Health Protection Scotland

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CONTENTS

CURRENT NOTES

Healthcare Associated Infection Annual Report 2015

50/2201 Health Protection Scotland (HPS) is today publishing the 'Healthcare Associated Infection Annual Report 2015' – at http://www.hps.scot.nhs.uk/haiic/publicationsdetail.aspx?id=68107.

This latest report shows that healthcare associated infections (HAI) such as surgical site infections (SSIs), those in intensive care units, and *Staphylococcus aureus* bloodstream infections have remained stable against a background of the reductions seen in the past decade. Although *Escherichia coli* bacteraemia rates were stable compared to the preceding year, following an increasing year-on-year trend, *E. coli* bacteraemias are the most common HAI found in Scotland. *Clostridium difficile* infection (CDI) numbers increased in the 15-64 years age group in 2015 compared to the previous year, though numbers continued to decrease in those aged 65 and over.

The report also points to the internationally recognised risk of antimicrobial resistance (AMR); wherein there was a reduction in the proportion of organisms that were resistant to drugs commonly used to treat urinary tract infections. However, the number of carbapenemase-producing organisms (CPOs) isolated in Scotland was higher compared to 2014, underlining the need for continued surveillance, early detection and risk assessment. HPS continues to coordinate the national AMR response via our Control of Antimicrobial Resistance in Scotland (CARS) programme.

HPS continues to deliver expert advice, intelligence and guidance throughout NHSScotland to support our colleagues in the NHS in reducing HAI.

Campylobacter survey results - January-March 2016

50/2202 *Campylobacter* continues to be the most common cause of foodborne illness in the UK, and Food Standards Scotland (FSS) research has shown that a significant proportion of Scottish *Campylobacter* cases are associated with a chicken source. FSS is working in partnership with the Food Standards Agency (FSA) on the UK strategy to reduce *Campylobacter* in chicken.

The latest set of results from FSA's survey of *Campylobacter* in fresh shop bought chicken at retail, and its packaging were published on 26 May. The results from 1,009 fresh whole chilled UK-produced chickens and packaging sampled during January-March 2016 continue to show a decrease both in the number of birds with *Campylobacter*, and those with the highest level of contamination.

The latest data for the three month period between January-March 2016 (available at http://www.food.gov.uk/sites/default/files/campy-survey-report-jan-mar-2016.pdf) show that:

- *Campylobacter* was present on 50% of chicken samples, down from 71% in the three months from December 2014-February 2015;
- 9.3% of chickens tested positive for the highest level of contamination in this quarter, which is down from 21.8% for the three months from December 2014-February 2015.

The results are considered to be very encouraging, and one of the reasons the survey results are lower for this quarter is the action recently taken by retailers and their suppliers to remove neck skin from the bird before it goes on sale. Neck skin is the most heavily contaminated part of the chicken, so this is a positive step for reducing the risks to consumers. However, as the survey design has been based on the testing of neck skins, its removal means that detailed comparisons with previous results are not possible.

For this reason, the most recent results have been presented as an overall figure for the amount of *Campylobacter* on chicken sampled across the UK, in contrast with previous results which provided a breakdown of figures by retailer. It should also be noted that this survey has now stopped, and a new survey will begin in the summer with a different method for testing *Campylobacter* levels on chicken. The results from this new survey, which will rank the results obtained for each of the retailers, will come out in January 2017. [Source: FSS News Release, 26 May 2016. http://www.foodstandards.gov.scot/news/latest-campylobacter-results-continue-show-improvement]

New combination therapies against chronic hepatitis C

50/2203 The European Medicines Agency (EMA) has recommended the granting of marketing authorisations in the European Union (EU) for two new combination therapies against chronic (long-term) hepatitis C virus (HCV) infection, Epclusa (sofosbuvir/velpatasvir) and Zepatier (grazoprevir/elbasvir).

HCV infection is a major European public health challenge. It affects between 0.4% and 3.5% of the population in different EU member states and is the most common single cause of liver transplantation in the region. Epclusa and Zepatier belong to a new generation of medicines for chronic HCV infection, direct-acting antivirals, that give high rates of cure of HCV infection and that have, in the past few years, reshaped the way this disease is treated. These medicines block the action of proteins which are essential for viral replication. Epclusa targets the proteins NS5B and NS5A, while Zepatier targets the proteins NS3/4A and NS5A.

