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Surveillance Report

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Current notes

HAI and antibiotic resistance point prevalence survey

51/2001 The significant burden of healthcare associated infection (HAI) is affecting one patient in every ward in every hospital across Scotland, according to an HPS report published today (Tuesday 23 May). The National Point Prevalence Survey (PPS), indicates that the current prevalence of HAI in acute hospitals is 4.5%, which, while significantly lower than five years ago, still represents one in 22 patients at any one time, or 55,500 infections every year.

There has also been significant improvement in practice in the prescribing agenda in Scotland in recent years, although antibiotic prescribing in hospitals was found to be significantly higher than five years ago, which has serious implications for the threat of antibiotic resistance.

The report (available at <http://www.hps.scot.nhs.uk/pubs/detail.aspx?id=3236>) demonstrates that healthcare associated infections remain a public health threat across all care settings. The European Centre for Disease Prevention and Control (ECDC) has recently confirmed that these infections represent the highest burden of all communicable diseases monitored in Europe (see http://ecdc.europa.eu/en/healthtopics/burden_of_communicable_diseases/Pages/index.aspx for details). Health Protection Scotland is developing national programmes to tackle these new threats and working with NHS colleagues to preserve antibiotics for future use.

Hepatitis A cases in Lanarkshire - update

51/2002 Further to Current note 51/1802 (at <http://www.hps.scot.nhs.uk/ewr/redirect.aspx?id=73024>), NHS Lanarkshire has issued a further public reminder (on 19 May) to be alert for the symptoms and signs of hepatitis A infection. The board's department of public health has issued the reminder particularly to those living in the Airdrie and Coatbridge area as part of the ongoing management of a hepatitis A outbreak.

The current number of confirmed hepatitis A cases (as at 19 May) was 61.

It was stressed that some people infected with hepatitis A can feel well and have no symptoms for several weeks prior to developing symptoms and becoming unwell. However, during this time they can be infectious to others. Others - especially younger children and babies - may become infected and not develop any symptoms, yet may be infectious to others for several weeks.

This is why the board was continuing to raise awareness of the infection to help identify other possible cases so that treatment can be provided if appropriate and to prevent further spread of the infection.

The symptoms and signs people are being asked to look out for, which may be due to hepatitis A infection, are a flu-like illness, loss of appetite, nausea, fever, abdominal pains or jaundice (a yellowing of the eyes or skin).

Anyone experiencing these should contact their GP or, if out of hours, contact NHS24 by dialling 111.

People can also call a freephone information line on 0800 028 2816. [Source: NHS Lanarkshire News Release, 19 May 2017. <http://www.nhslanarkshire.org.uk/news/news/Pages/HepAupdate.aspx>]

Ebola outbreak in DRC - ECDC rapid risk assessment

51/2003 On 9 May 2017, the health authorities in DRC declared an outbreak of Ebola virus disease in Likati Health Zone, Bas Uele province in the north of the country, bordering the Central African Republic. According to WHO, 11 cases, including three deaths, were identified. Media are reporting 19 suspected cases in total.

For European Union/European Economic Area (EU/EEA) citizens living in or travelling through DRC, the risk of exposure is considered negligible. For people entering the affected area, such as healthcare workers supporting the response to the outbreak, the risk of infection remains very low, assuming that recommended precautions are followed. The outbreak is in an extremely remote area, which limits the risk of transmission and spread to neighbouring areas.

The risk of introduction into the EU would most probably be related to an infected traveller coming from the affected area. Although this is most unlikely, given the remote location of the outbreak, it cannot be excluded. The overall risk of the introduction and further spread of Ebola virus within the EU/EEA is therefore currently considered to be extremely low. [Source: ECDC News Release, 19 May 2017. http://ecdc.europa.eu/en/press/news/layouts/forms/News_DispForm.aspx?ID=1622&List=8db7286c-fe2d-476c-9133-18ff4cb1b568&Source=http%3A%2F%2Fecdc%2Eeuropa%2Eeu%2Fen%2FPages%2Fhome%2Easpx]

Hay fever map of the UK

51/2004 A study from the University of Exeter's Medical School has produced new, highly-detailed maps of the UK containing the location of key plants and trees known to produce pollen that triggers allergies and asthma. The maps, which were produced in collaboration with the Met Office, may help acute hay fever or asthma sufferers decide where to live, or which areas to avoid at peak times when pollen is released.

