to others through coughs and sneezes. The virus can live on hands and surfaces for 24 hours, so can also be spread by touching surfaces contaminated with the virus. Seasonal flu season in the UK generally runs from autumn through to early spring. This pattern can change depending on the type of virus and weather.
- Prevention of seasonal flu is important. Whilst many people recover from flu in a couple of weeks, flu can cause serious illness or death among vulnerable people, including older people, pregnant women and people with long term health conditions (including chronic obstructive pulmonary disease, heart disease or diabetes).
- Seasonal flu can have a significant impact on the health and care system, and also have impacts on workforces. Minor illnesses (including flu) were responsible for 34 million working days lost in the UK in 2016. [1] This accounted for 25% of all sickness absence, and was the most common reason for sickness absence from work during the influenza season.
- The flu virus can change every year. Those in vulnerable "at risk" groups, should be vaccinated each year to ensure they are protected from the latest strain.

Seasonal flu vaccinations

- There is a national, seasonal flu vaccination programme, overseen by NHS England and Public Health England.
- The aim of the programme is to protect those who are most likely to become seriously unwell from flu, and to reduce the spread of flu.
- In 2017-18, groups which were eligible for free flu vaccination were:
    - older people aged over 65 years;
    - people of any age with long term health conditions, including chronic obstructive pulmonary disease, heart disease or diabetes or morbidly obese (body mass index of 40 or above);
    - pregnant women;
    - children aged 2 to 8 years;
    - carers;
    - people living in a residential care home or long stay care facility.
- To protect themselves and those that they care for health and social care workers should also receive an annual flu vaccination. Employers are responsible for offering vaccination for this cohort of workers, however in 2017-18, the NHS provided free flu vaccination for all health and social care staff. This initiative was focussed on staff working in a registered residential care/nursing home, or those employed by a domiciliary care provider.

Uptake of seasonal flu vaccination in Medway

- Flu vaccination programmes aim to vaccinate a high percentage of the targeted populations against flu. When this is achieved, it is called "herd immunity" as it makes it difficult for a disease to spread because there are few susceptible people left to infect. The proportion of a population which must be immunised in order to achieve herd immunity varies for each disease.
- Nationally, targets (ambitions) for flu vaccination uptake among different groups are set based upon a number of factors including: the proportion of the population that should be vaccinated to prevent spread of flu in the community, ambitions for the proportion of vulnerable people

who should be vaccinated against flu (direct protection against flu) and also take into account past performance.

- Table 1 compares the uptake of flu vaccination in eligible groups in the periods 2017/18 and 2016/17.
- Overall, flu vaccination uptake for children in Medway has increased and Medway is meeting the national targets. For other eligible groups however, Medway in common with the majority of local authorities in England, is not meeting national targets for uptake of seasonal flu vaccination. Pregnant woman and at risk groups (younger than 65 years with long term health conditions) are particular areas for focus as coverage in Medway is lower in these groups than the England average.

Children

- Recent evidence of the role that children play in spreading seasonal flu in the community led to the introduction of a vaccination programme for pre-school children and those aged 4 to 8. In 2017/18, Medway met the national target for vaccinating children against flu, for both pre-school children (aged 2 to 3 years) and school aged children (aged 4 to 8 years). This was an improvement in child vaccination uptake across all ages compared to 2016/17.

Pregnant women

- Pregnant women have a higher risk of developing complications from flu such as pneumonia. Flu can also harm unborn babies, which may lead to low birthweight, early birth or death. Therefore, pregnant women are targeted for seasonal flu vaccination.
- In 2017/18, Medway did not meet the national target of 55% of pregnant women being vaccinated against flu, however a greater percentage of Medway women were vaccinated in 2017/18 (45.8%) compared to the previous year. Flu vaccination for pregnant women is also a challenge nationally, with the England average of 47.2% also falling below the national target.

Older people (aged 65 years and over)

- Older people are targeted for flu vaccinations as they are more at risk of complications such as bronchitis or pneumonia if they get flu, which can lead to hospital admissions.
- For older people a greater proportion of people were vaccinated in Medway in 2017/18 (72%) than in the previous year, with Medway being similar to the England average. Again, flu vaccination for older people is a challenge nationally, with neither Medway nor England overall meeting the national target of 75%.
- When looking back over a longer period (Figure 1), since 2011 there has been a downward trend in uptake of flu vaccination among older people in both Medway and England.
- The exact reason for this downward trend is not known. There is evidence that people's beliefs about the effectiveness and safety of the vaccination is one of the factors associated with how likely people are to have the vaccine.

At risk groups (aged under 65 years)

- Younger people (aged under 65) with certain long term health conditions are offered flu vaccination. This includes those with respiratory diseases, heart, kidney or liver disease, diabetes, neurological conditions, impaired immune systems, having had a stroke, spleen problems or being very overweight (body mass index of 40+).
- These groups are offered flu vaccination as they are more at risk of flu complications, and are around eleven times more likely to die from flu than people not in a risk group. [2]

- The proportion of people in at risk groups (aged under 65 years with long term health conditions) vaccinated against seasonal flu in Medway (45.5%) is lower than the England average in 2017-18, however again, this is a national challenge, with the England average being lower than the target of 55%.

Health and social care workers

- Health and social care staff should have annual seasonal flu vaccination, both to protect themselves and their families from flu, but also to protect vulnerable patients from flu. This is particularly important for health care workers as some people infected with flu may not have any symptoms but are still able to pass on flu to others.
- NHS healthcare providers have a national target of vaccinating 70-75% of their staff against seasonal flu. Nationally, this target is not being met, with an average of 68.7% of staff being vaccinated across organisations in England in February 2017/18. There is variation across trusts in Medway, with Medway Foundation Trust having the highest proportion of staff vaccinated (71.5%).

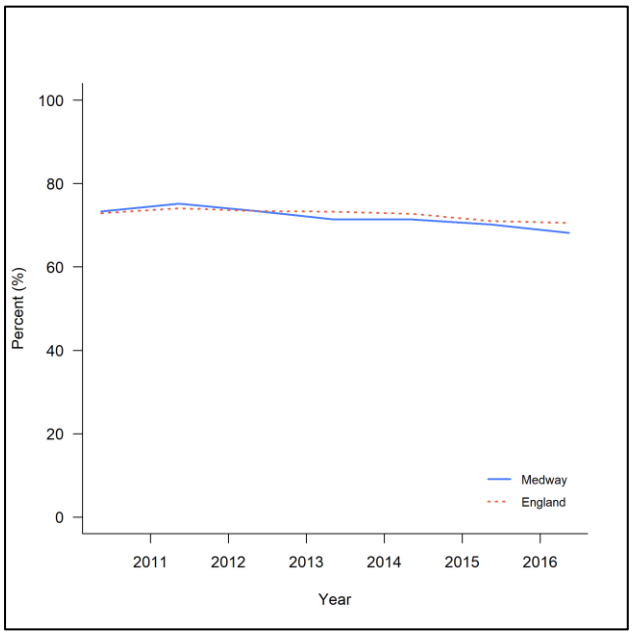
Table 1: Provisional seasonal flu vaccine uptake by eligible groups in Medway compared with England, 2016/17 and 2017/18 [3, 4]

Eligible population	England 2017/18 (2016/17)	Medway 2017/18 (2016/17)	England target 2017/18
Aged 2	42.8% (38.9%)	42.7% (36.9%)	40-65%
Aged 3	44.2%% (41.5%)	45.6% (40.1%)	40-65%
Aged 4 (school reception year)*	62.6% (33.9%)	46.8% (30%)	40-65%
School year 1*	60.9% (57.6%)	55.9% (37.5%)	40-65%
School year 2*	60.3% (55.4%)	55.2% (34.5%)	40-65%
School year 3*	57.5% (53.3%)	52.6% (33.6%)	40-65%
School year 4*	55.7% (N/A)	51.2% (N/A)	40-65%
Pregnant women	47.2% (44.9%)	45.8% (41.2%)	At least 55%
Under 65 years (at risk only)	48.9% (48.6%)	45.5% (46.1%)	At least 55%
65 years and over	72.6% (70.5%)	72% (68.2%)	75%
Health and social care workers**	68.7% (63.4%)	Kent and Medway NHS and Social Care Partnership Trust: 65.6% (58.4%)	At least 70-75% (NHS England CQUIN for staff vaccination covering 2017-2019)

		Medway NHS Foundation Trust: 71.5% (75.7%) Kent Community Health NHS Trust: 57.1% (53.2%)	

Sources: Public Health England. Seasonal influenza vaccine uptake amongst GP Patients in England, Provisional monthly data for 1 September 2017 to 31 January 2018
** Public Health England. National childhood influenza vaccination programme 2017 to 2018 (provisional)*
*** Public Health England. Seasonal influenza vaccine uptake amongst frontline healthcare workers (HCWs) in England, February Survey 2017/18*

Figure 1: Seasonal flu vaccine uptake by people aged 65 years and older compared with England 2011-2016



Source: Public Health England. Fingertips, Public Health Outcomes Framework, 3.03xiv

2) What are partners doing to protect the health of Medway's population?

- In Medway, seasonal influenza vaccinations are commissioned and performance managed by NHS England. Vaccinations are then delivered by a range of providers including GPs, pharmacists, and school immunisations teams.
- In 2017/18, partners in Medway put in place a number of local initiatives to address the impact of seasonal influenza in Medway (see case study).
- Partners meet quarterly at the Medway Immunisation Board and have a shared action plan to increase uptake of vaccinations. At these meetings, partners review performance, and monitor progress against the action plan.
- Local authorities and clinical commissioning groups have a role in promoting awareness of seasonal flu vaccinations and undertook "Stay Well This Winter" campaigns in 2017/18 (see case study).
- The Kent Health Protection Team at Public Health England has a lead role in controlling the spread of infectious diseases in Medway, including providing advice and support to manage

outbreaks of seasonal influenza. In 2017/18, this included proactively providing advice to care homes, schools and other settings, to help prevent or deal with the consequences of an outbreak.

3) What can people in Medway do to protect their health?

- If you fall within one of the eligible groups, the best way to protect yourself from seasonal flu is by having a flu vaccination every year.
- Currently older people (aged 65 years or older), people with long term health conditions, pregnant women, carers, people living in residential care homes, and children aged 2 to 8 years are eligible for a free vaccination. Your health professional will send you a reminder, of when this is due-ask your pharmacist or GP for details in the autumn.
- Protect yourself from flu by making sure you "catch it, bin it, kill it". Catch any coughs or sneezes in a tissue and dispose of them straight away.
- Wash your hands regularly with soap and hot water to help protect yourself and others against viruses.
- Schools, nurseries, care homes and other residential care settings can protect themselves by informing Public Health England if they have an outbreak of flu (two or more people with flu who have been in contact with each other in a similar time period). Public Health England will provide advice and support to stop flu spreading further.
- Protect your health over winter by eating a balanced diet, getting regular exercise, and keeping your home heated to at least 18°C. This can help you to stay well in the colder weather.

4) What are the areas to focus on in the future?

- Partners in Medway will continue to work together to improve the percentage of people in Medway who are vaccinated against flu annually. There will be a, particular focus on groups which currently have lower vaccination rates, such as vulnerable people with long term health conditions, and health and care workers.

5) Recommendations

- Best practice from GPs achieving high rates of flu vaccination must be shared with local care teams, as part of the Medway Model approach.
- Planned work to pilot supporting care homes to achieve "Healthy Settings" charters to include seasonal influenza.
- Medway council and partners should continue to deliver the "Stay Well This Winter" communications campaign. This campaign highlights the benefits of seasonal flu vaccination to Medway residents, specifically those groups with the lowest uptake of vaccination and, vulnerable people with long term health conditions.
- All health and social care organisations in Medway to ensure they have plans in place to increase staff influenza vaccination rates to meet the national targets.
- A partnership workshop should be held to plan for the 2018/19 flu season. This workshop should review lessons learned from the previous 2017/18 flu season. Action plans for 2018/19 should include specific actions targeting groups with lower uptake of flu vaccination, including people with long term health conditions.

6) Case study

Partnership working to improve seasonal influenza vaccination uptake in Medway

Why was this work needed?

In 2017, health and care organisations in Medway agreed that in order to improve seasonal flu vaccination uptake in Medway, they needed to work more closely together. This was particularly important as early indications from other countries suggested that winter 2017 may be a particularly heavy flu season.

What was done?

- Medway Council Public Health and Kent and Medway Screening and Immunisation Team led a flu planning partnership workshop and developed a Medway seasonal flu action plan, so that partners could coordinate actions and identify areas for joint working.
- A Medway Immunisation Board was established and begun meeting in 2017, to bring local partners together to identify ways they could work together to improve immunisations uptake.

Key actions included in the action plan and carried out by partners in 2017/18:

- Flu vaccination was introduced as part of the maternity pathway at Medway Maritime Hospital for the first time in 2017. Expectant mothers were able to receive their vaccination at the hospital immediately after their pregnancy scan, rather than having to make a separate appointment at a GP practice or pharmacy. Medway is the first area across Kent to offer this.
- Medway Clinical Commissioning Group introduced template text messages for practices to use to invite eligible patients to their vaccination appointment, and also contacted practices which had large numbers of patients to vaccinate for seasonal flu to offer them support.
- A number of partners including Medway Council and Medway Clinical Commissioning Group delivered “Stay Well This Winter” communications campaigns, supporting the public with information about how to protect their health over winter, including protection against flu.
- Information about how to recognise and report flu outbreaks, including support available from Public Health England, was shared with local schools and care homes.

What were the outcomes?

- More than 100 pregnant women have already been vaccinated through the new flu vaccination maternity pathway.
- Provisional data for the 2017/18 flu season suggests that the percentage of people in Medway vaccinated in a number of the key target groups (children, older people, and pregnant women) has improved compared to 2016/17.
- Strengthening partnership working has led to improvements for residents, however further work is still needed. In line with many areas nationally, further work is still needed to meet national targets for flu vaccinations for some key groups. Partners will need to continue to work together in future to meet these targets.

Figure 2: Medway Directors (Ian Sutherland, Director of Adults and Children's Services; James Williams, Director of Public Health) and Councillors (Councillor Alan Jarrett, Leader of the Council; Councillor David Brake, Portfolio Holder for Adult Services) getting their flu jab in 2017 to show support for flu vaccinations.

