

STOCKTON-ON-TEES BOROUGH COUNCIL

HEALTH PROTECTION REPORT 2015/6

Background

Health protection seeks to prevent or reduce the harm caused by communicable diseases and minimise the health impact from environmental hazards such as chemicals and radiation. As well as major programmes such as the national immunisation programmes and the provision of health services to diagnose and treat infectious diseases, health protection involves planning, surveillance and response to incidents and outbreaks.

Health protection arrangements

Local authorities (and Directors of Public Health (DsPH) who would usually act on their behalf) have a critical role in protecting the health of their population, both in terms of planning to prevent threats arising and in ensuring appropriate responses when things do go wrong. The DPH is responsible for the local authority's contribution to health protection matters, including planning for and response to incidents that present a threat to the public's health. To carry this out, they liaise closely with the specialist health protection expertise available in Public Health England (PHE).

PHE has a responsibility to deliver the specialist health protection response, including the response to incidents and outbreaks, which is carried out through the Health Protection Team in the North East PHE Centre. These roles are complementary and both are needed to ensure an effective response. In practice this means that there must be early and ongoing communication between the PHE Centre and DPH regarding emerging health protection issues to discuss and agree the nature of response required and who does what in any individual situation.

The local health protection system therefore involves the delivery of specialist health protection functions by PHE and local authorities providing local leadership for health. In practice, local authorities and PHE work closely together as a single public health system. This joint working with clarity of responsibilities between them is crucial for the safe delivery of health protection.

Delivering health protection

There are four key components to the work of protecting the health of the population: prevention; surveillance; control; communication. All agencies have major roles in each of these components.

Prevention in communicable disease control is exemplified by immunisation but includes a wide range of activities such as promoting safe sex to prevent sexually transmitted diseases and needle exchange programmes to prevent transmission of hepatitis B and C in people who inject drugs. There is also a key role for Environmental Health teams within the local authority in several areas, including for example, food safety. For other hazards such as chemical incidents, prevention is about planning for incidents and emergencies and co-ordinating exercising and training.

Surveillance is dependent both on the system of disease notification from registered medical practitioners and on organism reporting from hospital laboratories plus a number of other information flows. Effective surveillance systems are essential in identifying trends and outbreaks and monitoring the outcome of control actions.

Control relates to the management of individual cases of certain diseases to minimise the risk of spread and the specific actions taken to control an outbreak of infectious disease. For other hazards or threats, advice can be provided to agencies co-ordinating the response, in particular on public health risk assessment and actions to protect the public.

Communication underpins prevention and control and includes the production of routine and ad hoc reports; the networks and groups to which all those involved in health protection contribute; proactive and reactive communications to the media and the communications response in urgent and emergency situations.

Prevention - immunisation and vaccine preventable disease

Immunisation remains one of the most effective public health interventions for protecting individuals and the community from serious diseases.

The national routine childhood immunisation programme currently offers protection against a wide range of vaccine preventable infections. In addition to the routine childhood programme, selective vaccination is offered to individuals reaching a certain age or with underlying medical conditions or lifestyle risk factors.

Programme delivery:

NHS England is responsible for commissioning local immunisation programmes.

- Screening and Immunisation Teams (SITs) employed by PHE Centres and embedded in NHS England provide local leadership and support to providers in delivering improvements in quality and changes in the programmes. The SITs are also responsible for ensuring that accurate and timely data is available for monitoring vaccine uptake and coverage.
- PHE Centres lead the response to disease outbreaks of vaccine preventable disease and provide expert support and advice to the SITs.
- Local Authorities are responsible for providing independent scrutiny and challenging the arrangements of NHS England, PHE and providers.