The study (available at <http://www.sciencedirect.com/science/article/pii/S0048969717309749>) records areas where plants which hay fever sufferers are most likely to be sensitive to are most prevalent, including grasses and trees and plants such as birch, alder, oak and nettle (tree maps

currently for England and Wales only). The plant maps, which include cities throughout the UK may also help medics further study the impact of air pollution on asthma.

Around 80% of people with asthma also have a pollen allergy and in the UK around 10% of the adult population is affected by asthma - one of the highest levels of doctor-diagnosed asthma in the world. In 2001, 13% of people in the UK were diagnosed with hay fever by doctors.

Most people with hay fever are allergic to grass pollen, which is most common in late spring and early summer. Air pollution, for example from car exhaust fumes, is understood to exacerbate hospital admissions for asthma caused by allergies. [Source: University of Exeter Medical School News Release, 20 May 2017. <http://medicine.exeter.ac.uk/news/articles/hayfevermapofbritainpubli.html>]

Environmental incidents - SEISS reports (Bearsden school; Faslane naval base – chemical incidents)

51/2005 The Scottish Environmental Incident Surveillance System (SEISS) recorded the following incidents in the past week:

- Emergency services were called to Boclair Academy in Bearsden on Friday morning (19 May) after a 'strange smell' was detected in the building. East Dunbartonshire Council said all pupils were safe and had been taken to nearby Killermont Primary School. Boclair Academy was later declared safe after a chemical leak from emergency lighting was identified as the source (<http://www.bbc.co.uk/news/uk-scotland-glasgow-west-39972535>).
- On 17 May, six Royal Navy personnel were taken to hospital after inhaling gas during a routine fire exercise at Faslane. The Royal Navy said the exercise on a surface ship triggered a fire suppression system. Emergency services were called to the naval base just after 05:30 (<http://www.bbc.co.uk/news/uk-scotland-glasgow-west-39948815>).

For more detailed information on SEISS, go to <http://www.hps.scot.nhs.uk/enviro/ssdetail.aspx?id=107> or contact either Ian Henton or Colin Ramsay at HPS on 0141 300 1100.

70th World Health Assembly 22-31 May

51/2006 The Seventieth World Health Assembly opened in Geneva, Switzerland, at 9:30 am on Monday 22 May 2017. It will close on Wednesday 31 May. Delegations from all 194 WHO member states are meeting to discuss, review progress and agree on action regarding global health issues.

Countries will vote on a new WHO Director-General, who will take up their duties on 1 July 2017. They will also discuss budgetary issues and developments regarding organisational reform.

The plenary proceedings are being webcast live, and discussions will continue on social media using #WHA70.

Agenda topics of special interest include:

- health emergencies, including WHO's response in severe, large-scale emergencies, research and development for potentially epidemic diseases, and health workforce coordination in emergencies;
- antimicrobial resistance, including an update on the implementation of the WHO Global action plan on antimicrobial resistance, agreed in 2015, and a proposed resolution on improving the prevention, diagnosis and clinical management of sepsis;

- implementation of the International Health Regulations (2005) in the decade since they entered into force for most state parties, and the work of the emergency and review committees convened by the Director-General;
- human resources for health and implementation of the outcomes of the United Nations' High-Level Commission on Health Employment and Economic Growth;
- the global shortage of, and access to, medicines and vaccines;
- refugee and migrant health, including a draft framework of priorities and guiding principles to promote the health of refugees and migrants;
- a proposed global action plan on the public health response to dementia;
- an implementation plan following the report of the Commission on Ending Childhood Obesity;
- a proposed resolution relating to the prevention of deafness and hearing loss; and
- a report on progress in the implementation of the 2030 Agenda for Sustainable Development.