Source: Medway Council communications

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Screening

1) What is the current situation in Medway?

- Screening is offered to healthy people who may be at higher risk of disease, so they can be offered information or early treatment to reduce the risk of illness.
- National screening programmes are agreed by the UK National Screening Committee who assess programmes against internationally recognised criteria, robust evidence reviews and consultation.
- There are 11 NHS population screening programmes in England, six for antenatal women and newborn babies and five for adults. This chapter focuses on population screening programmes for adults, covering cancer screening (breast, bowel and cervical) as well as abdominal aortic aneurysm screening (AAA).
- In Medway, screening programmes are commissioned by the NHS England team that covers the South East (Kent, Surrey, Sussex).

Breast cancer screening

- Screening programmes take place for a number of different cancers: breast, bowel and cervical.
- Breast cancer is the most common cancer in the UK overall. It is the most common cancer in women, but much less common in men. [1]
- Breast cancer is also the second most common cause of cancer death among women. For this reason, the national breast screening programme is solely focussed on women [2].
- Nationally, women aged 50 to 70 years who are registered with a GP are invited for screening every three years, and those aged over 70 years can continue to be screened every three years by self-referring into the programme.
- In Medway, as is the case in the majority of areas nationally, a proportion of women aged 47 to 49 years and 71 to 73 years are also invited for breast screening as part of a national age extension breast screening trial.
- For the screening programme to be effective, it is important that the majority of the eligible population attend. Nationally the minimum standard is 70%, with a target of 80%.
- In Medway, breast screening is provided by a mobile screening unit that travels to different locations in Medway and a static clinic within Medway Maritime Hospital.
- Figure 1 shows that 76.7% of eligible women (22,392 women) were screened for breast cancer in Medway between 2014 and 2017. This is significantly higher than the England average of 75.4%. [3]
- The proportion of eligible women screened for breast cancer (coverage) in Medway has remained similar over the last few years. However, over a longer time period (since 2010), there has been a slight decrease in uptake of breast cancer screening in Medway, and this is also the case for England overall.

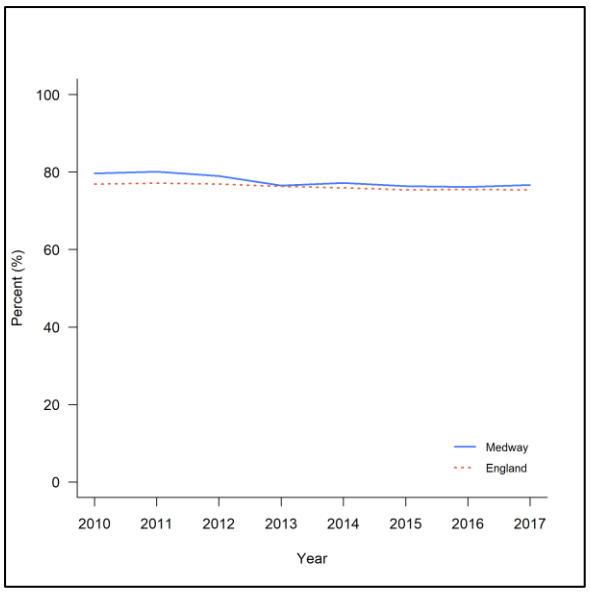

Figure 1: Percentage of women eligible for breast screening who were screened within the previous 3 years on 31 March

Source: Public Health England. Fingertips, Public Health Outcomes Framework, 2.20i

- Women from black and minority ethnic groups, those with learning disabilities, from lower socioeconomic groups or who have not attended screening before, are less likely to take up breast screening. This could mean missed opportunities to identify and treat cancer at an early stage [4, 5].
- In Medway, between 2014 and 2016, there were 70 deaths of women younger than 75 years old from breast cancer (a rate of 20.8 per 100,000 people).
- Breast cancer screening at recommended intervals, appropriate and timely treatment if required, and addressing negative lifestyle factors (for example not smoking, being regularly active) can help to reduce the risk of early death from cancer.

Cervical screening

- Cervical screening aims to detect and treat abnormalities in cervical cells which, if left untreated, could lead to cancer.
- Cervical cancer is the 14th most common cancer among females in the UK. The incidence (new cases) of cervical cancer are most common among 25 to 29 year olds. [6]
- Women between the ages of 25 and 64 years are invited to attend cervical screening. Women aged 25 to 49 are screened every three years. Those aged 50 to 64 are screened every 5 years.
- In Medway, cervical screening is usually carried out at a woman's registered GP practice. Alternatively, a number of cervical screening appointments are available through the Medway Councils integrated sexual health service at Clover Street, Chatham.
- Data from 2017 shows that 73.9% of eligible women in Medway (51,958 women) were screened (in the last three to five years), which is significantly higher than the England average of 72.0% (Figure 2). [7]
- Recent trends suggest the proportion of eligible women who have been screened for cervical cancer in Medway has decreased. This has also been the case nationally.

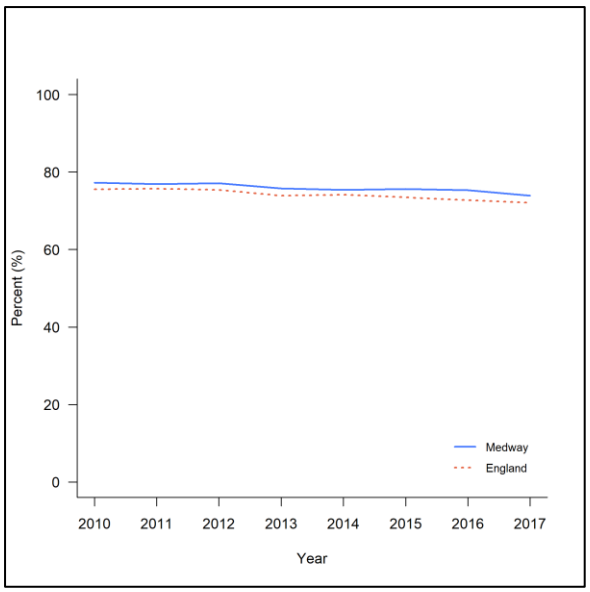

Figure 2: Percentage of women eligible for cervical screening who were screened within the previous 3½ or 5½ years (according to age) on 31 March
Source: Public Health England. Fingertips, Public Health Outcomes Framework, 2.20ii

- Younger eligible women, women from ethnic minority groups, lesbian and bi-sexual women [8], women from lower socioeconomic groups and women with learning disabilities are less likely to take up cervical screening. This could mean missed opportunities to identify and treat cancer at an early stage [4].

Bowel screening

- In England, bowel cancer is the third most common cancer in men and women, but the second biggest killer (after lung cancer). 1 in 14 men and 1 in 19 women will be diagnosed with bowel cancer during their lifetime. [9] [10]
- Bowel screening is the only cancer screening programme offered to both men and women.
- In England, half of all bowel cancers are diagnosed at a late stage. Screening is an important way of identifying and treating bowel cancer early, increasing the chances of successful treatment [10]. The programme also identifies and removes polyps in the bowel which are non-cancerous, but which could over time lead to cancer.

The NHS offers two different types of bowel screening:

- A home testing kit (called a faecal occult blood kit). Men and women aged 60 to 74 years are offered a kit every two years. The test is self-completed at home and posted to a laboratory to be tested for small amounts of blood. If this is detected, people are referred for further testing and treatment, if required.
- An additional one-off test, called bowel scope screening, is steadily being introduced in England. Bowel scope is offered to men and women aged 55. People up to the age of 60 can self-refer if their GP practice is part of the new method of screening for bowel cancer. The screening looks for and removes growths called polyps which could turn into cancer if they're not removed. This is done by using a flexible tube to look inside the bowel. As of July 2017, 75% of GP practices in Medway had begun offering bowel scope screening. Work is ongoing to roll this new technique out to the remaining 25% of Medway GP practices.

- Data from 2017 shows that 57.3% of eligible people in Medway (21,300 people) were screened for bowel cancer (Figure 3). This is significantly lower than the England average of 58.8%. [11]
- The low uptake of bowel cancer screening across England is a national concern. The uptake of bowel screening is not as high as other cancer screening programmes. [9]
- Men are less likely to take up bowel screening than women. The reason for this is not clear, but it could be because women who receive an invitation to bowel screening will already have experience of other screening programmes (cervical and breast), or it could be because men are less likely to address health issues. [13] The embarrassment about taking the test itself (as it involves taking a poo sample) may also be a reason why uptake of bowel screening is lower than other cancer screening. [13]
- As is the case with other screening programmes, people from lower socioeconomic backgrounds and ethnic minority groups are less likely to be screened for bowel cancer. [4]
- In 2017, no local authorities achieved the national target of 75% uptake (uptake ranged from 39.7% to 68.6% across all local authorities). [11]
- Bowel cancer screening coverage in Medway has stayed at a similar level over recent years (since 2015), compared to the England coverage which has actually shown a small increase during this period.
- For breast, bowel and cervical screening, both nationally, and in Medway, populations in more deprived areas have lower uptake of screening (coverage). When looking at geographic locations in Medway, the areas with the lowest uptake for cancer screening are in Chatham, Gillingham, Walderslade and to a lesser extent, Strood. Rainham and Hempstead area generally have the highest coverage rates. This data is based on using where a patient is registered with a GP as an indication of where they live. [12]

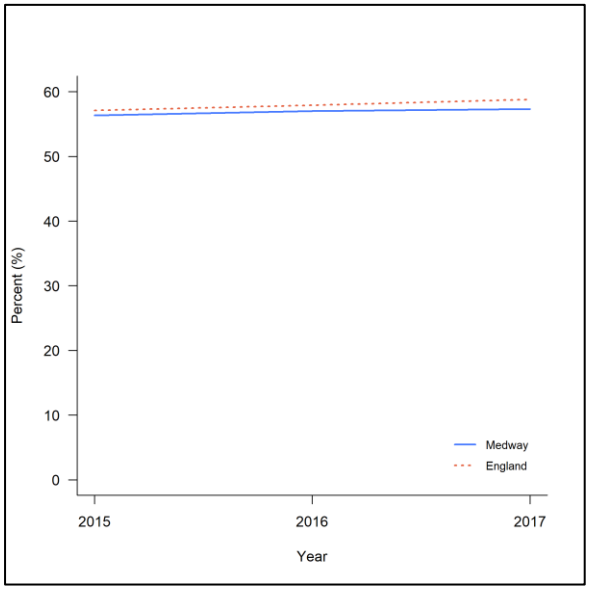

Figure 3: Percentage of people eligible for bowel screening who were screened within the previous 2½ years on 31 March
Source: Public Health England. Fingertips, Public Health Outcomes Framework, 2.20iii

Abdominal aortic aneurysm screening

- An abdominal aortic aneurysm (AAA) is a bulge or swelling in the aorta (the main blood vessel running from the heart downwards). It is caused by the aorta weakening. It may be present

without symptoms and can be dangerous and even life threatening, if it isn't spotted early on as it could burst.

- Men aged 65 years and older are most at risk of AAA's. Having a high blood pressure, smoking or a family history of AAA can increase risk.
- Around one man in 70 aged 65 has an AAA. Around 85 out of 100 people who experience a ruptured (burst) AAA die. [14]
- The screening programme reduces early deaths from ruptured AAA's by up to 50% among men aged 65 years and over. [15]
- Men are invited to attend AAA screening when they reach the age of 65. Screening consists of an ultrasound. If an AAA is found lifestyle changes, further ultrasounds or surgery may be recommended (treatment depends on the size of the AAA).
- AAA screening takes places in five locations across Medway (Walderslade, Gillingham, Rochester, Rainham and the Hoo Peninsula). In 2016/17, screening coverage (proportion of eligible men who were screened) in Medway was 80.2% (1067 men screened). This is similar to the England average of 80.9% (Figure 4). [16]

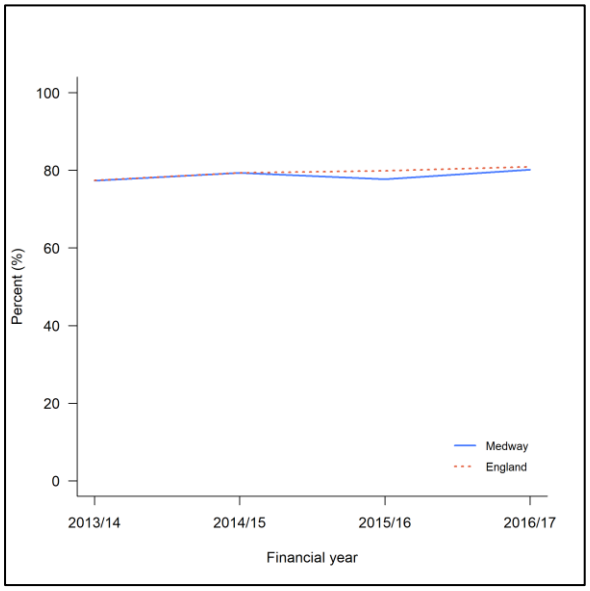

Figure 4: Percentage of men eligible for abdominal aortic aneurysm screening who were screened
Source: Public Health England. Fingertips, Public Health Outcomes Framework, 2.20iv

2) What are partners doing to protect the health of Medway's population?

- NHS England South East (Kent, Surrey, Sussex) commissions the national screening programmes for Medway. Screening is delivered by a range of providers. These include Medway Foundation NHS Trust and GPs. Performance of all screening programmes is monitored at national and local level by NHS England and Public Health England.
- Public Health England undertake regular quality assurance of screening programmes to ensure they are safe, good quality and any areas for improvement are identified and action taken to address deficits. The Director of Public Health for Medway regularly engages with NHS England and Public Health England to discuss and address any specific issues that might impact on the Medway population.