Following advice from the Joint Committee on Vaccination and Immunisation (JCVI) there have been some changes to the existing programmes and new vaccinations were introduced into England's national immunisation programme for 2015/16. These were:

- Seasonal influenza: Extension of the offer of flu vaccination to children of school years one and two (and now to year three for the 2016/7 season).
- Meningococcal B: In September 2015, the new MenB vaccine was added to the childhood immunisation programme as part of the routine schedule.
- Meningitis ACWY: In September 2015 the MenACYW conjugate vaccine replaced the MenC vaccine, which was routinely offered to adolescents. This vaccination was introduced into the national immunisation programme for England this year to respond

to a rapid and accelerating increase in cases of invasive meningococcal group W (MenW) disease, which was declared a national incident. A booster was also offered to all first time university/further education students.

- Meningitis C: Although still in the schedule, MenC vaccine for infants is now given only at one year.
- Pertussis: From 1 April 2016 pregnant women are now offered the single dose of dTaP/IPV vaccine between gestational weeks 16 and 32 in every pregnancy.

Taking all these changes into account, a summary of the current vaccination programmes in England (October 2016) can be seen below:

8 Weeks:

5-in-1 vaccine (diphtheria, tetanus, whooping cough (pertussis), polio and Haemophilus influenzae type b (Hib))
Pneumococcal (PCV) vaccine
Rotavirus vaccine
Men B vaccine

12 weeks:

5-in-1 vaccine, second dose
Rotavirus vaccine, second dose

16 weeks:

5-in-1 vaccine, third dose
Pneumococcal (PCV) vaccine, second dose
Men B vaccine, second dose

One year:

Hib/MenC, given as a single jab containing vaccines against meningitis C (first dose) and Hib (fourth dose)
Measles, mumps and rubella (MMR) vaccine
Pneumococcal (PCV) vaccine, third dose
Men B vaccine, third dose

2-7 years (including children in school years 1, 2 and 3)

Children's flu vaccine (annual)

3 years and 4 months:

Measles, mumps and rubella (MMR) vaccine, second dose
4-in-1 pre-school booster, given as a single jab containing vaccines against diphtheria, tetanus, whooping cough and polio

12-13 years (girls only):

HPV vaccine (which prevents against cervical cancer) – two injections given 6-12 months apart

14 years:

3-in-1 teenage booster, given as a single jab containing vaccines against diphtheria, tetanus and polio

Men ACWY vaccine, given as a single jab containing vaccines against meningitis A, C, W and Y

65 years:

Pneumococcal (PPV) vaccine

65 and over:

Flu vaccine (annually)

70 years (and 78 and 79 year olds as a catch-up):

Shingles vaccine

Vaccines for certain special groups only:

These include –

Flu vaccine for pregnant women

Whooping cough vaccine for pregnant women

Flu vaccine for people in nationally defined clinical at risk groups

Hepatitis B vaccine

TB (BCG) vaccination

Chickenpox (varicella) vaccination

Men ACWY for first-time university entrants

Vaccine coverage rates

Table 1: Childhood Immunisation Uptake Stockton Borough 2015/16

12 month cohort	TOTALS 2015-16				
	Eligible Stockton	Immunised Stockton		Immunised North East	Immunised England
	<i>number</i>	<i>number</i>	<i>percentage</i>	<i>percentage</i>	<i>percentage</i>
DTaP/IPV/Hib Primary	2304	2203	95.6	96.8	93.6
Men C infant	2304	2256	97.9	97.5	N/A
PCV infant	2304	2199	95.4	96.9	93.5
24 month cohort					
DTaP/IPV/Hib Primary	2355	2296	97.5	98.0	95.2
MMR 1 st dose	2355	2243	95.2	95.0	91.9
Hib/Men C Booster	2355	2260	96.0	95.5	91.6
PCV Booster	2355	2247	95.4	95.4	91.5
5 year cohort					
DTaP/IPV/Hib Primary	2524	2476	98.1	98.1	95.6
DTaP/IPV Booster	2524	2328	92.2	92.7	86.3
Hib/Men C Booster	2524	2386	94.5	95.9	92.6
MMR 1 st dose	2524	2410	95.5	97.3	94.8
MMR 2 nd dose	2524	2315	91.7	94.2	88.2

DTaP = Diphtheria, tetanus and acellular pertussis

IPV = Inactivated polio vaccine

Hib = Haemophilus influenzae type b

Men C = Meningitis C

PCV = Pneumococcal conjugate vaccine

MMR = Measles, mumps and rubella

As can be seen in Table 1 above, uptake in the North East for the routine childhood immunisation programme remains amongst the highest in England. Stockton performance is similar to the North East overall with some immunisation rates at or above the regional average and others slightly below. Stockton uptake is higher than the national average for all categories.