These new regimens allow cure of patients with chronic HCV infection without the need for interferons, medicines which are associated with poor tolerability and potentially serious side effects that rule out such treatment in a considerable proportion of HCV patients. Despite the rapid development of new therapies, including interferon-free regimens, doctors and patients can still benefit from alternative treatment options. The more treatment options that are available, the better chance a patient has to get the right treatment to cure the disease and to lead a longer and healthier life.

The opinions adopted by the Committee for Medicinal Products for Human Use (CHMP) at its May 2016 meeting are an intermediary step on Epclusa's and Zepatier's path to patient access. The CHMP opinions will now be sent to the European Commission for the adoption of decisions on EU-wide marketing authorisations. Once the authorisations have been granted, decisions about price and reimbursement will take place at the level of each member state considering the potential role/use of these medicines in the context of the national health system of that country. [Source: EMA News Release, 27 May 2016. http://www.ema.europa.eu/ema/index.jsp?curl=pages/news_and_events/news/2016/05/news_detail_002537.jsp&mid=WC0b01ac058004d5c1]

Residues in animals and food - EFSA report

50/2204 On 25 May, the European Food Safety Authority (EFSA) published its 'Report for 2014 on the results from the monitoring of veterinary medicinal product residues and other substances in live animals and animal products'.

The report (available at http://www.efsa.europa.eu/en/supporting/pub/923e) summarises the monitoring data from 2014, including compliance rates with EU residue limits, for a range of veterinary medicines, unauthorised substances and contaminants found in animals and animal-derived food.

Overall, 730,000 samples were reported in 2014 - a drop from the 1 million plus samples in last year's report on 2013 data - from the 28 EU member states.

In 2014, the level of non-compliance in targeted samples (i.e. samples taken to detect illegal use or check non-compliance with the maximum levels) rose slightly - to 0.37%, compared to 0.25%-0.34% over the previous seven years. There was slightly higher non-compliance for resorcylic acid lactones (hormonally active compounds produced by fungi or man-made) and contaminants such as metals and mycotoxins (toxins produced by fungi).

EFSA considers the summary data reported suggest high rates of compliance overall and also demonstrate the strengths of the EU monitoring system and its contribution to consumer protection. [Source: EFSA News Release, 25 May 2016. http://www.efsa.europa.eu/en/press/news/160525]

European bathing waters report

50/2205 Further to Current note 50/2104 (at http://www.hps.scot.nhs.uk/ewr/redirect.aspx?id=68111), the European Environment Agency (EEA) published its 'European bathing water report' on 25 May.

According to the report, (available at http://www.eea.europa.eu/publications/european-bathing-water-quality-2015), more than 21,000 European coastal and inland bathing water sites reported on their water quality in 2015. The report indicates that, as in recent years, the majority can confidently claim to have good quality water, figures showing a slight increase in 2015, with 96% of sites meeting the minimum quality requirements set out in the EU's Bathing Water Directive.

Moreover, more than 84% of bathing water sites satisfied the directive's more stringent 'excellent' bathing water quality standards, while less than 2% of sites were rated as having 'poor' water quality.

The report notes that this year marks a significant moment in Europe's attempts to tackle water pollution and provide clean bathing water for its citizens. The Bathing Water Directive - which sets quality standards and provides monitoring guidelines - was first issued 40 years ago, in 1976, and revised in 2006. The EEA argues that the progress made over these 40 years proves the value of continuous water quality monitoring and assessment, as well as demonstrating the importance of investing in wastewater infrastructure, among other strategies, to reduce pollution across Europe.

The 2015 bathing season was moreover the first time that all EU member states monitored their bathing sites according to the provisions of the EU's revised Bathing Water Directive (2006/7/EC). Individual reports on water quality in all EU member states (including the UK) can be accessed at http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water/state/state-of-bathing-water-2#eea-report-european-bathing-water-quality-in-2015.