- Medway Clinical Commissioning Group (CCG) is also involved in the assurance process of local screening services. The CCG hosts a cancer steering group. This group includes partners from Cancer Research UK, Macmillan, NHS England's screening team, Medway Public Health and a patient participation group representative. One area the group is currently focussed on is to work with primary care staff (including GPs) to raise awareness of the benefits of screening with patients.
- A Macmillan GP and nurse cover the Medway area and work with primary care to make improvements to cancer care, including cancer screening.
- Partners have undertaken cancer screening awareness campaigns. For example, the Breast Screening Unit at Medway Maritime Hospital teamed up with the Medway Messenger to run a "Get It Checked, It's For The Breast" campaign in 2017.
- Health Equity Audits (HEAs) have also been undertaken for screening programmes. HEAs are used to identify which groups within the population are not accessing or taking up screening opportunities. HEAs have found people with learning disabilities, those currently in prison or secure mental health facilities, or people living in the areas of highest deprivation, often have the lowest uptake rates for screening.
- Partners (including NHS England, Macmillan Cancer Support, Cancer Research UK or Medway CCG) have also provided targeted support (and visits where appropriate) to GP practices in Medway with low uptake of screening.
- NHS England and partners have developed an action plan to improve cervical cancer uptake, which is being implemented.

3) What can people in Medway do to protect their health?

Be informed about screening

- If you receive a screening invitation, it's worth finding out about the test itself and what would happen if you found out you have a higher risk of a particular condition. This can help you make an informed decision about attending screening. You can find out more information by reading the information leaflet that arrives with the invitation, discussing this with a healthcare professional, or reading the screening section of the NHS Choices website. [17]

Look out for signs and symptoms of cancers

- If you have symptoms that you are worried could be cancer or another illness, don't wait to be offered screening. See your GP, who will advise if you need to be referred for further investigations or treatment. Screening is not appropriate for individuals who already have symptoms. Further information about signs and symptoms of cancer can be found on the NHS Choices website. [17]

Reduce your risk of cancers with healthy lifestyle changes

- You can help reduce your risk of certain cancers by eating a healthy, balanced diet, maintaining a healthy weight, being physically active, drinking less alcohol and not smoking.
- A Better Medway's health improvement services can support you to stop smoking, lose weight, learn how to cook healthy meals and more. Find out more on Medway Council's A Better Medway website. [18]

Consider requesting a screening test

For most screening programmes, if you are eligible for screening, and are registered with a GP, you will automatically receive an invitation when your screening is due. However you can request a screening test in the following circumstances:

- If you're a man who is older than 65 and you haven't been screened for abdominal aortic aneurism (AAA) before, you are eligible to request screening. You can contact the Kent and Medway AAA screening service to ask for a test, by calling 01227 868775.
- Women who are aged over 70 can request a breast screening appointment every three years by contacting their GP or Medway Breast Screening Unit on 01634 825036. Younger women (aged 50 to 70 years will automatically receive an invitation when screening is due). Women aged 47 to 49 years or 71 to 73 years may also be invited for screening as part of the age extension programme.
- Women and men who are aged 75 or over, can request a bowel cancer home testing kit every 2 years. Simply call the free bowel cancer screening helpline on 0800 707 60 60 (younger men and women aged 60 to 74 years automatically receive an invitation when screening is due). If you have lost your test kit, you can also call the number for a replacement.

4) What are the areas to focus on in the future?

- Bowel cancer is a particular area to focus on as coverage is lower than the England average and not increasing in line with the England trend.
- Changes to the national bowel screening programme, mean that from 2018, the bowel cancer home screening kit will be replaced with a new improved type of test called a FIT test (faecal immunochemical test). This test will start to be rolled out in Medway during 2018. Pilots in other areas have shown people are more likely to use the FIT test than the previous type of test (possibly as it requires fewer samples). Rolling out this new test may therefore positively impact on the number of people participating in bowel screening.
- NHS England will continue to work with the screening provider to continue rollout of bowel scope in Medway (one-off bowel screening at age 55).
- Working with all partners to increase awareness of screening amongst health professionals and the public. This work aims to increase the proportion of the Medway population who receive screening. This will reduce illness and death from conditions for which screening is available.
- Cervical screening uptake in Medway has been declining (as is the case nationally). There needs to be a social marketing campaign to promote the benefits of this programme for eligible women in Medway.
- Review current pathways and identify ways in which partners can work together to increase the uptake of screening in the local Medway prison population.

5) Recommendations

- It is recommended that partners identify opportunities to work together to increase uptake of screening among groups that are less likely to attend including lower socioeconomic groups and ethnic minority groups.
- It is recommended that opportunities to include information about screening within A Better Medway Champion training or the Making Every Contact Count programme be investigated.

6) Case study: Improving breast screening in Medway

Why was this work needed?

The Medway NHS Foundation Trust Breast Screening Unit is responsible for breast screening for a population of 85,000 women aged 50-70 every three years. The team identified areas of the service where quality improvement action was needed, for example the timeliness of women receiving their screening results.

What was done?

- The unit undertook an innovative review to transform the service and improve the care received. Women who used the breast screening service were involved throughout this work.
- Staff shortage was the most significant issue. The team introduced a staff training plan to address staffing challenges. This resulted in staff being trained to undertake a wider variety of tasks when needed.
- This meant that improvements were able to be made to processes for care received, for example where women required more than one intervention, these were able to be carried out on the same day. This made the process more efficient and person centred, reducing the number of appointments a women needed to attend.
- An audit was undertaken to understand the reasons why screening results weren't being delivered more quickly, identifying solutions and implementing the service changes required.
- Improvements were also made to the processes used to identify suspected cancers. A review of the capability of team members was undertaken (following additional training). This enabled specific task assignments to appropriate staff within the team. For example, delivery of benign (non cancerous) screening results by the breast care nurses via telephone was introduced. This saved patients hospital visits whilst also freeing up capacity of more clinical appointments.

What were the outcomes?

- As a result of this innovative work, women in Medway are receiving outstanding care, prompt results and overall better outcomes.
- Key improvements include:
- In 2016/2017, 99.3% of women were invited to attend breast screening appointments within the target national timescales, in previous years this had been as low as 45% (2014).
- Recent patient surveys have found women using the service are much more satisfied with the service and how it is run than was the case before improvements were made. Feedback from patients has been "can't fault the care here".
- The proportion of women who received further assessment after screening, if needed, in a timely manner was also improved by this work. National targets for this area are now being exceeded, and the Trust is one of the best performing in the South East region.
- The work has also had a positive impact on the team, resulting in high team morale and a team environment that is open to new ideas.
- The results of this work have been praised by NHS England, NHS Improvement and Screening Quality Assurance Teams. The Medway team have been shortlisted as finalists in the national "Best Cancer Care Team" British Medical Journal Awards 2018.

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Emergency preparedness

1) What is the current situation in Medway?

Partners in Medway need to plan for, and respond to, emergencies and incidents that could occur and have a negative effect on the health of the population. This includes being prepared to deal with a wide range of scenarios, including extreme weather events, flooding, or outbreaks of infectious diseases.

The Director of Public Health (on behalf of Medway Council) is responsible for ensuring there are robust plans that are regularly tested, in place to protect the population of relevant to protect the health of Medway from threats that could impact on their health. This involves working with a range of partners including other local authorities, local NHS organisations and government agencies such as Public Health England and NHS England.

The role of Medway Council and other partners in preparing for and responding to emergencies

- The Civil Contingencies Act (2004) is a law that places a duty on governmental and other non-governmental organisations, to take action to protect the health and wellbeing of the population should a major incident occur. Depending on their role, organisations are designated as a Category 1 or Category 2 responder.
- Category 1 responders have the highest level of responsibility during an incident. These organisations are generally the emergency services, local authorities and NHS bodies. Category 2 responders, for example utility, transport companies, Health and Safety Executive, have a duty to cooperate with Category 1 responders.
- Medway Council is a Category 1 responder. This means the Council, along with other organisations such as the NHS and emergency services, has a statutory responsibility to plan, prepare for, and respond to incidents. This role also includes warning and informing the public prior to, during any emergency.
- The Council also coordinate voluntary sector support during an emergency and provide advice on business continuity management to small/medium business.

Kent Resilience Forum

Category 1 and 2 responders, and wider partners, come together to form the Kent Resilience Forum (KRF). The role of the KRF is to ensure that partners across Kent and Medway plan for and respond to emergencies as effectively as possible. This includes sharing information, assessing risks, planning for business continuity (ensuring services can continue to operate during disruption), and providing information and guidance to the public before, during and after emergencies.

Medway Council is represented at this forum by its Emergency Planning and Public Health teams.

Community risks in Medway

Partners in the KRF are required to produce a community risk register. Its purpose is to assure people in Kent and Medway that an assessment of potential risks has taken place and these risks have been identified in the emergency plans of local partners. The inclusion of risks does not mean that KRF believes that the risks will materialise, but is based on a reasonable worst case assumption.

The top risks identified across Kent and Medway for 2016-17 are:

- Pandemic influenza (this is also the most significant risk nationally);

- Tidal flooding in relation to the Medway Council area;
- Severe inland flooding;
- Local/urban flooding.

The role of the Council and other partners in Medway in Control of Major Accident Hazards Regulations 2015

- Control of Major Accident Hazards Regulations (COMAH) 2015 apply to businesses that make, store or use specified quantities of dangerous substances.
- Medway Council is responsible for reviewing, writing and testing the External COMAH Emergency Plans for partnership response and recovery if there was a major incident at an "upper tier" COMAH site in Medway (all sites must have their own plans to prevent and respond to incidents).
- Upper tier COMAH sites are ones that hold greater quantities of dangerous substances and therefore extra requirements are placed on them.

There are two "upper tier" COMAH sites in Medway:
- BP Oil import terminal, Isle of Grain,
- National Grid LNG (liquefied natural gas) storage terminal, Isle of Grain.

There are also three power stations in Medway (Medway Power Station, Grain Power Station and Damhead Creek; all on the Hoo Peninsula) all of which are gas powered and are "lower tier" COMAH sites.

Kent Local Health Resilience Partnership

The Kent Local Health Resilience Partnership (LHRP) brings together local NHS organisations and health related organisations. The role of the LHRP is to ensure the NHS and health partners have in place appropriate arrangements to respond to health related emergencies. These could include a power failure at a hospital, or being able to deal with a major outbreak of communicable disease. The LHRP also enables health partners to collaborate with other non-NHS organisations such local Authorities the police, fire service and Ministry of Defence.

The Council is represented at this partnership through joint arrangements between the Director of Public Health for Kent and Director of Public Health Medway.

NHS England is responsible for gaining assurance that the NHS is prepared to respond to emergencies and protect patients. Clinical Commissioning Groups (CCGs) are responsible for overseeing local NHS services. CCGs and the providers of NHS services (e.g. hospitals and the ambulance service) are required to complete an annual self-assessment against NHS Emergency Preparedness, Resilience and Response (EPRR) Core Standards. This assessment is submitted to the LHRP. The LHRP then decides whether an organisation has in place robust systems and processes to maintain business continuity, protect patients and are able to respond effectively to an emergency.

2) What are partners doing to protect the health of Medway's population?

- The Kent Resilience Forum (KRF), Local Health Resilience Partnership (LHRP) and other partners, including Medway Council, maintain, update and test a range of plans to prepare for, respond to and recover from emergencies.

- In 2017/18, Medway Council worked with the KRF to refresh the pandemic influenza plan.
- A KRF emergency planning exercise was held to focus on recovery in the aftermath of an emergency. Over 160 officers from local partners attended this event (Exercise Vulcan). The main aim of the Exercise was to validate the Pan Kent Recovery Framework. Lessons learned from this exercise are being used to update and improve plans across Medway and Kent.
- Should there be an incident that causes mass casualties, it is important that all partners are able to work together to respond effectively. In 2017 a KRF emergency planning exercise focussed on dealing with mass fatalities (Exercise Unified) was held. This exercise helped us test our current preparedness and identify issues that needed to be addressed in the unlikely event an incident occurs in Kent or Medway.
- KRF continue to regularly update the Kent community risk register, which includes Medway. This ensures all current or emerging risks are identified and appropriate plans are in place to address them.
- Medway Council annually refreshes its cold weather and heatwave plans. This exercise is undertaken to ensure local plans and in line with national guidance which is published by Public Health England. These plans are shared with internal services and are activated in periods of extreme weather (see case study).

3) What can people in Medway do to protect their health?

- Familiarise yourselves with the Kent Resilience Forum (KRF) advice booklet "What should I do in an emergency?" and take the "How ready are you?" test.[1] While we all hope that emergencies won't happen to us, it's easy to be prepared just in case.
- Make your own household emergency plan. It'll only take a few minutes but it could be a lifesaver. Find hints about how to prepare one in the KRF "What should I do in an emergency?" advice booklet.[1]
- Pack an emergency grab bag and keep it in a safe place. Having medicines, important documents and other essentials handy will save time if an emergency should occur.
- Find out if your home is in a flood warning area and sign up for flood alerts, if relevant, with the environment agency.[2]
- Consider taking a first aid course. Simple skills could help save a life. For local courses see the St John Ambulance [3] or British Red Cross [4] websites.

4) What are the areas to focus on in the future?

- Kent Resilience Forum (KRF) have created a "lessons identified" log, which Medway Council has contributed to. This log captures learning from previous emergency preparedness events and exercises. The Council is using this learning to underpin an intensive process of staff training, plan development and exercising and training over the next 3 year training cycle.
- In 2018, Medway Council will be refreshing and testing its partnership plans for response and recovery if there was to be a major incident at the National Grid LNG (liquefied natural gas) storage terminal in Grain (as part of its programme of COMAH plans).

5) Recommendations

- It is recommended that an annual assurance audit of the Council's cold weather and heatwave plans be undertaken. This audit should specifically review the roles and responsibilities of partners during extreme weather and identify any areas for improvement.
- It is recommended that Medway Council review the emergency planning governance arrangements between the Council and the emerging strategic leadership function of the Kent and Medway Sustainability and Transformation Partnership.
- Medway Council should review its relationships with Public Health England specialist teams, e.g. the Centre for Radiation, Chemical and Environmental Hazards (CRCE), to ensure processes are in place for quick and coordinated responses to exceptional events, such as chemical incidents.