Immunisation trends over time in Stockton-on-Tees can be seen in Figures 1-3 below:

Figure 1: Immunisation uptake at 1 year of age, by year, across Stockton Borough

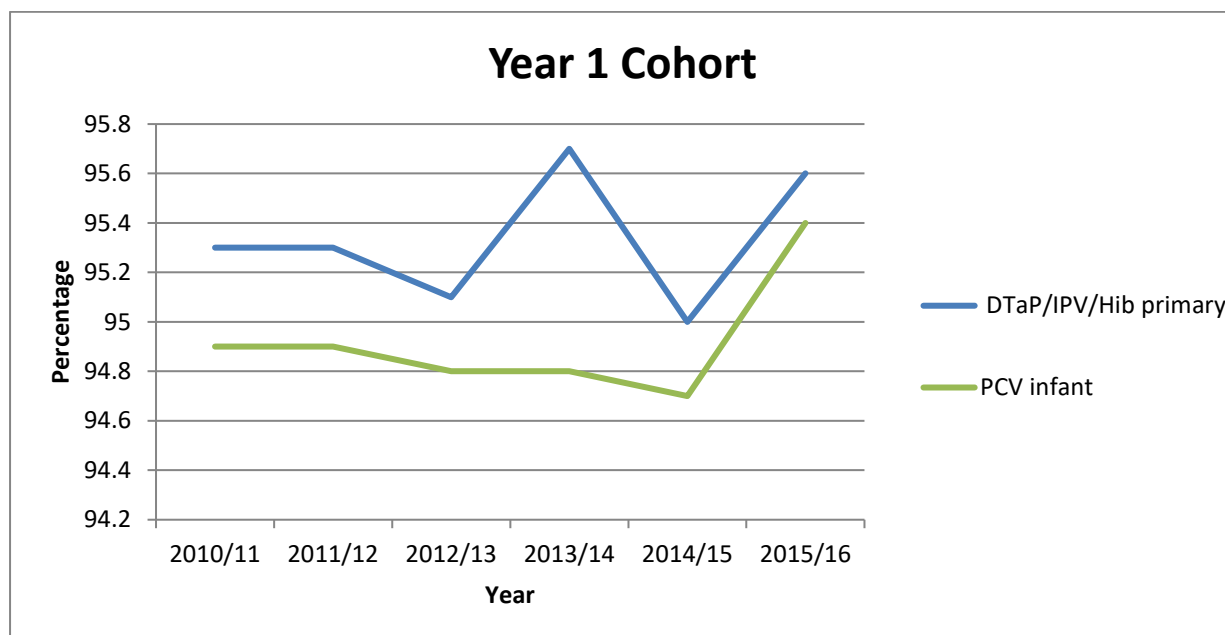


Figure 2: Immunisation uptake at 2 years of age, by year, across Stockton Borough