Ermine moth caterpillar web

50/2206 A 30ft-long caterpillar web beside a Stirling DIY store was last week cordoned off after becoming a tourist attraction. The caterpillars, thought to be those of a species of Ermine moth, feed on cherry trees, hawthorn and blackthorn and build webs to protect themselves from predators (see http://www.bbc.co.uk/news/uk-scotland-tayside-central-36399909; http://www.itv.com/news/2016-05-28/thousands-of-caterpillars-form-a-30ft-long-web/).

This phenomenon clearly raised great interest and some concern. However, according to the charity Butterfly Conservation:

'These webs and caterpillars are harmless and usually last from May to June. The webs slowly disappear over the summer and typically the hedgerow shrubs/trees recover. The adult moths fly later in summer and all look superficially similar, being white or greyish with many small black dots, hence the ermine name.'

However: 'Ermine moth webs should not be confused with other web-forming larvae, which can be found around the same time, although these nests tend not to be so extensive and the caterpillars of most are hairy. Nests could belong to the nationally scarce Small Eggar *Eriogaster lanestris*, whose webs can reach the size of a small football; the declining Lackey *Malacosoma neustria*, with their striking stripy caterpillars; the Brown-tail *Euproctis chrysorrhoea*, which is expanding its range; and the introduced Oak Processionary *Thaumetopoea processionea*. The caterpillars of the latter two have urticating hairs, i.e. these can cause rashes, and because of this we advise that all hairy caterpillars and webs should be avoided and not handled'. [Source: Butterfly Conservation News & Blog webpage, 2014. http://butterfly-conservation.org/3114-6041/dont-worry-about-ermine-webs.html]

A N S W E R

HIV infection and AIDS: Quarterly report to 31 March 2016

Diagnosed HIV-infected persons living in Scotland	Number of HIV-infected persons attending for care and treatment	Proportion of attenders on treatment
5111	4323	93%

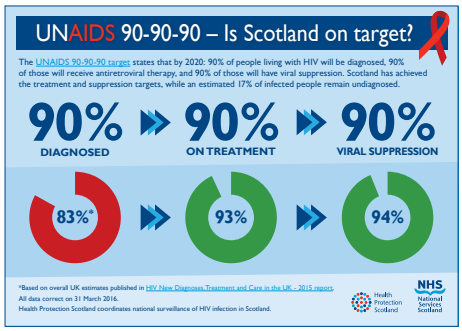
During the first quarter of 2016, NHS Scotland laboratories reported positive HIV-antibody test results for 87 individuals not previously recorded as HIV-positive. The cumulative total of known HIV-positive individuals ever reported in Scotland is now 8451, of whom 6189 (73%) are male and 2262 (27%) are female. At least 2018 (24%) are known to have died. Allowing for known and presumed migration of infected persons, it is estimated that there are currently 5111 persons living in Scotland who have been diagnosed HIV-positive.

Of the 87 HIV-positive individuals reported in 2016, 71 (82%) are male, and 52 (60%) are aged between 25 and 44 years. Greater Glasgow & Clyde reported 31 diagnoses, 19 were reported from Lothian and nine each from Tayside and Grampian.

Due to recent changes in data collection/reporting methods, information on route of transmission and location of exposure in new diagnoses is not immediately available in the majority of cases. For this reason, Table 1 – which previously featured new reports by transmission category and gender – has been replaced by a table featuring new reports by NHS board and gender. Continuous active follow-up of diagnosed cases with undetermined transmission category should improve data quality throughout the year, the results of which can be observed in Tables 2 and 5.

As at 31 December 2015, 4323 HIV infected individuals were attending specialist services for monitoring and treatment. Including recently reported persons (139 – Table 5) who may not as yet have recorded an attendance, this represents 87% of the estimated number of diagnosed individuals currently living in Scotland. Across Scotland, 93% of persons attending for monitoring are receiving anti-retroviral therapy.

This issue's infographic looks at Scotland's progress against the UNAIDS 90-90-90 targets (http://www.unaids.org/en/resources/documents/2014/90-90-90) in advance of the 21st International AIDS Conference (Durban, South Africa – July 2016). To date, Scotland is performing well against two of the three targets (treatment and suppression), with further progress to be made on the third (diagnosis).



Download infographic.

More detailed and cumulative information is included in the following tables. The HIV-positive and AIDS databases are under continual review and modification as additional information becomes available. This may result in apparent discrepancies when current and previously published tables are compared.