Full details including the live-streaming option are available on the WHA website at <http://www.who.int/mediacentre/events/2017/wha70/en/>. [Source: WHO Regional Office for Europe, News Release, 22 May 2017. <http://www.euro.who.int/en/about-us/regional-director/news/news/2017/05/seventieth-world-health-assembly-opens-today>]

Gastro-intestinal and foodborne infections: viral pathogens, *Listeria*, *Shigella* and *Yersinia*

Prepared by: The GI team

Norovirus

In 2016, HPS received 1549 laboratory reports of norovirus (NV), a rate of 29.0 per 100,000. While this was an increase of 160 (11.5%) on the 1338 reports received in 2015, both 2014 and 2015 had both been relatively low years compared to historical trends (Figure 1). The number of reports in 2016 was moreover lower than the five-year average of 1847 reports (Figure 2), reflecting the cyclical nature of NV infection with some particularly high and low years.

These laboratory reports arise from confirmed infection in the whole population (community and healthcare). Laboratory confirmations represent just a small proportion of the true incidence in the community. The second study of infectious intestinal disease in the community (IID 2 study - available at https://www.food.gov.uk/science/research-reports-search?keyword=&project_code=FS231043) estimated that approximately 290 cases of NV occur in the community for every case reported to national surveillance.

Laboratory reports of NV showed a distinct age distribution (Figure 3) affecting the elderly and young, with 54% (842/1549) reported from those aged 65 years and over, 23% (364/1549) from those under five years of age, while none of the other age bands accounted for more than 4% of reports. The distribution of laboratory reports among those at the extremes of age probably reflects those from whom samples are most likely to be taken.

FIGURE 1: Laboratory reports of norovirus to HPS 2007-2016.