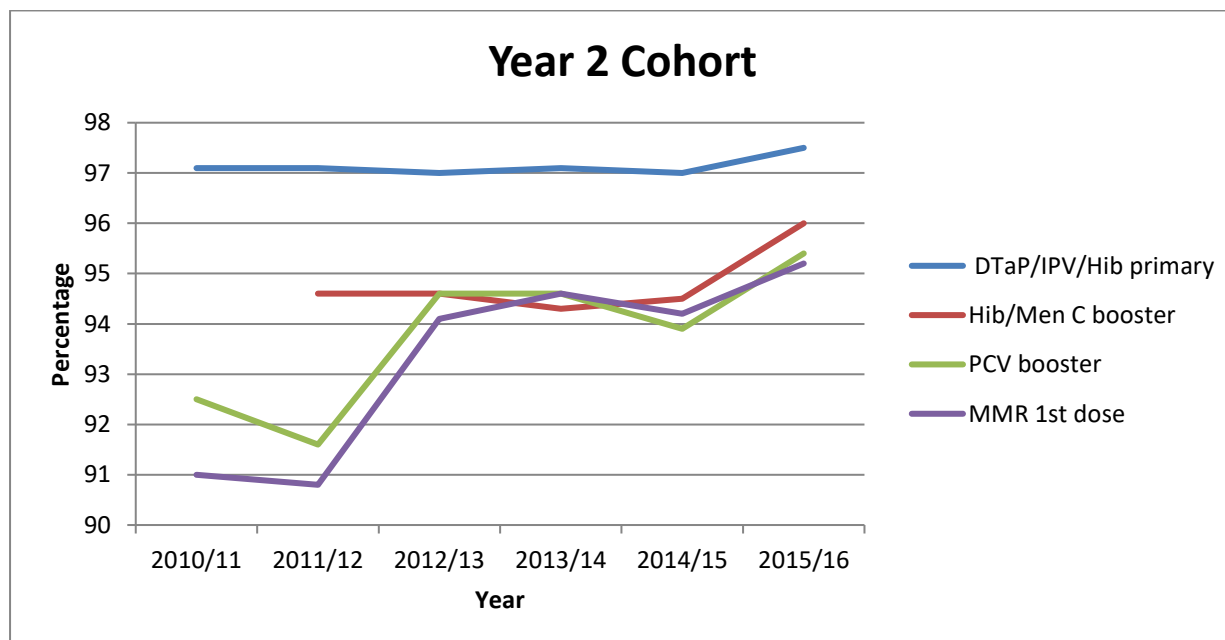
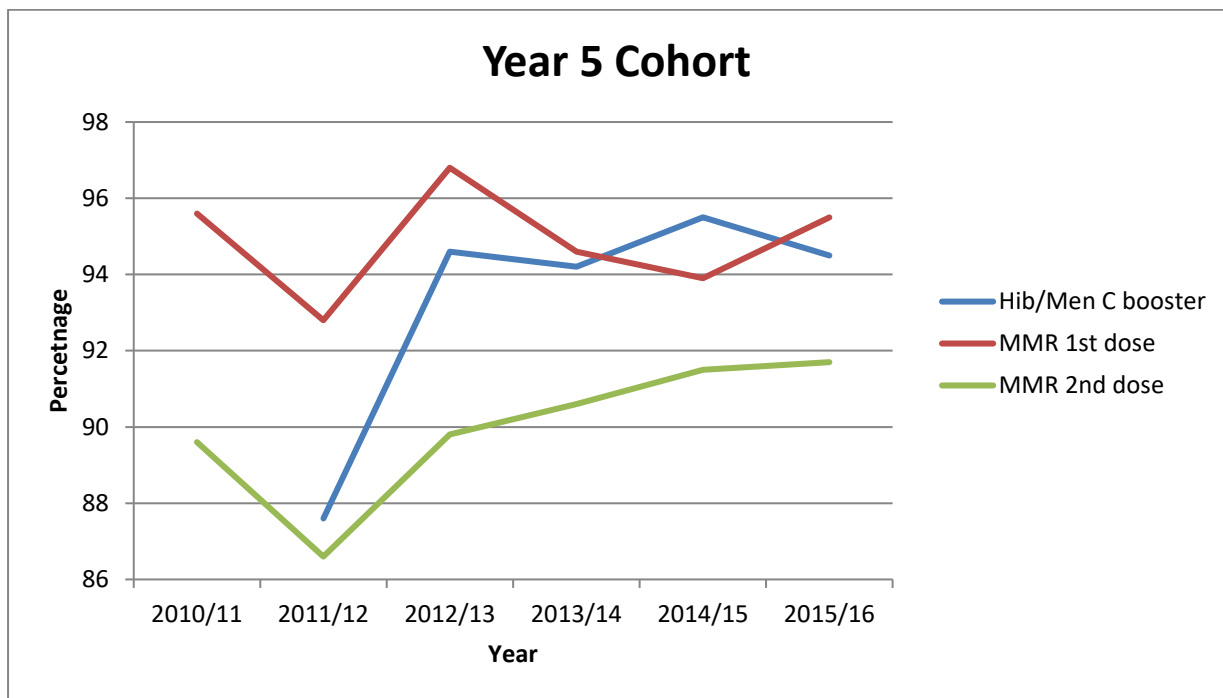