6) Case study

How Medway tackled the Beast from the East

In late February and early March 2018, Medway experienced unprecedented weather conditions, including freezing temperatures and a significant amount of snow over a sustained period. Medway Council put its cold weather plan into action and took the following actions to protect the health of Medway residents:

Ensuring vulnerable residents were supported

The Council prioritised its efforts to ensure the most vulnerable residents were supported. This included:

- Telephone calls to vulnerable residents and people in sheltered housing to ensure their welfare. Some residents couldn't be reached by phone, so staff offered to walk to properties to check on them.
- Support for rough sleepers was available daily at Kingsley House in Gillingham, with an out-of-hours homelessness service available for support, advice and assistance in the evenings and weekends.
- Once alerted that snow drifts were severely affecting the Hoo Peninsula, sending winter vehicles immediately to help clear roads. As part of the Council's adverse weather contingency planning, farmers were equipped with snow ploughs which they could attach to the front of their tractors to help clear rural roads in their communities.
- Additional staff redeployed to ensure key and routine services were open daily, for example libraries and community hubs.

Keeping Medway moving

The Council worked hard to keep Medway moving. This included:

- Spreading 1,600 tonnes of salt on Medway's roads during the snowy conditions and refilling the 455 residential salt bins in Medway. The Council's Snow Wardens (volunteers in the community) worked tirelessly to keep residential and municipal footpaths clear of ice and snow.
- The Council used 4x4 vehicles to take social care staff to check on those living in sheltered housing schemes, as well as the area's most vulnerable residents. These vehicles delivered essential supplies of food and drink where required.
- The Council also supported the wider health and care system to respond to the snow. Council staff teamed up with colleagues from Medway Norse and volunteers from South East 4x4

Response to take health care professionals who were having difficulty getting to work to the hospital and to drop off food to care homes that had deliveries cancelled.

- The Council also contacted private care homes to offer assistance in gritting their footpaths and car parks, and took tonnes of salt to Medway Maritime Hospital to help with their efforts to keep the car park and footpaths clear of ice. Officers from greenspaces, street cleansing and parking services also helped to grit areas around GP practices and town centres.

Figure 1: Medway Council during the snow in 2018

Source: Medway Council Press Office (adapted)

7) References

[1] Kent Resilience Forum. *What should I do in an emergency? A handbook that could save your life.* Available at: https://www.medway.gov.uk/downloads/file/1987/kent_resilience_forum_-_what_to_do_in_an_emergency

[2] Environment Agency. *Flood Warning and Alert Areas.* Available at: http://apps.environment-agency.gov.uk/wiyby/37835.aspx

[3] St John Ambulance. Available at: http://sja.org.uk/sja/

[4] British Red Cross. Available at: https://www.redcrossfirstaidtraining.co.uk/

Sexual health and blood-borne viruses

1) What is the current situation in Medway?

The health and economic wellbeing of any population and the wellbeing of individuals can be critically influenced by sexual health. The financial case for sexual health services has been made repeatedly; effective sexual health services and the prevention of sexually transmitted infections (STIs) are cost-saving. STIs and blood-borne viruses present both short-term and long-term negative impacts on health. For example:

- Bacterial chlamydia and gonorrhoea may have physical symptoms in early stages of infection and can lead to infertility and other complications.
- Human Papillomavirus (HPV) causes genital warts and is responsible for cervical, oral and anal cancers in some people.
- Hepatitis and human immunodeficiency virus (HIV) can lead to life changing illness and a lifelong reliance on medication.

The residents of Medway enjoy relatively good sexual health, but sexual ill health is not equally distributed among the population. Higher levels are seen in gay, bisexual and other men who have sex with men (MSM), teenagers, young adults and some black and minority ethnic groups. [1] There is a strong positive correlation between deprivation and STI rates. In Medway, central Chatham has the highest concentration of STI diagnoses and higher HIV prevalence, with lower prevalence seen in rural and more affluent areas. [1]

It is therefore necessary to promote sexual health in a multifaceted way as it is influenced by a number of issues including socioeconomic and cultural issues.

- In 2016, Medway had lower rates of STIs than the England average (see Figure 1).
- There were 1,979 new STIs diagnosed in Medway; a rate of 716 per 100,000 population compared to the England average of 750 per 100,000 population. [1]
- Chlamydia was diagnosed more than any other STI (see Figure 2). [1]
- There was a significantly lower rate of gonorrhoea at 39.4 per 100,000 population compared to the England average at 64.9 per 100,000 population. [1]
- There were marginally lower rates of syphilis (9.4 per 100,000 population) compared to the England average (10.6 per 100,000 population). [1]
- In Medway, there has been a reduction in genital warts from 115.7 per 100,000 population in 2015 to 107.1 per 100,000 population in 2016. [2]
- There was a higher prevalence of herpes at 66.6 per 100,000 population compared to the England average at 57.2 per 100,000 population. [1]
- 58% of all new STI diagnoses in Medway were among 15 to 24 year olds. [1]
- There was a 81.4% uptake of HIV screening when offered in sexual health services but screens were only offered 79.7% of the time. [1]
- There were lower rates of HIV than the England average (see Figure 3). [1]
- Medway had similar rates of late diagnosis of HIV (39.5%) compared to England (40.1%). [3]
- In 2016, 288 people were living with HIV in Medway, of which 50.3% were white and 39.9% were black African. [1]

- The rate of new cases of acute hepatitis B and hepatitis C (detection rates) are similar to the England average (new cases of acute hepatitis B: 1.08 per 100,000 population in Medway compared to 0.82; hepatitis C: 18.2 per 100,000 reported cases in Medway compared to 19.7 per 100,000 reported cases).
- More people in Medway acquired HIV through heterosexual sex, than through same sex activity. [1]
- There were lower chlamydia detection rates than the England average and Medway screened a comparable proportion of its population. [4]
- There was a lower percentage of eligible people entering substance misuse services that completed a course of hepatitis B vaccination (2.4%) than the England average (8.1%). [5]
- Looking at the South East region overall, the prevalence of blood-borne viruses appears to have reduced among people who inject drugs. [6]

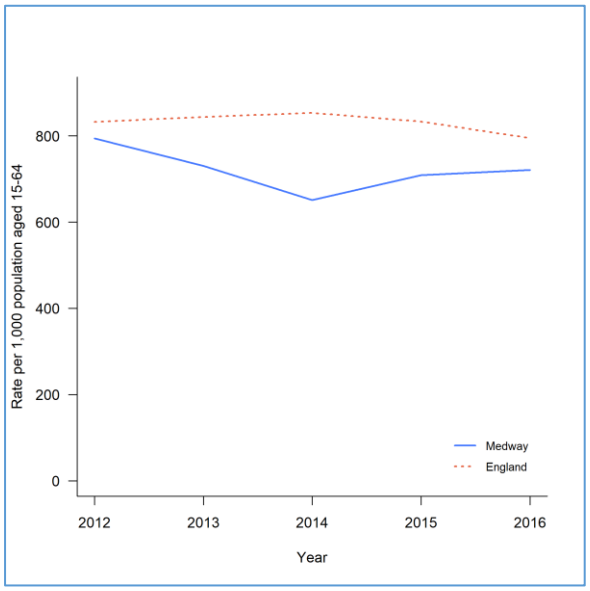

Figure 1: New sexually transmitted infection diagnoses (excluding chlamydia in under 25 year olds) per 100,000 population aged 15 to 64

Source: Public Health England. Fingertips, Sexual and Reproductive Health Profiles, 91306

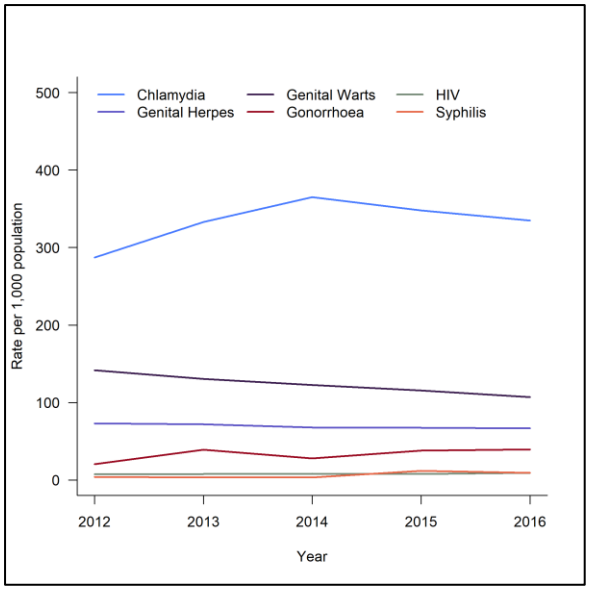

Figure 2: Sexually transmitted infections and HIV diagnoses per 100,000 population in Medway

Source: Public Health England. Fingertips, Sexual and Reproductive Health Profiles

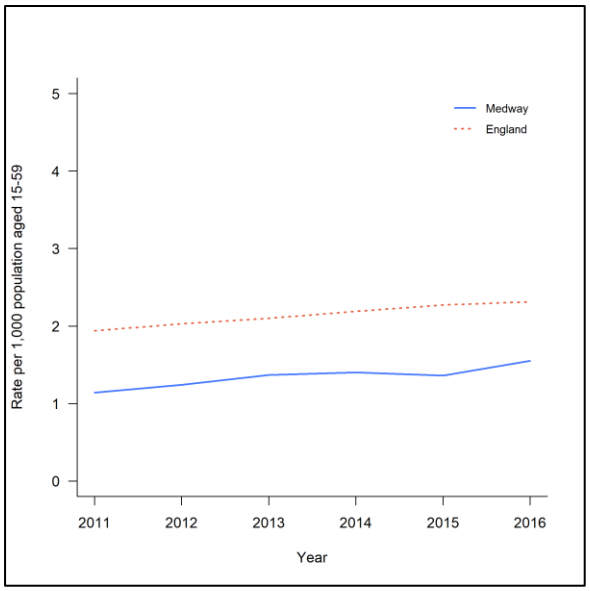

Figure 3: Prevalence of diagnosed HIV infection per 1,000 among persons aged 15 to 59 years

Source: Public Health England. Fingertips, Sexual and Reproductive Health Profiles, 90790

2) What are partners doing to protect the health of Medway's population?

The vast majority of new cases of HIV in England are transmitted sexually and relatively few cases are transmitted as a result of injecting drug use. All the available evidence suggests that this is mirrored in Medway. The local treatment provider, Turning Point, manages a needs exchange scheme as part of the substance misuse treatment service to make clean injecting equipment available to drug users. In 2017/18 approximately 194,000 syringes were distributed in Medway, with the large majority used by drug injectors and a small minority of steroid users. [7]

New HIV diagnoses among MSM have reduced nationally and in the South of England. There is evidence that this is due to high levels of uptake in HIV tests alongside accelerated initiation of anti-

retroviral therapy [8]. It is anticipated that this reduction will increase as trials for Pre-Exposure Prophylaxis (PrEP) are rolled out in 2018; Medway Services are taking part in the trial.

Sexual health services in Medway have been reconfigured into an integrated model. This means that people can access advice, contraception, STI testing and treatment all in one place, often as part of one appointment. The service are working to increase the percentage of people who accept the offer of an HIV test. The service has introduced self-sampling kits that can be ordered online and used at home. Negative test results are available online and a telephone call is made in cases where an infection is indicated.

Consistent and correct condom use provides a very effective way to reduce the transmission and acquisition of an STI. There are two main schemes in Medway to distribute free condoms from certain collection points or via post to a home address. The "Get It!" scheme is for young people aged 13 to 24. Registration is online but a face-to-face consultation is required for those aged under 16. Between October 2016 and September 2017, the scheme offered free condoms from 66 sites to over 1,000 users. The other scheme, called "Pitstop Plus" works in a similar way and is aimed at men who have sex with men.

The vaccination programmes delivered across Medway in a number of services and settings are likely to have contributed to a reduction in genital warts and prevented a significant increase in hepatitis.

3) What can people in Medway do to protect their health?

Get tested

Sexually active young people should be tested for chlamydia and other STIs annually or whenever they change partner. [9] Others who face higher risks of acquiring a STI or HIV, such as MSM, sex workers or those who have several concurrent partners, should test more regularly. Sexual health experts based at the 4 Clover Street clinic in Chatham town centre are able to advise people on a testing routine to best suit their lifestyle.

If you have not had an HIV screen recently and are offered one, take the test. It is better to know your status and if required, begin treatment as soon as possible. This will reduce the likelihood of you becoming unwell. Not knowing your status may put your health and that of others at risk.

Reduce the risk

As well as preventing unplanned pregnancy, condoms (male or female) offer protection against STIs such as gonorrhoea, chlamydia, syphilis and HIV. Condoms should be worn on every occasion where there is any doubt about the sexual health of your partner; it may be that they are a new partner, or the relationship is not exclusive, or that either of you have not had an STI or HIV test recently. Condoms should be used correctly according to the manufacturer's instructions using a water based lube as wanted or needed. If you share sex toys with your partner they should be covered with a condom too.

Vaccinations offer effective protection from some illnesses. The human papilloma virus (HPV) vaccination protects against two types of virus that cause most cases (over 70%) of cervical cancer. Since it was introduced in September 2008 it also appears to have had a reduction on the number of new diagnoses of genital warts. Hepatitis vaccinations are available through sexual health and

substance misuse services. Vaccinations are available on the NHS for some groups; you should speak to your health care professional for advice.

4) What are the areas to focus on in the future?

In Medway the Public Health team will:

- Monitor STI and blood-borne virus prevalence in the population.
- Increase and normalise the use of 'self-managed care' options in sexual health and substance misuse services to reduce risk. This includes online requests for self-sampling kits, condoms, web-based consultations where appropriate and also general advice.
- Increase the number of young people tested annually who are at increased risk of chlamydia.
- Support the NHS England PrEP research trial to reduce HIV acquisition.
- Use targeted outreach to those at highest risk of HIV and STI, where possible offering rapid screening.
- Increase the use of partner notification in sexual health services to reduce the likelihood of onward transmission of an STI.
- Continue to commission free condom distribution schemes to young people and MSM.
- Continue to make condoms available through sexual health services.
- Continue to commission the needle exchange scheme for injecting drug and steroid users.