HPS would welcome comment and suggestions from stakeholders regarding content. Please direct any correspondence to Glenn Codere, BBV/STI Information Manager, HPS (email g.codere@nhs.net, tel 0141 300 1146).

TABLE 1: HIV-1 infected persons, Scotland, by NHS board and date reported; January to March 2016.

NHS board	Male	Female	Total
Ayrshire & Arran	*	0	*
Borders	0	0	0
Dumfries & Galloway	*	*	*
Fife	5	0	5
Forth Valley	*	0	*
Grampian	*	*	9
Greater Glasgow & Clyde	23	8	31
Highland	*	*	*
Lanarkshire	*	*	*
Lothian	*	*	19
Orkney	0	0	0
Shetland	0	0	0
Tayside	*	*	9
Western Isles	0	0	0
Total	**71**	**16**	**87**

TABLE 2: HIV reports, Scotland[1] by year of report, exposure category and presumed area of exposure[2]; to 31 March 2016.

Year of report	All risks[3]				Men who have sex with men (MSM)				Sexual intercourse between men and women				PWID	Age group[4] 15-24
	Total[5]	within Scotland	outwith Scotland	outwith UK	Total[5]	within Scotland	outwith Scotland	outwith UK	Total[5]	within Scotland	outwith Scotland	outwith UK		
2002	250	104	143	113	92	58	34	15	130	31	99	89	14	25
2003	258	104	149	125	101	62	39	20	135	33	101	98	11	38
2004	359	141	217	188	141	98	43	21	195	30	165	159	15	51
2005	404	149	255	207	172	106	66	35	197	27	170	160	27	48
2006	340	122	216	175	149	87	62	29	162	21	139	134	22	33
2007	440	153	283	224	203	115	88	40	219	35	182	172	10	65
2008	405	149	250	203	162	98	64	29	206	37	168	161	21	29
2009	419	142	273	222	176	99	77	41	209	35	174	160	18	33
2010	359	149	209	172	162	108	54	29	167	24	143	134	21	35
2011	364	162	199	142	174	112	62	28	161	39	122	101	19	31
2012	347	125	216	159	172	94	78	39	144	21	123	107	16	33
2013	354	144	202	147	179	99	80	38	143	30	110	98	21	25
2014	370	156	206	138	183	100	83	32	149	36	112	98	22	31
2015	361	171	116	85	144	101	43	18	93	21	68	63	52	32
2016	87	15	17	12	22	10	12	8	6	*	*	*	*	*

1. Due to active follow-up, data on the Scottish AIDS/HIV Register is constantly changing. Figures presented in this table may differ slightly from those previously published.
2. 'Presumed Area of Exposure' is based on information provided by the patient at the time of test or during subsequent follow-up. An individual is presumed to have been infected in Scotland if, after investigation, no evidence exists to the contrary. 'Outwith UK' is a subset of 'outwith Scotland'. Cases under investigation are excluded from all categories except the total.
3. Includes persons outwith three main risk groups.
4. Age at time of first positive specimen.
5. Includes cases currently under investigation.

TABLE 3: HIV reports, Scotland by year of report and NHS board[1]; to 31 March 2016.

Year of report	A&A	BR	D&G	FF	FV	GR	GG&C	HG	LN	LO	TY	SH, OR, WI
2002	8	*	*	16	7	17	83	11	14	73	18	0
2003	*	*	*	11	*	24	92	7	18	80	14	0
2004	10	*	8	21	6	26	115	7	24	112	26	0
2005	10	*	13	17	16	33	126	9	30	131	17	0
2006	10	*	12	11	13	24	109	5	29	96	25	*
2007	9	*	9	20	16	46	137	17	37	115	30	*
2008	8	*	*	11	15	42	140	10	25	114	31	*
2009	10	5	5	18	16	35	187	13	31	75	23	*
2010	17	5	5	11	11	37	112	14	28	91	27	*
2011	14	*	*	18	14	30	114	13	27	96	32	*
2012	11	*	5	16	10	42	114	14	27	87	19	0
2013	19	*	5	9	15	45	100	7	29	88	31	*
2014	16	*	6	11	10	32	129	13	35	94	20	0
2015	12	7	8	18	10	31	132	13	39	67	23	*
2016	*	0	*	5	*	9	31	*	*	19	9	0

1. See NHS board in terms and definitions.

TABLE 4: Monitoring and progression, and deaths among HIV infected individuals, Scotland; to 31 March 2016.