Figure 3: Immunisation uptake at 5 years of age, by year, across Stockton Borough



As can be seen in the trend graphs above, it is encouraging that in recent years, vaccination uptake has improved across Stockton-on-Tees, in most vaccines and age groups. This is a sign of progress which will help to protect many more children against these vaccine preventable infections.

Control - specific diseases

Stockton Borough has seen the following cases of disease in 2015/6:

Gastroenteric disease

Table 2: Numbers and incidence (annualised rate per 100,000 population) of selected gastroenteric diseases/organisms for 2015/6

		Stockton-on-Tees				North East			
		2015			2016	2015			2016
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
SALMONELLA ENTERITIDIS	No:	2	3	2	1	25	57	22	10
	Rate:	4.1	6.2	4.1	2.1	3.8	8.7	3.4	1.5
SALMONELLA TYPHIMURIUM	No:	1	1	2	0	27	23	16	12
	Rate:	2.1	2.1	4.1	0.0	4.1	3.5	2.4	1.8
SALMONELLA OTHER	No:	32	6	4	1	88	57	38	32
	Rate:	65.9	12.4	8.2	2.1	13.4	8.7	5.8	4.9
ESCHERICHIA COLI O157	No:	0	15	0	0	26	35	5	1
	Rate:	0.0	30.9	0.0	0.0	4.0	5.3	0.8	0.2
CAMPYLOBACTER	No:	83	95	71	47	855	981	711	521
	Rate:	171.0	195.8	146.3	96.8	130.6	149.8	108.6	79.6
CRYPTOSPORIDIUM	No:	4	17	8	1	46	165	170	40
	Rate:	8.2	35.0	16.5	2.1	7.0	25.2	26.0	6.1
GIARDIA	No:	4	4	11	2	40	50	60	25
	Rate:	8.2	8.2	22.7	4.1	6.1	7.6	9.2	3.8

As can be seen in the table above, campylobacter is the commonest cause of bacterial food poisoning, typically affecting several hundred individuals per year in Stockton-on-Tees. Other bacterial causes of gastroenteric disease are less common and trends are difficult to comment on at local level due to the relatively low numbers and hence often significant fluctuation in rates (for small amounts of cases) from year to year.

It can be seen that there were unusually high numbers of *Salmonella* (other) in Quarter 2 and *E. coli* O157 in Quarter 3 – these were due to outbreaks which are commented on later in this document.

Vaccine Preventable Disease/Exanthems

Table 3: Number and incidence (annualised rate per 100,000 population) of cases of common vaccine preventable diseases and other exanthema reported in 2015/6

		Stockton-on-Tees				North East			
		2015			2016	2015			2016
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Measles - suspected	No:	6	3	2	3	31	35	19	32
	Rate:	12.3	6.2	4.1	6.2	4.7	5.3	2.9	4.9
Measles - confirmed	No:	0	0	0	0	2	0	0	0
	Rate:	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Mumps - suspected	No:	55	26	15	11	292	160	159	126
	Rate:	112.9	53.4	30.8	22.6	44.5	24.4	24.2	19.2
Mumps - confirmed	No:	20	10	1	1	92	47	30	15
	Rate:	41.1	20.5	2.1	2.1	14.0	7.2	4.6	2.3
Rubella - suspected	No:	0	0	1	0	5	9	12	3
	Rate:	0.0	0.0	2.1	0.0	0.8	1.4	1.8	0.5
Rubella - confirmed	No:	0	0	0	0	1	0	0	0
	Rate:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Whooping cough - suspected	No:	2	2	5	3	87	84	119	96
	Rate:	4.1	4.1	10.3	6.2	13.3	12.8	18.1	14.6
Whooping cough - confirmed	No:	1	1	4	1	53	59	54	47
	Rate:	2.1	2.1	8.2	2.1	8.1	9.0	8.2	7.2
Meningococcal disease - suspected	No:	2	0	0	1	17	18	15	30
	Rate:	4.1	0.0	0.0	2.1	2.6	2.7	2.3	4.6
Meningococcal disease - confirmed	No:	2	0	0	0	10	13	12	25
	Rate:	2.1	0.0	0.0	0.0	1.5	2.0	1.8	3.8
Scarlet fever - suspected	No:	22	9	8	39	243	84	162	490
	Rate:	45.3	18.5	16.5	80.4	37.1	12.8	24.7	74.8