5) Recommendations

- Commissioned services should prioritise prevention and harm reduction with the majority of interventions delivered through self-managed care.
- Partners in the Quality and Safety Partnership should continue to promote the role of Antibiotic Guardians with healthcare professionals and the public, to counter the risk of newly emerging forms of antimicrobial resistant gonorrhoea.
- Partners should continue work to increase uptake of human papilloma virus vaccinations among eligible populations (both through sexual health services and routine vaccination programmes).
- Undertake work to increase the percentage uptake of HIV screening in sexual health clinics.

6) Case study

Historically, contraceptive services were not co-located with genitourinary medicine and staff were not dual trained, this resulted in missed opportunities to offer comprehensive screening to the service users.

In October 2016 Medway Public Health commissioned Kent Community Health Foundation Trust (KCHFT) to deliver an integrated sexual health service and started a programme of training staff across both disciplines; leading to greater opportunity for STI and HIV testing in clinics. KCHFT also offered home sampling kits for the first time in Medway. These are ordered online and delivered to the users home (or other address) where they collect samples of blood through a thumb prick test and either a vaginal swab for females or urine sample for males. The user sends the samples to the laboratory in the pre-paid envelope and approximately 80% of users get their results within 24 hours of the sample being received by the laboratory. The service has proved very popular with people in

the 20-34 age range with most people requesting screens for a 'full screen' of chlamydia, gonorrhoea, syphilis and HIV. Although tests are only made available to people who say they have no symptoms, the tests regularly identify infection in 8% of all who screen each month. Between October 2016 and September 2017, 2,145 people requested kits of which 77% were returned for testing at the laboratory. Without this easy access to testing it is likely that fewer asymptomatic people would be tested and therefore pass on the infection to subsequent partners.

7) References

[1] Public Health England (2017). *Medway Local Authority HIV, sexual and reproductive health epidemiology report (LASER): 2016.*

[2] Public Health England. *Fingertips, Sexual and Reproductive Health Profiles, 90729 - Genital warts diagnostic rate / 100,000.*

[3] Public Health England. *Fingertips, Sexual and Reproductive Health Profiles, 90791 - HIV late diagnosis (%).*

[4] Public Health England. *Fingertips, Sexual and Reproductive Health Profiles, 90776 - Chlamydia detection rate / 100,000 aged 15-24.*

[5] Public Health England. *Fingertips, Health Protection, 90932 - Persons entering drug misuse treatment - Percentage of eligible persons completing a course of hepatitis B vaccination.*

[6] Public Health England (2017). *Data tables of the Unlinked Anonymous Monitoring Survey of HIV and Hepatitis in People Who Inject Drugs*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633204/UAM_Survey_of_PWID_data_tables_2017.pdf

[7] Turning Point Medway (2018). *Performance management dataset* [Unpublished].

[8] Public Health England (2017). *New PHE figures show decline in HIV diagnosis rates* [Press release]. Available at: https://www.gov.uk/government/news/new-phe-figures-show-decline-in-hiv-diagnosis-rates

[9] NHS Choices. *Chlamydia. Diagnosis.* Available at: https://www.nhs.uk/conditions/chlamydia/diagnosis/

Tuberculosis

1) What is the current situation in Medway?

Background

Tuberculosis (TB) is caused by infection with the bacteria mycobacterium tuberculosis. TB is spread via inhaling airborne droplets when a person with infectious respiratory TB coughs or sneezes. TB is curable but can be fatal if left untreated. The disease can affect almost any part of the body, but is most commonly found in the lungs [1]. TB is however, much less infectious than other respiratory infections, such as influenza.

Some people can become infected with TB but not show symptoms. People who are infected in this way are said to have latent TB infection (LTBI). LTBI may reactivate later in life, particularly if an individual's immune system has become weakened, e.g. through HIV, cancer chemotherapy or in old age. Up to 10% of people who have LTBI will develop the disease at some point in their lifetime [2].

In England there has been a successful campaign to eradicate TB. Over the last 50 years TB has changed from being a disease that occurred across all parts of the population, to one occurring predominantly in specific population subgroups [3]. TB is not as significant a threat to the public health as it was at the beginning of the 20th century, when over 117,000 new cases of TB were recorded in England every year.

Although new cases of TB in England fell to a low of 5,086 in 1987, the disease has not been totally eradicated. In 2016 there were 5,664 TB cases notified in England, a decrease from the 5,727 cases notified in 2015.

Rates of TB are higher in certain communities, mainly by virtue of their connections to higher prevalence areas of the world. The rate of TB in the non-UK born population is 15 times higher than in the UK born population, and 74% of all TB cases notified in 2016 were born abroad [3].

In other communities, social risk factors, such as homelessness, drug or alcohol misuse and imprisonment, are important factors. In England the proportion of TB cases with at least one social risk factor was 11.1% in 2016, a small decrease from 11.7% in 2015.

TB is not a major public health issue for Medway or Kent as a whole. Medway is a low incidence area with a rate of 5.1 cases per 100,000 cases recorded in the three year period from 2014-16 (Figure 1).

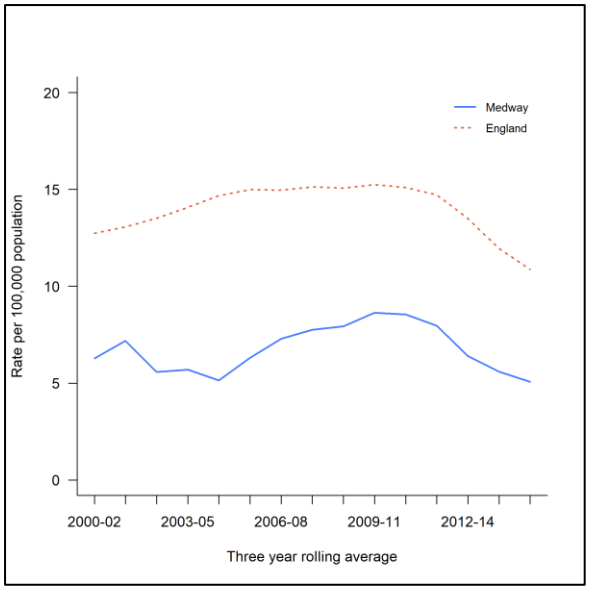

Figure 1: Rate of reported new cases of tuberculosis per year in England and Medway from 2000-2014 (3 year average)
Source: Public Health England. Public Health Outcomes Framework, 3.05ii

The challenge for Medway, given the low rates of TB infection, are to ensure early identification and treatment of individuals with active disease. There is also a need to ensure that people who may potentially have LTBI are identified and treated before the disease progresses.

2) What are partners doing to protect the health of Medway's population?

The World Health Organisation (WHO) has set a target to eliminate TB by 2050 [4]. Public Health England, in close collaboration with NHS England and a coalition of key stakeholders, launched the TB strategy for England 2015-2020 (5). This aims to achieve a year-on-year decrease in TB incidence, and ultimately the elimination of TB as a public health problem in England.

The strategy includes ten key areas of action, including the prompt identification of individuals who are infectious and ensuring that they are placed on appropriate treatment, vaccination of high risk groups, maintaining excellent diagnostic services, tackling drug resistant TB, identifying and treating those with latent TB, ensuring contact tracing happens, and workforce planning to ensure there is capacity to deliver these interventions.

The national TB strategy created a National TB Office and multi-agency TB Control Boards to oversee the implementation of the national strategy.

The UK previously screened migrants from countries with a high incidence of TB at the time of entry into the country. This has since been replaced with chest x-ray based screening for active pulmonary TB prior to entry to the UK. From 2015, there has been a national roll-out through GP practices of systematically testing and treating eligible new migrants for latent TB infection [5]. The BCG vaccine (which stands for Bacillus Calmette-Guérin vaccine) is most effective against the most severe forms of the TB in children, but less effective in preventing respiratory TB, which is the more common form in adults [1]. From 2005, the BCG vaccine has been given to babies and children with a parent or grandparent from a country with a high incidence of TB (over 40 cases per 100,000), or who live in an area of the UK where the incidence of TB is high.

Local initiatives

The Kent and Medway TB Network has developed a TB Health Needs Assessment and has a work plan which is shared amongst all the local organisations with a focus on TB. Partners include:

- Clinical Commissioning Groups;
- TB community services;
- Clinicians;
- Microbiologists;
- Health protection and epidemiology specialists.

The TB Network ran an awareness raising event on 24 March 2017 (World TB Day) aimed at helping those who work with people at risk of TB (e.g. non-specialist healthcare workers and social care or housing workers) to be able to identify the signs and symptoms of TB. Another initiative of the TB Network is to pilot video observed therapy (VOT) in a small number of patients.

People with TB need to take antibiotics, often daily, for a long time. Sometimes people may forget to take their medicine. This can lead to the TB bacteria becoming resistant to antibiotics, which can lead to difficulty treating the disease. To avoid this, the patient generally attends a clinic, or is visited at home by a clinician, and is observed taking their medicine. This is called directly observed treatment (DOT). However, DOT can be challenging to deliver and inconvenient for patients. Piloting VOT can help address some of these challenges. VOT is where a patient is observed taking their medication using mobile technology (e.g. using a smartphone). This can help clinicians monitor and support patients in the community. This increases treatment compliance and reduces the inconvenience that standard directly observed therapy can cause to daily activities.

The Kent and Medway TB Network also undertakes cohort reviews. This is a process which scrutinises every aspect of a patient with TB's treatment from start to finish. Cohort review is used to make improvements to the way in which people are managed and ensure people complete their treatment successfully. Information is fed back to the TB Control Board for England (which oversees progress towards the WHO target). This information is also shared with stakeholders including, commissioners, service providers and local Directors of Public Health.

Over the past year, the Council has been working with the Kent and Medway TB Network and the local community TB service on a number of initiatives. These include providing housing solutions for vulnerable homeless people diagnosed with TB.

The councils commissioned drug and alcohol service has collaborated with the community TB service to support directly observed therapy (DOT) for people with TB who have substance misuse problems. This involves the supervision of the patient by a healthcare worker when taking their medication, leading to better compliance with treatment. The local sexual health services have also been promoting the uptake of TB screening for all those who are offered HIV testing.

3) What can people in Medway do to protect their health?

- Although TB is uncommon among Medway residents, it's good to be aware of the signs and symptoms. If you think you may have TB or have symptoms, such as a cough lasting more than three weeks, weight loss, night sweats, tiredness or fever, speak to your local health professional. You can find out more on The Truth About TB website. [6]

4) What are the areas to focus on in the future?

- Partners will continue to scrutinise treatment for TB cases in Medway through the regular cohort review process.
- Partners will continue to work with professionals to raise awareness of TB signs and symptoms.

5) Recommendations

To continue the downward trend of TB notifications in Medway it is recommended that:

- Training should be made available to professionals to raise awareness of TB in vulnerable groups including homeless, drug and alcohol misusers, as well as new migrants from high incidence countries, to ensure prompt referral when TB is suspected.
- The Council should collaborate with the Kent and Medway TB Network to support the piloting of video observed therapy (VOT) in the most disadvantaged or hard to reach groups.

6) Case study

Partnership working to support vulnerable individuals

People with active pulmonary TB need to take antibiotics for at least six months to kill the bacteria. If they do not complete the course of treatment, TB bacteria may become resistant to the antibiotics. The individual may therefore need a longer course of treatment, potentially with more toxic therapies. Vulnerable groups, for example people addicted to illegal drugs or who may be dependent on alcohol, often live complex chaotic lives, which means it is sometimes challenging to treat them for TB infection.

In 2017 the council was approached by colleagues from the local NHS TB service for advice. They were treating an individual with active TB who was now stable and not infectious. This individual needed to be discharged from hospital as they were medically fit. They did however need to be monitored in a community setting to complete the full six month course of antibiotics.

Medway Council Public Health Department convened a planning meeting to determine the best course of action. The individual was of no fixed abode, had no recourse to public funds and therefore no entitlement to access housing support in Medway. All the partners, including NHS Medway Clinical Commissioning Group, Public Health England, Medway Councils Housing Team, local charities and a range of other statutory organisations, agreed the priority was to ensure the individual completed the course of antibiotics to prevent any risk to the public health.

Partners were made aware of a new London based TB charity. This charity specialises in managing individuals with chaotic lifestyles. As well as ensuring individuals complete their course of TB antibiotics, the charity provides housing and access to advice and support to help individuals manage drug and alcohol dependency. They also help people gain new skills, which helps them to access employment opportunities.

The local individual infected with TB was discharged from hospital and transferred to the London TB charity and specialist NHS TB services in London. This was a successful conclusion to a challenging situation. It demonstrated the effectiveness of local partnership working in Medway.

7) References

[1] Public Health England (2013). *Tuberculosis: the green book, chapter 32.* Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/148511/Green-Book-Chapter-32-dh_128356.pdf

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Healthcare associated infections

1) What is the current situation in Medway?

Healthcare-associated infections are infections patients contract from a healthcare setting, that were not present before they entered the setting. These settings include hospitals, nursing homes, rehabilitation facilities, outpatient clinics and other clinical settings. Patients tend to be vulnerable to infection due to their illness, age or because treatment for their condition has weakened their ability to fight infection.

Bacteria and viruses cause healthcare-associated infections. The most well-known micro-organisms that cause healthcare-associated infections include:

- Clostridium difficile (C. difficile);
- Methicillin-resistant Staphylococcus aureus (MRSA);
- Methicillin-sensitive Staphylococcus aureus (MSSA);
- Escherichia coli (E. coli).

Healthcare-associated infections can be very serious. For example, if left untreated, MRSA can cause sepsis, a life-threatening reaction to severe infection in the blood stream. Sepsis is a leading cause of death in the UK, causing between 36,000 and 64,000 deaths per year. [1] Infections can also cause severe pneumonia, infections of the urinary tract, bloodstream and other parts of the body.

As well as the significant harm to health, treating healthcare acquired infections is extremely costly for the NHS and wider health and care system.

There are six links in the “chain of infection”. Breaking the links at any one point will stop infection from spreading. These links are:

- Infectious agent: For example, a virus such as flu,
- Reservoir: Where the infectious agent lives, e.g. in a person’s lungs,
- Portal of exit: For infection to spread it must leave the reservoir, e.g. flu virus can leave the body through coughing or sneezing,
- Mode of transmission: How the infection gets from one person to another, e.g. flu virus is spread to others through contaminated hands, surfaces and droplets containing the virus,
- Portal of entry: How the infectious agent gains entry to the next person, e.g. through the eyes, nose or mouth,
- Susceptible host: This is a person at risk of becoming infected. People with long term health problems, the elderly or very young are particularly susceptible to infections.