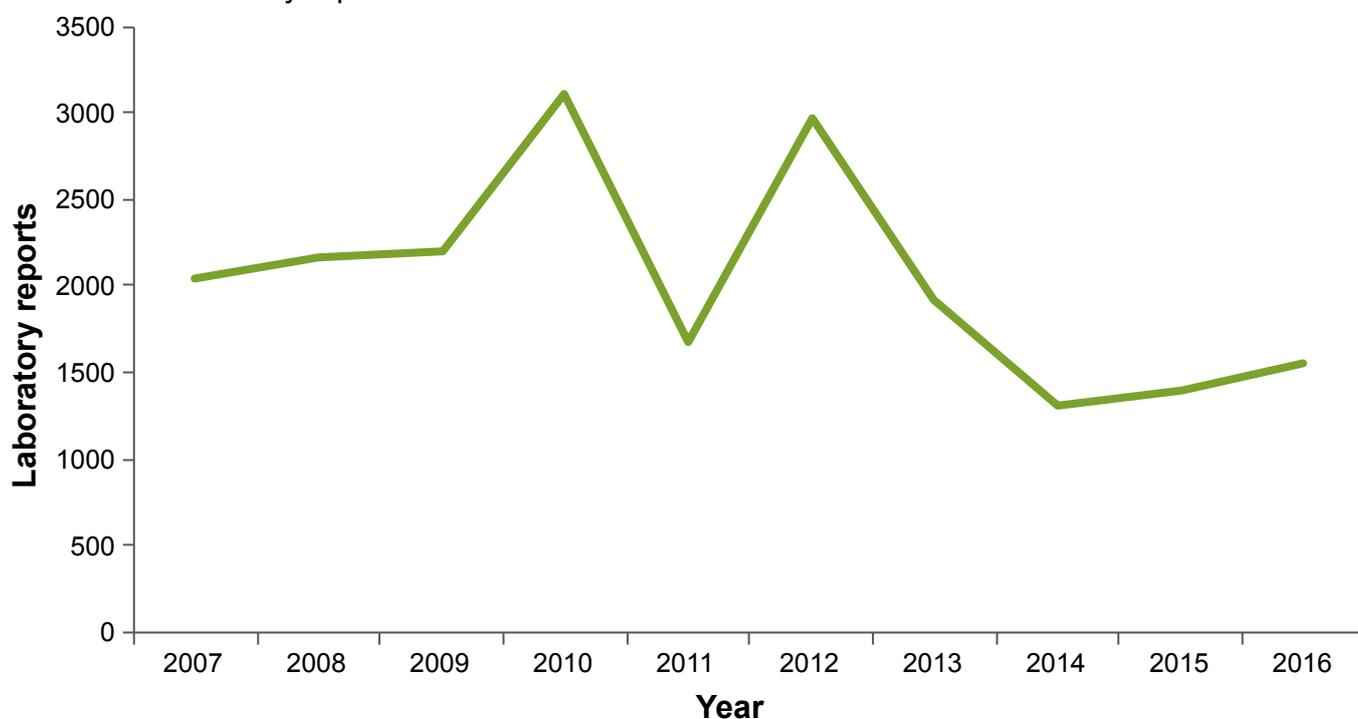


FIGURE 2: Laboratory reports of norovirus in Scotland, 2016 and five-year average (2011-2015).