There were no confirmed cases of measles or rubella in Stockton-on-Tees in 2015/6 and it is important to maintain vaccination rates to ensure this situation remains. Relatively high rates of mumps infection were seen across Teesside in 2015 but these are returning to lower levels in 2016.

Whooping cough (pertussis infection) can be particularly dangerous in small infants and this is why, following an upsurge in cases a few years ago, a programme of vaccination in pregnant women has been introduced in recent years in order to try to prevent transmission to the most vulnerable.

Meningococcal disease can be particularly serious and often causes much anxiety amongst parents. Rates have been falling in recent years and with the introduction of new vaccination programmes to include both serogroups B and W for certain age groups, it is hoped this can be controlled even further. In contrast, scarlet fever notifications have steadily increased over the past few years.

Other selected organisms

Table 4: Numbers and incidence (annualised rate per 100,000 population) of other selected diseases/organisms for 2015/16

		Stockton-on-Tees				North East			
		2015			2016	2015			2016
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
HEPATITIS A	No:	0	0	0	0	3	1	2	2
	Rate:	0.0	0.0	0.0	0.0	0.5	0.2	0.3	0.3
HEPATITIS B	No:	3	5	1	1	54	25	29	55
	Rate:	6.2	10.3	2.1	2.1	8.2	3.8	4.4	8.4
HEPATITIS C	No:	4	3	2	0	66	90	60	61
	Rate:	8.2	6.2	4.1	0.0	10.1	13.7	9.2	9.3
LEGIONELLA	No:	2	2	1	1	11	10	6	3
	Rate:	4.1	4.1	2.1	2.1	1.7	1.5	0.9	0.5
LISTERIA	No:	0	0	0	0	0	4	3	0
	Rate:	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.0

There were no cases of Hepatitis A or listeria in Stockton-on-Tees in 2015/6. Key elements of protection against Hepatitis B and C are provided through needle exchange programmes via local drug services. Legionnaires' Disease is an uncommon, though potentially serious, infection transmitted via droplets from poorly maintained water systems. Business operators who use cooling towers and evaporative condensers have a duty to report these to the local authority so a register of all such industrial units can be maintained. This may be useful in the investigation of cases, clusters and outbreaks of Legionnaires' Disease.

Tuberculosis

In 2015/6 there were a total of 10 TB cases reported in Stockton-on-Tees at a rate of 5.15 per 100,000. This was very similar to the North East rate of 5.08 per 100,000. The North East in general is a low incidence area for TB. England as a whole saw 5758 cases in 2015 at a rate of 10.5 per 100,000, so approximately double the North East rate. This in itself is actually a steady reduction from 2011 when 8780 cases at 15.6 per 100,000 were reported.

Sexual Health (note data is for calendar year of 2015 only)

Table 5: Number and incidence per 100,000 population of cases of common sexually transmitted infections reported in 2015

		Stockton-on-Tees	North East
Gonorrhoea	No:	70	1517
	Rate:	35.9	57.8
Chlamydia	No:	341	5148
	Rate:	175	196
Syphilis	No:	13	155
	Rate:	6.67	5.91
Genital warts/herpes (first episode)	No:	84	1499
	Rate:	43	57

A new sexual health contract has been commissioned in 2016 with enhanced outreach provision for Stockton Borough. This topic has been covered extensively in the Health & Wellbeing Board and partnership groups this year and so is not repeated again in this report.