A range of actions are taken by partners to break the links in this chain. One key area of focus is reducing the overuse or inappropriate use of antibiotics. Unnecessary use of antibiotics allows bacteria to develop resistance. This can lead to infections that are increasingly difficult to treat. Tackling the problem of antibiotic resistance is of national and international concern. If no action is taken it could lead to:

- an estimated 10 million deaths every year globally by 2050,
- a cost of £66 trillion in lost productivity to the global economy.

Important healthcare associated infections in Medway

Clostridium difficile (C. difficile)

Clostridium difficile, also known as C. difficile or C. diff, is a bacterium that can infect the bowel and cause diarrhoea. This infection most commonly affects people who have recently been treated with antibiotics, but can also spread easily to others.

Rates of C. difficile have fallen nationally since 2012/13 (Figure 1) and have remained flat in Medway. In Medway in 2016/17, there were 63 cases of C. difficile, a rate of 22.7 per 100,000 population. This is very similar to the national rate. [2]

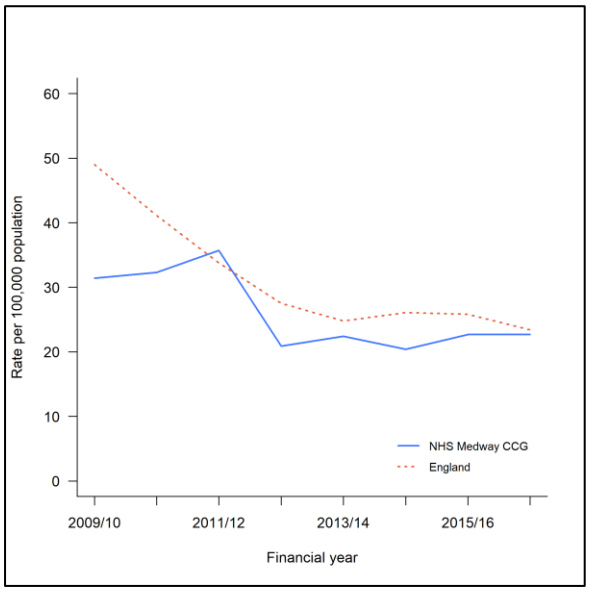

Figure 1: C. difficile infection rates
Source: Public Health England. Fingertips, AMR local indicators, 91902

Methicillin-resistant Staphylococcus aureus (MRSA)

MRSA (methicillin-resistant Staphylococcus aureus) lives harmlessly on the skin of around one in 30 people. It usually lives in the nose, armpits, groin or buttocks. People who have MRSA on their skin don't have any symptoms and it does not make them ill. They won't usually know they have it unless they have a screening test before going into hospital.

If MRSA gets deeper into a patient's skin, it can cause redness, swelling, warmth, pain and pus. If it gets deeper into the body it can cause sepsis.

As a result of concerted campaigns, MRSA infection rates have fallen nationally since 2009/10 and have been fairly flat since 2012/13 (Figure 2). In Medway the rate rose to high levels in 2014/15 and 2015/16 and has fallen again in 2016/17 when there were six cases (a rate of 2.2 per 100,000 population). This is slightly above the national average. [3]

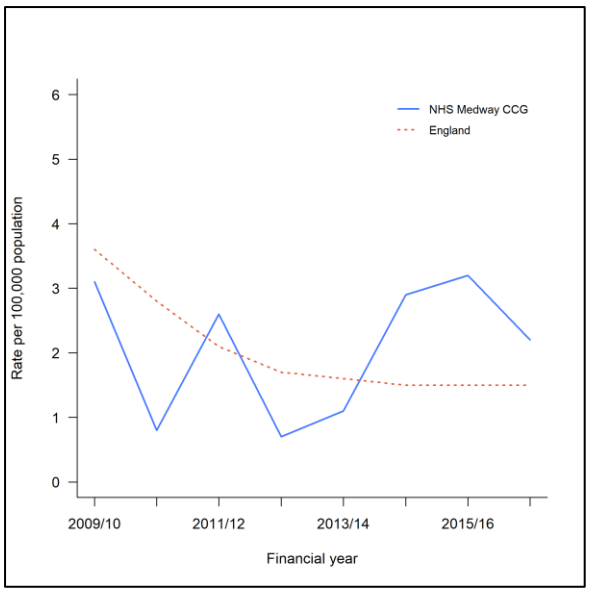

Figure 2: MRSA bacteraemia infection rates
Source: Public Health England. Fingertips, AMR local indicators, 91913

Escherichia coli (E. coli)

E. coli is a bacterium found in the gut and faeces of many animals, and is a common blood stream infection. Infection rates have been increasing over at least the last four years nationally and in Medway (Figure 3). Since the mid-2000s E. coli has been the most common cause of blood stream infection in England. In 2016/17 there were 232 cases in Medway, a rate of 83.7 per 100,000 population, slightly higher than the national average. [4]

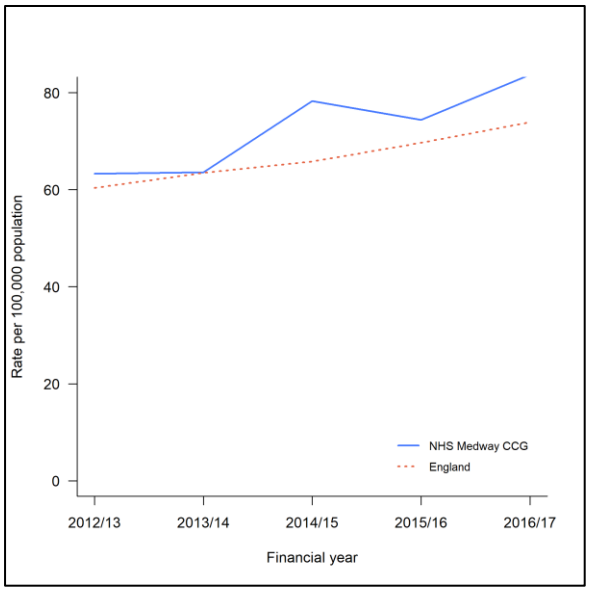

Figure 3: E. coli bacteraemia infection rates
Source: Public Health England. Fingertips, AMR local indicators, 91909

2) What are partners doing to protect the health of Medway's population?

- Multi-agency health protection meetings are held every quarter with representatives from Medway Council Public Health, Kent County Council Public Health, Public Health England and

NHS England. In these meetings partners review key issues relating to health protection, including healthcare-associated infections.

- The Kent and Medway Healthcare Associated Infections Group meets quarterly. This group has an action plan which focusses on specific local challenges.
- Medway Hospital reports blood stream infections to Public Health England and Medway Clinical Commissioning Group (CCG) monitors these reports on a monthly basis. The hospital and CCG work together to ensure that measures are taken to reduce the number of cases of hospital-associated infections.
- Medway NHS Foundation Trust (MFT) is taking a number of actions to minimise the risk of transfer of infection from patients, staff and visitors. These include:
  - Making "Hands Aware, Safe to Care" is the motto at MFT. Hand hygiene is the single most important intervention to reduce the risk of healthcare-associated infections. MFT ran a campaign coinciding with world hand hygiene day on May 5 2017. The hospital will repeat this event this year and continues to promote daily hand hygiene throughout the trust.
  - MFT has embraced digital technology. The Trust is using augmented reality to make infection control training and hand hygiene available to staff 24hrs a day, seven days a week. This training is being provided via the purchase of two state of the art "SureWash ELITE" advanced training kiosks. Patients and visitors will also be able to access these machines to better understand how they can reduce cross infection.
  - Reducing the infections related to catheter use in patients by using the HOUDINI protocol. This is a nurse-led programme designed to ensure appropriate insertion, timely removal and correct use of urinary catheters. Use of this protocol by nursing staff in the UK reduces catheter usage and catheter-associated urinary tract infections. Kent and Medway infection control teams are introducing a new catheter management policy throughout the whole of Kent and Medway in the acute and primary care sector with HOUDINI at its core.
  - Implementing new procedures and a specially trained rapid response team of housekeeping staff to effectively clean the rooms of patients discharged from hospital who may have had an infection. A simple traffic light system identifies which microbes were involved in the infection and which technology needs to be used to clean the room.
- Medway CCG is running a urinary tract infections project to reduce the number hospital admissions by training staff in care homes.
- Medway CCG is also running a project to reduce the rate of E.coli infection through:
  - better hygiene and improved patient care in hospitals, surgeries and care homes;
  - ensuring staff, patients and visitors regularly wash their hands;
  - promoting hydration;
  - promoting regular use of toilets;
  - raising sepsis awareness.

3) What can people in Medway do to protect their health?

NHS Choices provides the following information about how to prevent the spread of MRSA and this applies to other healthcare-associated infections. [5]

If you are staying in hospital, there are some simple things you can do to reduce your risk of getting or spreading MRSA. You should:

- wash your hands often (hand wipes and alcohol hand gel are also effective), especially before and after eating and after going to the toilet;

- follow the advice you're given about wound care and looking after devices that could lead to infection, such as urinary catheters or drips;
- report any unclean facilities to staff. Don't be afraid to talk to staff if you're concerned about hygiene.

If you're visiting someone in hospital, clean your hands before and after entering the ward and before touching the person. Gel or wipes are often placed by patients' beds and at the entrance to wards.

4) What are the areas to focus on in the future?

For the future, partners will need to continue work to break the “chain of infection” [6] in different settings, to stop infections from spreading. Below are some of the elements required for infections to spread (chain of infection), and actions that partners can take to reduce the spread of infection:

- Portal of exit (e.g. how infectious diseases leave the body and spread to others): reduce risk of infection spreading with hand hygiene, safe handling of body fluids, environmental cleaning and aseptic technique (procedures aimed to reduce the risk of contamination from bacteria, viruses, etc. using sterilisation, disinfection and other methods);
- Mode of transmission: reduce risk of infection spreading with decontamination of instruments and equipment, cleaning of the environment, isolation of patients with transmissible infections and safe handling of linen;
- Portal of entry (how an infectious agent enters the body): for example, one way to reduce risk of infection is having robust protocols around catheter insertion, care and review,
- Susceptible host: reduce risk of infection by assessing the risk of patients and act accordingly, e.g. ensuring good patient hydration and nutrition.

5) Recommendations

- Commissioning organisations ensure that all services commissioned or contracted by them, or on their behalf, are compliant with infection control guidance, policy and regulations. [1]
- Medway Hospital will ensure that the quality statements in NICE quality standard QS113 are applied. [7]
- Service providers to undertake assessments of their compliance with the infection control code of practice [8] at intervals agreed with the commissioning organisation.
- Providers to submit infection control compliance reports to their organisations’ relevant board for internal assurance and to their commissioning organisation for external assurance.

6) Case study

“Hands Aware, Safe to Care”

In 2017 Medway NHS Foundation Trust launched a “Hands Aware, Safe to Care” campaign to promote better hand hygiene amongst staff, patients and visitors at the Trust.

Clean hands are really important in stopping infections spreading and we want to encourage everyone to regularly wash their hands. Lots of bugs get transferred to surfaces on public transport, car steering wheels, door handles and other surfaces at home, at work and in public. The illnesses that these bugs cause can be greatly reduced by following simple infection control precautions, such as good hand hygiene.

This is important in all walks of life but especially in a hospital where patients are vulnerable and susceptible to illness and infection. The Trust supports all of its visitors to challenge staff and ask them if they have washed their hands before providing care.

To support this renewed focus, the Trust has put up additional posters and signs. Hand gel is available throughout the hospital, including in the main entrance and inside every ward/department. Examples of key messages used in this campaign can be seen below.

Stay safe - keep your hands clean

Clean your hands, with both soap and water or with hand gel every time you:

- Have visibly dirty hands - use soap and water;
- Plan to eat and before and after preparing food;
- Use the toilet;
- Blow your nose or when coughing into your hands;
- Touch pets or other animals;
- Visit a sick friend or relative.

Make sure that when you clean your hands, you do it thoroughly. As well as your palms and fingers, make sure that you also wash the backs of your hands and in-between your fingers and wrists.

References

[1] Royal College of Nursing (2016). *Infection Prevention and Control Commissioning Toolkit Guidance and information for nursing and commissioning staff in England*. Available at: https://www.rcn.org.uk/professional-development/publications/pub-005375

[2] Public Health England. *Fingertips, AMR local indicators, 91902 - All C. difficile rates in England by CCG and financial year.*

[3] Public Health England. *Fingertips, AMR local indicators, 91913 - All MRSA bacteraemia rates by CCG and financial year.*

[4] Public Health England. *Fingertips, AMR local indicators, 91909 - All E. coli bacteraemia rates by CCG and financial year.*

[5] NHS Choices. *MRSA.* Available at: https://www.nhs.uk/conditions/mrsa/

[6] Public Health England (2017). *Health matters: preventing infections and reducing antimicrobial resistance.* Available at: https://www.gov.uk/government/publications/health-matters-preventing-infections-and-reducing-amr/health-matters-preventing-infections-and-reducing-antimicrobial-resistance

[7] National Institute for Health and Care Excellence (2016). *Healthcare-associated infections. Quality standard [QS113].* Available at: https://www.nice.org.uk/guidance/qs113

[8] Department of Health and Social Care (2015). *The Health and Social Care Act 2008: code of practice on the prevention and control of infections and related guidance.*

Air quality

1) What is the current situation in Medway?

Air pollution is estimated to be the largest environmental risk to the public health in England. [1] Small particles and other substances polluting the air increase the risk of deaths from lung cancer, cardiovascular disease and respiratory disease. Air pollution has a direct impact on the quality of life of everyone, but more so for vulnerable people. These include the very young, older adults and people living with underlying health conditions, such as asthma or chronic obstructive pulmonary disease. Air quality in Medway is generally good and meets government objectives, however partners are committed to working together to maintain and improve local air quality. Targeted action is taken in areas where improvements are needed.