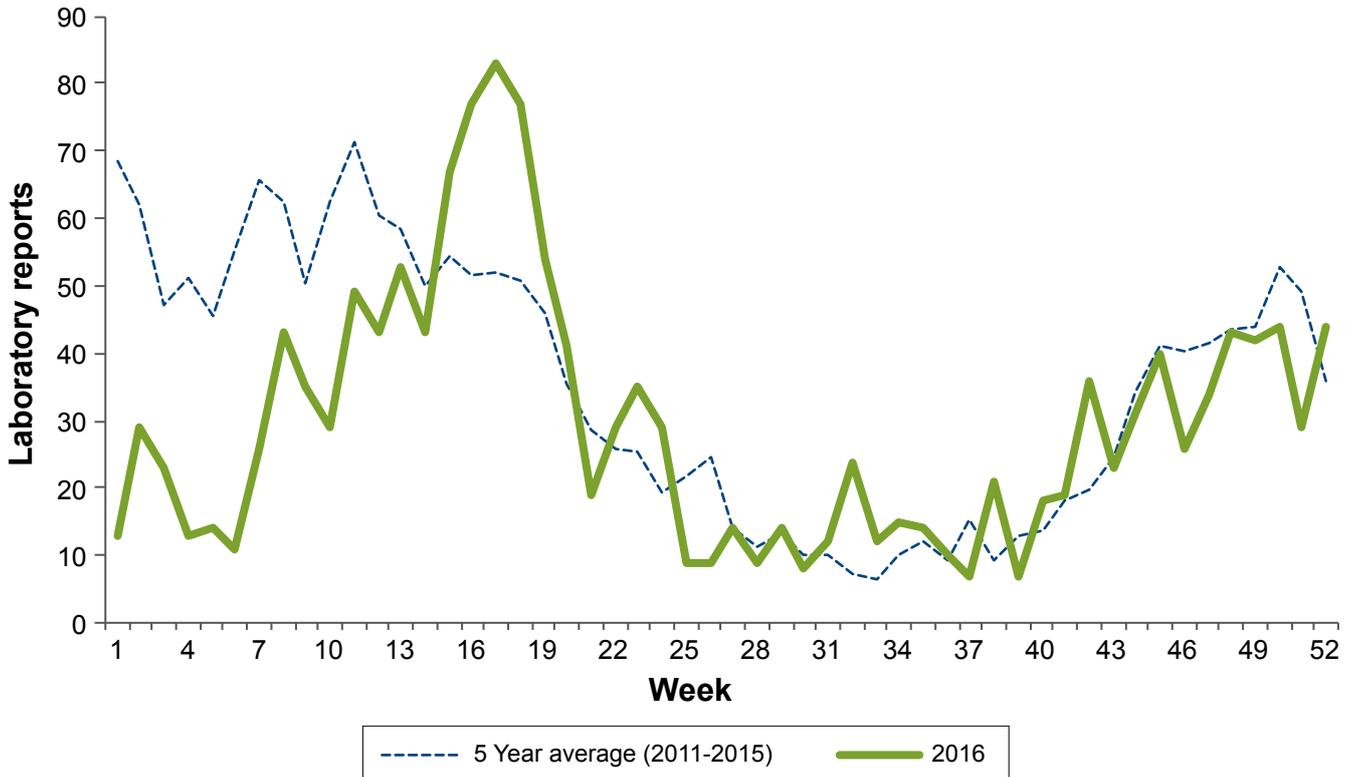
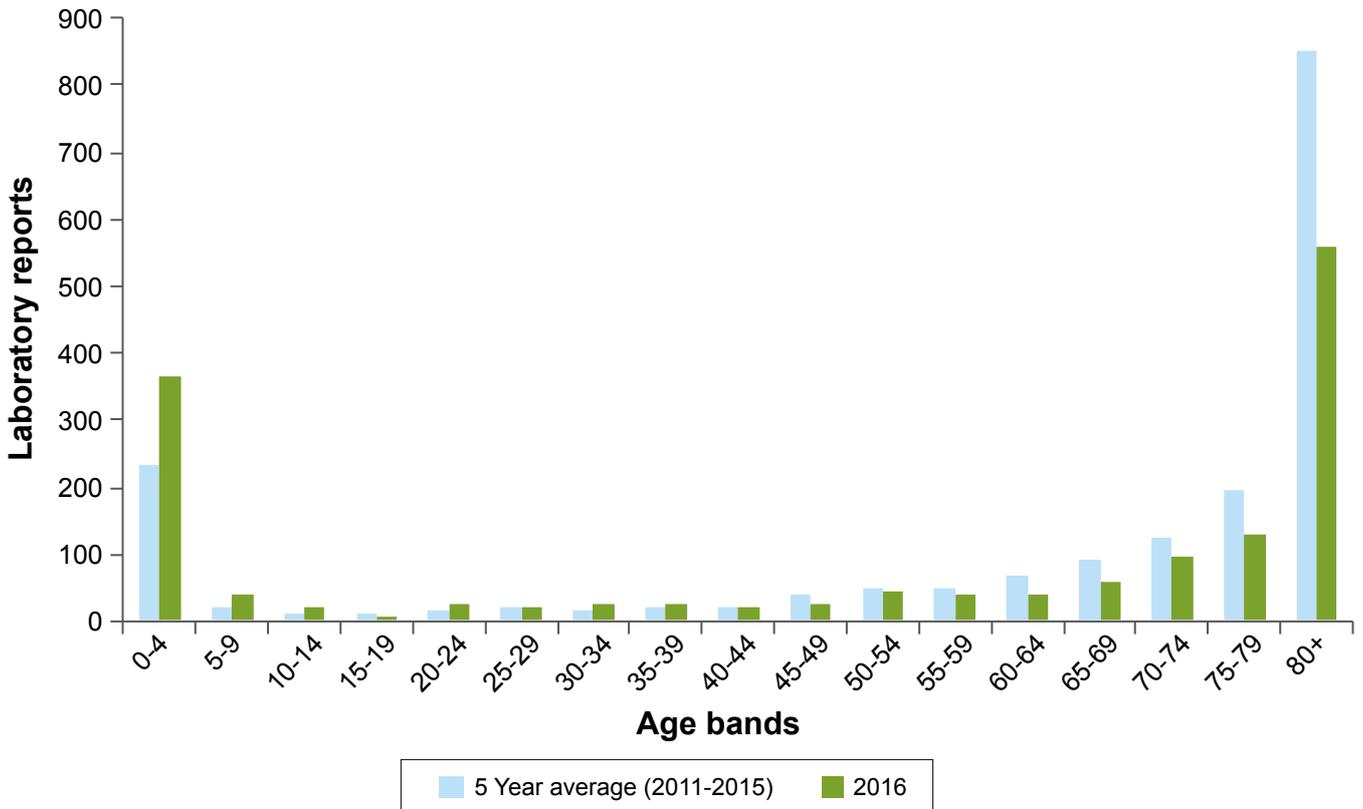


FIGURE 3: Laboratory reports of norovirus in Scotland by age band, 2016 and five-year average (2011 to 2015).