Control - outbreaks

Care home outbreaks

Outbreaks of illness are relatively common in the care home setting. These are typically viral outbreaks with person to person spread in a closed setting. As can be seen in Table 6, there were 14 such outbreaks in 2015/6 in Stockton-on-Tees.

Table 6: Number of gastrointestinal outbreaks in care homes by month and Local Authority

Year	Month	Stockton on Tees	North East Total
2015	April	1	13
	May	0	30
	June	1	20
	July	2	16
	August	0	8
	September	3	18
	October	0	30
	November	0	14
	December	1	21
2016	January	0	22
	February	3	35
	March	3	44
	Total	14	271

The causative organism is most commonly norovirus (the vast majority of outbreaks), though other viral causes such as rotavirus, astrovirus and sapovirus can be seen. However, it is often the case that no organism is identified, either

because samples could not be obtained or they did not test positive in the laboratory. There can be occasional outbreaks linked to food production such as from *Clostridium perfringens* or *Salmonella*. One *C.perfringens* outbreak was reported in Stockton-on-Tees in 2015/6.

Significant community outbreaks

There were two significant community outbreaks in 2015/6 which required large amounts of, in particular, Environmental Health Officer time within the Borough. These were an outbreak of *Salmonella* Kedougou linked to a restaurant and an outbreak of *E. coli* O157 linked to a butcher's shop.

Emergency preparedness, resilience and response (EPRR)

Emergency planning aims, where possible, to prevent emergencies occurring and when they do occur good planning should reduce, control or mitigate the effects of the emergency. It is a systematic and ongoing process which should evolve as lessons are learnt and circumstances change.

It is the responsibility of the local authority to prepare emergency plans to detail its response to a major incident or emergency. The basis for this obligation lies under the following:

- Civil Contingencies Act (2004)
- Control of Major Accident Hazards Regulations (2015)
- Pipeline Safety Regulations (1996)
- General duty of care as a local authority

Therefore, a Major Incident Plan has been prepared in accordance with Section 5 of Emergency Preparedness – Guidance on Part 1 of the Civil Contingencies Act (2004), its associated Regulations and non-statutory arrangements. For Stockton-on-Tees, this process has been co-ordinated and led by the Cleveland Emergency Planning Unit with help from the Public Health Team. The plan aims to allow for flexible management and adaptability to a wide range of circumstances. In addition it provides a means of coordinating the activities of all council staff and partners engaged in responding to major emergencies.

The primary roles and responsibilities of Stockton-on-Tees Borough Council during a major incident are to:

- Provide support to the initial responders
- Maintain essential services
- Lead on the post incident recovery

The plan is annually reviewed and updated as necessary, or after an exercise or an incident which has highlighted areas of the plan that require updating.

The council is also represented on multiagency planning and strategic groups such as the Cleveland Local Resilience Forum (LRF). The LRF coordinates planning, training and exercising in relation to a range of threats identified in their community risk register.

Environmental Health

Environmental Health covers a wide range of issues including pest control, investigating public nuisance, improving the quality of the environment in Stockton-on-Tees, animal welfare, food safety and improving work conditions to reduce the occurrence of accidents and ill health.

For the purposes of this Health Protection Report, some information on food safety standards and reducing food related disease is outlined below.

The Environmental Health Team undertook a total of 689 food safety inspections in 2015/6. Broad compliance was achieved by 93.6% of these. The majority of the others required basic advice only. However, there were a total of four notices issued, five cautions and eight prosecutions undertaken.

The team carried out 896 bacteriological samples during the year and responded to many food safety requests for service. These included 537 complaints about premises, 152 food complaints and 102 requests for food safety advice.

In terms of investigation of notified infectious disease, there were a total of 397 notifications, of which 144 were food poisoning notifications.

In addition, the team provided food training across a range of levels including catering courses, hygiene awareness and allergen training. A total of 684 attendees were trained.