Air quality and health

There are many pollutants in the air. Particulate matter and nitrogen dioxide are the pollutants that cause the most harm to health. Particulate matter consists of small particles that can be breathed deep into the lungs. This type of pollution can come from road transport (e.g. products of braking or tyre wear on road surfaces), industry or household fires/wood burning stoves. It can also be caused by chemical reactions in the air.

Both short and long term exposure to high levels of particulate matter can be harmful to health. Short-term exposure exacerbates respiratory problems, such as asthma and bronchitis, leading to coughing and wheezing. Long-term exposure (over many years) shortens life expectancy by increasing the risk of cardiovascular disease and other respiratory diseases. [2]

Long-term exposure to air pollution is thought to contribute to 25,000 deaths a year in England. [1] Nitrogen dioxide at high concentrations can also cause breathing problems and impact on lung function.

Air pollution in Medway

In England, transport is a major source of air pollution, particularly nitrogen dioxide. In Medway, this is made worse by high volumes of slow moving traffic. Medway is affected by air pollution from major roads such as the M2, A2 and other major A roads. Town centre congestion in Medway also contributes to air pollution. This is because slow moving vehicles produce a higher proportion of emissions relative to moving traffic. In Medway in 2016, it is estimated that 6.3% of deaths can be attributed to long-term exposure to small particles polluting the air. This compares with an average of 5.3% of deaths in England (Figure 1).

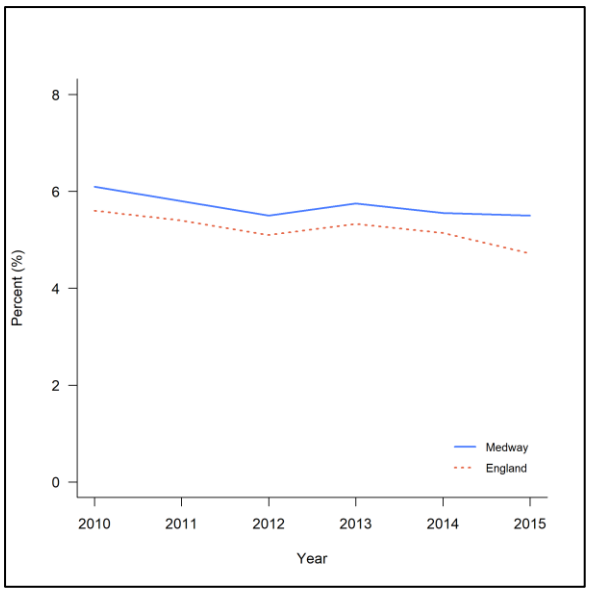

Figure 1: Fraction of all-cause adult mortality attributable to anthropogenic (human-made) particulate air pollution
Source: Public Health England. Fingertips, Public Health Outcomes Framework, 3.01

Air quality in Medway is generally good and meets national air quality objectives. However, similar to many urban areas in the UK, Medway has some areas of poor air quality. Four areas across Medway have been identified where levels of air pollution do not meet the annual mean objective for nitrogen dioxide (one of the national air quality objectives):

- Pier Road Gillingham;
- High Street, Rainham;
- Central Medway;
- Four Elms Hill, Chattenden.

Active travel in Medway

One of the ways to reduce air pollution from vehicles is to promote active travel, for example walking and cycling. These activities can also have a beneficial health impact. The annual school census in Medway (2016) reports that:

- 59.9% of pupils aged 5 to 10 years walk to school, 13.9% higher than the national average;
- 35.8% of pupils aged 5 to 10 years are driven to school by car, van or taxi which is 10.2% lower than the national average;
- there has been a 2.4% reduction in car use for pupils aged 11 to 15 years since 2006/07 (first survey);
- there has been a 6.8% increase in walking for pupils aged 11 to 15 years compared to the previous year, the highest since the survey began in 2006/07.

2) What are partners doing to protect the health of Medway's population?

Medway Air Quality Action Plan

The Medway Air Quality Action Plan (AQAP) [3] has been established to ensure the Council is able to monitor progress and, through a partnership approach, address any issues around air quality locally. The action plan has a particular focus on reducing nitrogen dioxide, but also contributes to reducing other air pollutants including particulate matter.

There are 12 key areas of work in the AQAP which are:

- Improve freight management (e.g. lorries),
- Encourage the increased use of public transport,
- Improving taxi emissions,
- Traffic management,
- Promotion of cycling and walking,
- Eco driving (driving in a smooth, controlled way reduces fuel use and air pollution),
- Procurement (work to ensure that services procured by the Council also support good air quality),
- Travel planning (e.g. supporting school travel plans),
- Development planning,
- Promote health awareness and air quality issues,
- Feasibility studies to tackle specific local issues,
- Development of the Air Quality Communication Strategy,
- Working with the Planning Authority to embed air quality guidance into the new Local Plan.

Good progress is being made against the action plan. Updates on actions are reported annually in the Air Quality Annual Status Report. [4] Medway Council works with a range of organisations as part of the Kent and Medway Air Quality Partnership to identify ways to improve air quality.

Air pollution is an issue that affects everyone and the best way to improve it is by individuals, communities and partners working together. One key issue identified within the Medway AQAP was the need to raise awareness of things that cause poor air quality and actions that can be taken by local people to improve the quality of air in Medway.

Medway Council's Environmental Protection team and Public Health department have developed an air quality communications strategy. The aim of this strategy is to engage with residents, businesses and other stakeholders to get them to tackle the things that cause air pollution.

Medway Air Quality Communications Strategy

The development of the Medway Air Quality Communications Strategy has been truly innovative. It focuses on specific communities and people who are most affected by poor air quality, as well as those who could provide solutions to help reduce air pollution in Medway. It also supports local people to be informed about ways in which they can reduce their contribution to air pollution. Key target groups include residents that live in air quality management areas, older people, parents of children, people with respiratory disease or cardiovascular disease, and people who drive regularly (including taxi and lorry drivers).

Active travel

In addition to the Medway Air Quality Action Plan, partners are taking a wide range of actions to promote active travel in Medway. Examples include:

- Walking school buses: There are 50 active walking bus routes operating within Medway, with over 600 children participating (2016).
- Health walks and cycling groups: Medway Council's Public Health team deliver over 25 guided walks weekly, with nearly 3,500 walkers registered as members of these walking groups. These walks are in addition to the regular Nordic walking sessions (full body walking including poles).
- The Council manages its parks and open spaces to support people to walk or cycle.
- The Council facilitates the use of public transport across Medway, including bus and rail providers.
- Medway Council is committed to encouraging cycling as a mode of travel and has produced a Cycling Action Plan. [5]

3) What can people in Medway do to protect their health?

Ways people can reduce their contribution to air pollution

- Don't leave your car engine running when the vehicle is stationary. This pollutes the air, causes unnecessary noise and costs money. Switching off your engine is an easy way to help improve air quality and the health of people in Medway.
- Walking or cycling instead of driving can improve your health as well as reducing air pollution. To get started, why not sign up for a health walk or cycle? Find out details on Medway Council's A Better Medway website. [6]
- Reduce the number of car journeys you make. Car sharing, cycling, walking or using public transport can help reduce the number of vehicles on the road in Medway and contribute to reducing air pollution.
- Keeping your car well maintained can reduce the amount of pollution it produces. Make sure it's regularly serviced/checked.
- Consider switching to an electric or hybrid vehicle. Recharging an electric vehicle is much cheaper than buying fuel.
- Conserve energy. Remember to turn off lights and appliances when not in use and choose energy efficient light bulbs and appliances.

Ways in which people can avoid air pollution

- Sign up to the free air pollution forecast on the KentAir website. [7] You will receive an email when there are likely to be raised levels of air pollution, so you can take measures to reduce your exposure if you are in a vulnerable group.

4) What are the areas to focus on in the future?

- Medway Air Quality Communications Strategy: This will be launched on "Clean Air Day" in June 2018. The day will also see focused activities with schools and the community in the Central Medway Air Quality Management Area. The overarching strapline for this event is "you are the key to cleaner air".
- Development Planning: Medway Council has produced Air Quality Planning Guidance [8] for use by developers and planners undertaking building or renovation in Medway. This will ensure new developments contribute positively to air quality by introducing a method to assess the air

quality impacts of developments, including potential negative impact on human health and the environment, related financial costs and identification of measures to address the negative impact of development on air quality. The guidance was published in April 2016. It has been used extensively when considering planning applications in Medway which are likely to have an air quality impact. As a result, significant action has been taken to build air quality mitigation into new developments in Medway. These include the installation of electric vehicle charging points and low emission boilers. This will help to accelerate both the use and uptake of electric vehicles in Medway.

- Plans are also underway to include updated Medway Air Quality Guidance within Medway's new Local Plan. This is expected to be a Supplementary Planning Document (SPD). This will mean, over the longer term, there is ongoing strategic support to promote good air quality in Medway.

5) Recommendations

- Through the Air Quality Communications Strategy, partners in Medway should continue to raise awareness to all residents of the potential health impacts from air pollutants and what measures they can take to reduce the impact and the level of poor air quality in Medway.
- Partners in Medway should increase the number of Medway residents signed up to receive the KentAir air pollution forecast.
- Through the Air Quality Communications Strategy, partners in Medway should work with local employers, service providers, and voluntary and public sector organisations to raise awareness of air pollution, its impact and actions that can be taken to reduce it.
- Health professionals should continue to raise awareness of air pollution, such as ways in which people can reduce air pollution and exposure to it, among people with respiratory conditions and cardiovascular disease.

6) Case study

Medway - cycling city of the future?

In 2016, Medway Council was awarded £1.2M from the Local Growth Fund to improve the cycling infrastructure and to promote, encourage and facilitate more cycling throughout Medway. Medway Council is fully committed to becoming recognised as a place of excellence for cyclists and this commitment is explored in the Cycling Action Plan (2016/18) [5], which states its objectives are:

- Provide safe, attractive and useful facilities that deliver journey time and safety improvements for cyclists by expanding and improving the cycle network.
- Contribute to improving the health of people who live and work in Medway by increasing physical activity. Increased physical activity not only improves physical and mental health, it also delivers long-term savings to the NHS and social care through improved health in later life.
- Contribute to growth in the local economy by making the local road network operate more efficiently during periods of congestion.
- Provide support for the less confident cyclists of the cycle network.
- Contribute to improving air quality (particularly in declared Air Quality Management Areas) by making the local road network operate more efficiently.
- Contribute to reducing social isolation by encouraging more local people to become involved in cycling club activities.

The project has delivered new/improved cycling routes, with cycling counters installed in:

- Beechings Way,
- Gillingham Business Park,
- Lordswood Lane.

Medway is undergoing exciting regeneration, which supports the aspiration to make Medway a place where people are physically active and travel sustainably (e.g. walking, cycling, public transport) rather than by car. This is a significant cultural change for those who live and work in Medway. Therefore messaging needs to be consistent and the infrastructure has to support the aspirations of the Council Plan, the Cycling Action Plan, Air Quality Communication Strategy and Air Quality Action Plan.

Two town centres that are currently undergoing changes where cycling has been made a key priority (as part of place making projects) are:

- Strood Town Centre,
- Chatham Town Centre.

The Chatham Place Making Project will improve journeys for both pedestrians and cyclists from Chatham railway station through to the Waterfront bus station and town centre.

The plans include work to:

- Chatham Railway Station,
- New Cut Junction,
- St John's Square,
- Military Square,
- Military Junction.

The Local Growth Fund also proposes a much needed Toucan crossing to be installed along Hoath Way to enable cyclists using this route to cross the carriageway safely.

Figure 2: Toucan crossing display box to support cyclists

7) References

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Vaccinations

1) What is the current situation in Medway?

In order to prevent outbreaks of infectious (communicable) diseases, it is important that sufficient numbers of a population are vaccinated. The term "herd immunity" is used to describe a situation when a high percentage of the population is protected through vaccination against a virus or bacteria. This makes it difficult for a disease to spread because there are few susceptible people left to infect. The proportion of a population which must be immunised in order to achieve herd immunity varies for each disease. The aim is to ensure as many people as possible are vaccinated and become immune to the diseases.

Most child and adult vaccination programmes are commissioned by NHS England, who have overall responsibility for performance and for working with partners to improve vaccination rates. Vaccinations are delivered by a range of providers, including GPs, pharmacists and school vaccination teams. A wide range of partners including Medway Council, Clinical Commissioning Groups and education services have a role in working with NHS England to support good uptake of vaccinations. Medway Council (through Public Health) also has a responsibility to ensure there are effective systems and processes in place to protect the health of the population.

Vaccinations for children and young people

In England, all children are offered vaccinations to protect them against a range of diseases. Initial vaccination programmes start at eight weeks of age. Children receive some of the most important vaccinations during their early years (from birth to five years). This is an important period and it's critical to build herd immunity to reduce the likelihood of disease outbreaks at a time when they start to mix with other children and potentially become exposed to viruses or bacteria that could cause harm.

The full range of vaccinations routinely offered by the NHS and at which age can be found on the GOV.UK website. [1] A child born in 2018 who receives a full course of these vaccinations at the correct ages, will have received protection against the following diseases by age three and a half:

- Measles,
- Mumps,
- Rubella,
- Pertussis (whooping cough),
- Meningitis B and C,
- Haemophilus influenzae type b (Hib),
- Hepatitis B,
- Pneumococcal infections,
- Rotavirus,
- Diptheria, tetanus and polio vaccinations are started in early childhood, with further vaccination at age 14 to complete the course,
- In addition, in 2017/18, children aged 2 to 9 were offered annual seasonal flu immunisation (as well as young people of any age in risk groups e.g. with long term conditions).

Uptake of vaccinations among children and young people in Medway

Nationally, achieving the target of 95% uptake of children's vaccinations is challenging. The England average (Tables 1-3) shows that nationally, 95% uptake is not being reached for the majority of children's vaccinations. This is also the case in Medway (Tables 1-3). In Medway, uptake of children's

vaccinations appear to be lower than the national average for a number vaccinations. Uptake of key vaccinations among children in Medway compared to the England average can be seen in Tables 1-3.