Rotavirus

Rotavirus is the most common cause of diarrhoea in young children. An immunisation programme for rotavirus was introduced into the infant immunisation schedule in July 2013 (more information on the programme is available in the CMO letter available at [http://www.sehd.scot.nhs.uk/cmo/CMO\(2013\)04.pdf](http://www.sehd.scot.nhs.uk/cmo/CMO(2013)04.pdf)).

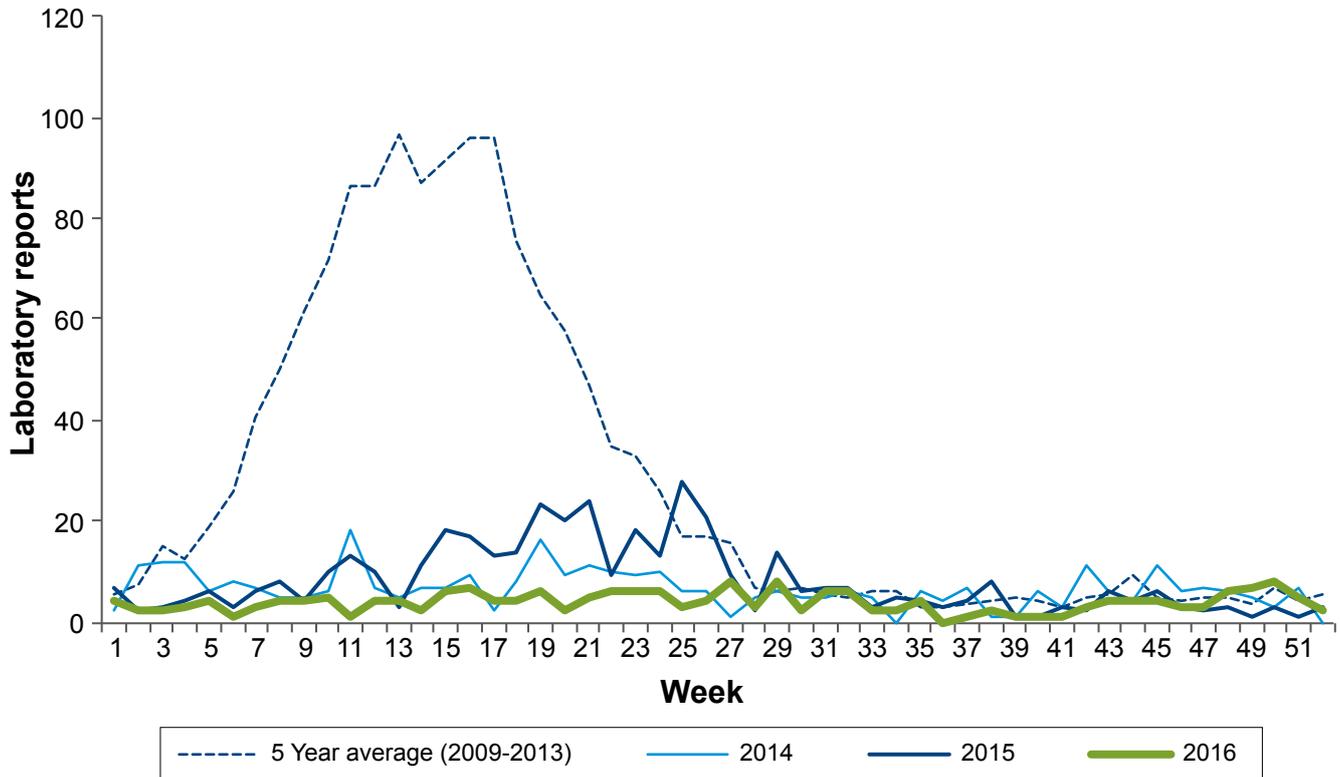
Further information about rotavirus immunisation is available from the public information website: <http://www.immunisationscotland.org.uk/vaccines-and-diseases/rotavirus.aspx>.

The introduction of the vaccine programme has had a significant impact on the number of laboratory reports of rotavirus, reducing them from 1301 in 2013 to 346 in 2014, 419 in 2015 and 198 in 2016 (Figure 4). Of the reports in 2016, 179 (90.4%) were from children under five years of age. Figure 5 shows the impact of the rotavirus programme in eliminating the distinctive historical peak for rotavirus infection in early spring and the size of the reduction in the past three years 2014-2016 compared to the average for the preceding five years.

FIGURE 4: Laboratory reports of rotavirus to HPS 2007-2016.



FIGURE 5: Laboratory reports of rotavirus to HPS, five-year average (2009-2013) and 2014-2016.



Hepatitis A

There were 20 reports of hepatitis A in 2016, similar to the 19 reports in 2015.

More general information on hepatitis A was included in current note 51/1802 (available at <http://www.hps.scot.nhs.uk/ewr/redirect.aspx?id=73023>).

Hepatitis E

Reports of hepatitis E (HEV) infection in Scotland have increased in recent years, as they have elsewhere in the UK. Since 2011, laboratory reports of HEV in Scotland have increased from 13 in 2011, to 78 in 2012, 95 in 2013, 196 in 2014 and have since stabilised with 186 reports in 2015 and 206 in 2016. The overall rate of HEV in Scotland in 2016 was 3.9 per 100,000, with a predominance of infection in older males. In 2016, 129 reports (62.6%) were from males of which 50 (38.9%) were from males aged 65 years and older.

HPS is working with colleagues in Food Standards Scotland, the Scottish Government, NHS boards and Public Health England to improve understanding of the epidemiology of HEV, including risk factors and exposures, to inform public health management and control.

Listeria monocytogenes

The importance of *L. monocytogenes* as a gastro-intestinal pathogen arises not from the number of reported cases, which are relatively low compared to many other pathogens, but rather due to the severity of infection and high mortality. In line with reporting in the rest of the UK and Europe pregnancy-associated cases are counted as one case, even when both the mother and infant are positive.

Infection with *L. monocytogenes* can cause an influenza-like illness, septicaemia or a meningoencephalitis. Pregnant women, newborn infants, the elderly and the immunocompromised are most at risk.

There were 15 cases of *L. monocytogenes* reported in 2016, a slight increase on the 13 cases reported in 2015, reflecting the random year-on-year variation seen in the small number of cases (Figure 6).

FIGURE 6: Laboratory reports of *Listeria* to HPS, 2007-2016.



HPS is grateful to all consultants in public health medicine, health protection nurses, microbiologists and environmental health officers who contribute to the enhanced surveillance of *Listeria* infection in Scotland, the aim of which is to improve our understanding of such infection here.

Shigella

Among the species of *Shigella* reported, the most common was *Shigella sonnei*. In 2016, 44 cases of *Shigella sonnei* were reported, which was a decrease of 27 (38%) compared to the 71 reports in 2015, but similar to the 49 reports in 2014.

Thirty-seven cases of *Shigella flexneri* were reported in 2016, an increase of seven cases compared to the 30 reported in 2015. Typing information was available for 35 these 37 cases. The most common serotype was 2a which was reported for 24 isolates, while there were three isolates of serotype 6, two isolates each of 1c, 4a and y, and one each of serotypes 3a and 3c.

Three cases of *Shigella boydii* and two of *Shigella dysenteriae* were reported in 2016, compared to eight and two cases respectively in 2015. In 2016, two cases which were reported as *Shigella* species.

Yersinia

In 2016, there were nine reports of *Yersinia enterocolitica* compared to five in 2015 and four in 2014, reflecting the random year-on-year variation and small numbers of reports of this pathogen.

NHS board abbreviations

AA Ayrshire & Arran	BR Borders	DG Dumfries & Galloway	GGC Greater Glasgow & Clyde
FF Fife	FV Forth Valley	GR Grampian	HG Highland
LO Lothian	LN Lanarkshire	OR Orkney	SH Shetland
TY Tayside	WI Western Isles		

Correspondence to: The Editor, HPS Weekly Report, Health Protection Scotland, Meridian Court, 5 Cadogan Street, Glasgow, G2 6QE, Scotland

T 0141-300 1100 **F** 0141-300 1172 **E** NSS.HPSWReditor@nhs.net **W** <http://www.ewr.hps.scot.nhs.uk/>

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