When looking at specific groups of children, vaccination uptake for children in care in Medway is significantly higher than the England average and has increased over recent years. In 2017, 90.7% of children in care in Medway had up to date vaccinations, compared to a national average of 84.6%. [2]

Trend data suggests that since 2013, there has been a decline in the uptake of childhood vaccinations in Medway across a number of the routine childhood vaccinations. [3-10] There are many factors that influence uptake of childhood vaccinations. These include parental attitudes to vaccination, accessibility of vaccination services, and having in place systematic arrangements for inviting and reminding parents to vaccinate their children. An in depth review into the reasons why the childhood vaccinations rates in Medway appear to have declined since 2013 identified a number of possible causes. These include changes to the IT systems used by the NHS to report childhood vaccinations. Work to improve data collection systems and vaccine uptake is ongoing (see section 2).

Groups of children who are at particular risk of not being fully vaccinated also include younger children from large families, children from non-English speaking families, looked after children, children of lone or teenage parents, children from some minority ethnic groups, those with physical or learning disabilities or health problems, vulnerable children (e.g. homeless, asylum seekers or not registered with a GP) [11] and those from families experiencing socioeconomic deprivation. [12]

Table 1: Percentage uptake of children's vaccinations for children aged 1 in Medway and England in 2016/17

% Uptake	Diphtheria/tetanus/ whooping cough/polio/ haemophilus influenza	Pneumococcus	Rotavirus	Meningitis B – 2 doses*
England	93.4%	93.5%	89.6%	92.5%
Medway	**90.8%**	**90.3%**	**81.3%**	**92%**

Source: NHS Digital (2017). Childhood vaccination coverage statistics

**Public Health England. Meningococcal B immunisation programme: vaccine coverage estimates, Men B coverage at 52 weeks of age, Medway CCG, March 2018*

Table 2: Percentage uptake of children's vaccinations for children aged 2 in Medway and England in 2016/17

	Diphtheria/tetanus/whooping cough/polio/haemophilus influenza	Pneumococcal booster	Haemophilus influenza/ meningitis C	Measles/ mumps/ rubella - dose 1	Meningitis B – booster*
England	95.1%	91.5%	91.5%	91.6%	86.9%
Medway	**90.6%**	**86.9%**	**86.9%**	**86.3%**	**86.1%**

Source: NHS Digital (2017). Childhood vaccination coverage statistics

**Public Health England. Meningococcal B immunisation programme: vaccine coverage estimates, Men B coverage at 78 weeks of age, Medway CCG, March 2018*

Table 3: Percentage uptake of children's vaccinations for children aged 5 in Medway and England in 2016/17

% Uptake	Diphtheria/ tetanus/whooping cough/polio/haemophilus influenza	Measles/ mumps/ rubella - dose 1	Measles/ mumps/ rubella - dose 2	Diphtheria /tetanus/ whooping cough/ polio booster	Haemophilus influenza/ meningitis C
England	95.6%	95%	87.6%	86.2%	92.6%
Medway	**94.6%**	**95.1%**	**83.7%**	**78.6%**	**91.6%**

Source: NHS Digital (2017). Childhood vaccination coverage statistics

Vaccination among older children in Medway

Older children are also offered vaccinations:

Human papilloma virus vaccination

Girls aged 12 to 18 years are offered vaccination against human papilloma virus (HPV). The vaccine protects against certain types of HPV which are responsible for the majority of cervical cancer and genital warts. This is usually first offered to girls aged 12 to 13 years (school year 8), with a second dose usually around a year later.

In 2016/17,

- 84.6% of girls in Medway aged 12 to 13 years had received one dose of HPV vaccine (compared to an England average of 87.2%). [13]
- 72.7% of girls in Medway aged 13 to 14 years had received a full course (two doses) of HPV vaccination (compared to an England average of 83.1%). [14]

Meningococcal ACWY

Boys and girls aged 14 (school year 9) are offered the meningococcal ACWY (MenACWY) vaccine. This offers protection against four types of bacteria called meningococcal groups A, C, W and Y, which can lead to meningitis and blood poisoning. Young people up to the age of 25 who have not received this vaccination at school or who are going to university for the first time can also receive this vaccination from their GP. In 2016/17, 82.1% of 14 to 15 year olds in Medway received MenACWY vaccination, compared to an England average of 82.5%. [15]

Adult vaccinations

There are also a number of vaccinations offered to adults as part of the routine NHS vaccination programme, as older people are at greater risk of becoming seriously unwell if they catch certain infections or viruses. These are:

Pneumococcal vaccine

This is offered as a one-off vaccination to everyone aged over 65 years. It protects against pneumococcal infections which can lead to pneumonia, blood poisoning or meningitis. People with some long term health conditions may need the vaccination more frequently (e.g. every 5 years).

In Medway, 66.8% of over 65s were vaccinated against pneumococcal infections in 2016/17, compared to an England average of 69.8%.[16] The target nationally is 75% uptake. Uptake of pneumococcal vaccine has been slowly declining in Medway over a number of years, whereas in England uptake has stayed fairly constant (see Figure 1).

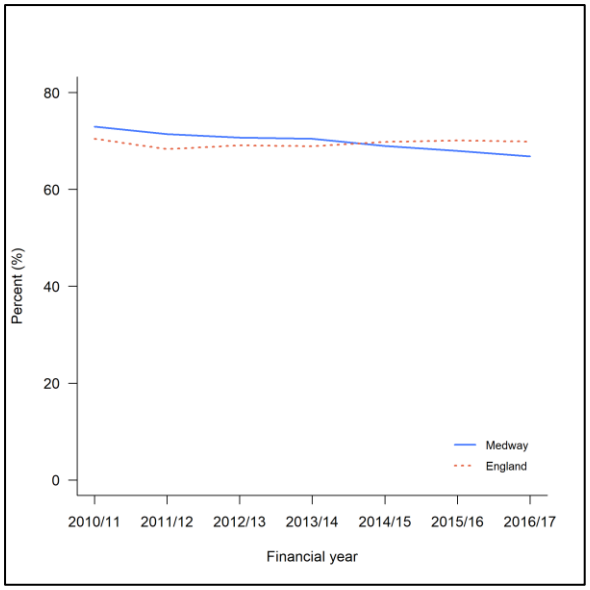

Figure 1: Uptake of pneumococcal vaccine (PPV) among over 65s in Medway and England, 2010-2017

Source: Public Health England. Fingertips, Public Health Outcomes Framework, 3.03xiii

Shingles

Shingles is a painful skin rash caused by the reactivation of the chickenpox virus (varicella-zoster virus) among people who have previously had chickenpox. The rash can be very painful, especially among people over the age of 70. Shingles is a one-off vaccination and there is a programme to ensure that people aged 70 to 79 years are invited for vaccination.

In Medway, 42.6% of 70 year olds were vaccinated against shingles in 2016/17, compared to an England average of 48.3%. [17] The target nationally is 60% uptake. In recent years (since 2014/15), for both England overall and Medway, the uptake of the vaccine among 70 year olds has been declining.

Seasonal influenza

Adults aged over 65 years and people with long term conditions are offered annual flu vaccination. In 2017-18, children aged two to nine years were also invited for seasonal flu vaccination (see flu chapter).

Vaccinations for specific groups of people

As well as routine vaccinations, some specific groups of people may be eligible for extra vaccinations as part of the NHS vaccination programme as they are at higher risk of certain diseases. These include:

Pregnant women

Women are offered seasonal flu and pertussis (whooping cough) vaccination in pregnancy. Babies can become very unwell and even die from whooping cough and a vaccination in pregnancy protects them until they are old enough to be vaccinated themselves. In Medway, monthly data shows the proportion of pregnant women vaccinated against whooping cough ranged between 66.2% and 86.2% in 2017, compared to a range of 69.3% to 75.3% for England overall. [18]

Travel vaccinations

Infectious diseases that are not common in the UK may be common in other countries, and additional vaccinations may be needed to stay protected. Some of these may be available free of

charge and others may need to be paid for. More information is available on the NHS Choices website. [19]

Hepatitis B vaccination

Hepatitis B is a virus that can cause damage to the liver. It is usually spread through coming into contact with an infected person's blood. Since 2017, hepatitis B has been included in the NHS routine vaccination programme for children. People who are in specific groups at higher risk of hepatitis B are eligible to receive hepatitis B vaccination (usually from their GP or a local sexual health service). These groups include people who inject drugs, people who change sexual partner frequently or men who have sex with men, babies born to infected mothers, people who receive regular blood transfusions, sex workers and people who may be in contact with blood through their work (e.g. doctors and dentists).

2) What are partners doing to protect the health of Medway's population?

There are a range of actions being taken to improve vaccination performance in Medway. These include:

- Medway Immunisation Programme Board: This was established in December 2017 and has partnership representation including NHS England, Medway Council, Public Health England, Medway Clinical Commissioning Group, Health Visiting and the Heath Protection Team (which investigates and manages outbreaks). The Board meet quarterly to oversee leadership of vaccination programmes in Medway and to identify and implement actions which partners can take to support providers to increase uptake of vaccinations across Medway. The Board is initially focusing on childhood and flu vaccinations and has developed, and is implementing, a partnership action plan to improve vaccination uptake. This includes working with children's centres and other key partners to raise awareness of children's vaccinations with families.
- Improving accessibility of vaccination programmes: NHS England have recently re-procured the community childhood vaccination service for Medway. The new service starting in August 2018 will include additional ways of offering childhood vaccinations to children who have not attended their GP for vaccinations (including catch up sessions).
- Working with vaccination providers to improve uptake of vaccinations: NHS England is continuing to work with providers to improve uptake of childhood vaccinations. Actions underway include regular monitoring and feedback to GP practices about vaccination uptake (including comparison with other practices), support to GP practices (including visits where appropriate) and sharing information and best practice.
- Working with partners to raise awareness and understanding of vaccination programmes (including health visiting teams and children and family hubs) and co-ordinating media and awareness campaigns.
- Quality improvement work to improve vaccination uptake: As part of quality improvement work, NHS England is reviewing the quality of local vaccination data with the help of external expertise from NHS digital and implementing actions to improve this further.

3) What can people in Medway do to protect their health?

- Off to university for the first time? Have you had your meningitis ACWY vaccination? Stay protected with a free vaccination, speak to your health professional or find out more on the NHS Choices website. [20]
- Going on holiday abroad? Stay healthy on your vacation by being up to date with vaccinations recommended for that country. Find out more on the NHS Choices website. [19]

- If you or your child are not up to date with your vaccinations, you are at risk of infectious diseases. If you aren't sure if you or your child have had all your routine vaccinations, ask your GP or practice nurse to find out for you. Find out more on the NHS Choices website. [21]
- Measles is circulating in many parts of England. Children and adults who have not had two doses of measles, mumps and rubella vaccine (MMR) should contact their GP practice to catch up and stay protected. Some countries in Europe such as Romania, Italy and Germany are experiencing measles outbreaks. If you or your family are travelling to these countries, stay protected by checking you have received two doses of MMR vaccine and contacting your GP practice before you travel if you aren't up to date with vaccinations.

4) What are the areas to focus on in the future?

- Continue partnership working to increase vaccination uptake in Medway, with particular areas of focus including children's vaccinations, whooping cough vaccination for pregnant women and shingles vaccination for older people.

5) Recommendations

- Partners should continue to work together to increase vaccination uptake in Medway, including through the Medway Immunisation Programme Board.
- Partners should work together to effectively communicate the benefits of shingles vaccination to health professionals and the public.
- Partners should continue to work together to identify additional opportunities for professionals to raise awareness of the benefits of childhood vaccinations with families.
- Partners in Medway should work with quality teams to make further use of audits to identify areas for improvement around vaccination uptake (e.g. audits against NICE guidance on children's vaccinations and audits of invitations to attend vaccinations).

6) References

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Glossary

Abdominal Aortic Aneurysm (AAA) - is a bulge or swelling in the aorta (the main blood vessel running from the heart downwards). It is caused by the aorta weakening.

Bowel Scope Screening – a one off screening as part of the bowel cancer screening programme to detect early signs of bowel cancer or growths that could become cancerous over time.

Campylobacter – a bacteria that can cause food poisoning. Often found on raw or undercooked meat(especially chicken).

Category 1 Responders – have the highest level of statutory responsibility during an emergency. These organisations are generally the emergency services, local authorities and NHS bodies.

Category 2 Responders – include organisations such as transport companies and utility companies who have a duty to cooperate with Category 1 responders in an emergency.

Civil Contingencies Act (2004) – legislation that places a duty on governmental and other non governmental organisations to take action to protect the health and wellbeing of the population should a major incident occur

Cohort Review – A partnership meeting that scrutinises treatment of patients with tuberculosis to identify any areas for improvement.

Control of Major Accident Hazards Regulations (COMAH) 2015 - applies to businesses that make, store or use specified quantities of dangerous substances.

Consultants in Communicable Disease Control" (CCDCs) – responsibilities include managing cases and outbreaks of infectious diseases. These consultants are often employed by Public Health England.

Emergency Preparedness – preparing for and responding to emergencies to protect the population from threats that could impact on their health.

Faecal Occult Blood Kit – a home testing kit for bowel screening, offered by the NHS.

Human Papilloma Virus Vaccination (HPV) - vaccine protects against certain types of the human papilloma virus which is responsible for the majority of cervical cancer and genital warts.

Kent Resilience Forum – formed of Category 1 and 2 responders and partners. The forum ensures that partners across Kent and Medway plan for and respond to emergencies as effectively as possible.

Latent TB – people who have tuberculosis but are not showing symptoms.

Norovirus – a virus that can cause gastroenteritis.

Polyps – growths in the bowel which could turn into cancer over time.

Pre-Exposure Prophylaxis (PrEP) - Pre-exposure prophylaxis, or PrEP, is a way for people at high risk of HIV infection to reduce their risk of acquiring HIV. This involves taking the PrEP drug before any potential exposures to HIV.

Proper Officer – an officer who has a statutory responsibility for receiving notifications if infectious diseases and who can take further action if there are public health implications relating to infectious diseases.

Salmonella – a bacteria that can cause food poisoning. Often found on raw or undercooked meat, raw eggs and dairy.

Seasonal influenza (flu) - a viral illness, which can lead to fever, aches, exhaustion, sore throat and headaches. It spreads very easily to others through coughs and sneezes.

Particulate Matter - consists of small particles that can be breathed deep into the lungs and cause harm to health.

Video Observed Therapy (VOT) – A way of observing people taking medication using mobile technology.