Year of monitoring/ diagnoses/death	Monitoring and progression		Reported deaths[1]	
	Individuals attending for CD4/VL monitoring[2]	AIDS cases diagnosed	All HIV infected cases	AIDS only
2002	1522	62	67	32
2003	1676	50	63	28
2004	1922	58	29	7
2005	2204	52	52	18
2006	2402	40	47	14
2007	2661	53	48	13
2008	2869	47	49	18
2009	3095	44	50	11
2010	3346	55	48	16
2011	3581	31	43	8
2012	3773	22	44	12
2013	3932	16	49	17
2014	4147	19	49	16
2015	4296	12	37	12
2016	-	0	5	*

1. Death figures are for those persons known to be HIV infected, or who have been diagnosed with AIDS. In some cases the actual cause of death may have been unrelated to the person's infection status. Death data is subject to reporting delay.
2. Total individuals attending for monitoring within given year. Subject to three-month reporting delay.

TABLE 5: New HIV reports and current status of living diagnosed persons; to 31 March 2016.

NHS board	Diagnoses reported during year to 31 March 2016					Current status of living diagnosed persons						
	Total	MSM	Het	IDU	Other/ NK	Estimated[1] diagnosed individuals alive as at 31 Mar 2016	Number attending[2] for monitoring	Recent report[3]	Proportion of Dx individuals attending or recently reported	Proportion of attenders on treatment at any level	Number lost to follow up (and number last identified prior to 1 Jan 2006)	
A&A	*	0	0	0	*	162	141	6	90%	92%	18	(6)
BR	0	0	0	0	0	47	40	0	85%	88%	9	*
D&G	*	0	0	0	*	76	57	5	82%	96%	14	(5)
FF	5	*	0	0	*	229	200	*	89%	95%	28	(12)
FV	*	0	0	0	*	167	136	5	85%	90%	26	(16)
GR	9	*	*	0	6	391	337	13	90%	94%	52	*
GG&C	31	0	0	*	*	1578	1336	56	88%	92%	251	(76)
HG	*	0	0	0	*	144	125	*	90%	95%	14	(9)
LN	*	0	0	0	*	375	325	12	90%	92%	45	(12)
LO	19	14	*	0	*	1543	1308	21	86%	95%	252	(161)
TY	9	5	*	0	*	384	306	12	83%	96%	79	(27)
OR, SH, WI	0	0	0	0	0	15	12	*	86%	92%	*	(0)
Total	**87**	**22**	*****	*****	**55**	**5111**	**4323**	**139**	**87%**	**93%**	**791**	**(329)**

1. Estimate is calculated by adding number currently attending, number recently reported but not yet attending and number lost to follow-up, then allowing for outward migration of non-Scots lost to follow-up.
2. Individuals alive, not known to have left Scotland, and recording at least one attendance within the previous 12 months as at 31 December 2015.
3. Individuals reported within the past 12 months who have not yet attended for monitoring at a specialist clinic.

Acknowledgements

HPS thanks collaborators and contributors to national HIV surveillance throughout Scotland for their assistance in the compilation and production of these data.

Terms and definitions

Attending/Attenders: Individuals are considered to be 'attending' if they have recorded at least one visit to a specialist HIV clinic for monitoring and/or care within the most recent 12-month period.

Lost to follow-up: Individuals are considered to be 'lost to follow-up' if a) they have not recorded an attendance at a specialist HIV clinic within the previous 12 months and b) no evidence exists of recent attendance at an NHS facility for a non-HIV related condition and c) no evidence exists of recent attendance for HIV care in an NHS setting other than a specialist HIV centre and d) no evidence exists that the patient is deceased or has left Scotland.

NHS board: Unless otherwise specified, individuals are assigned to a specific NHS board based on the patient's postcode of residence or, where this is not known, their NHS board of referral.

PWID: People who inject drugs.

Suppression of 'small numbers': Where there is deemed to be a risk of deductive disclosure, some small numbers (usually those below five) presented within these tables have been suppressed (represented by *).

Transmission category: Individuals are assigned to a transmission category based on a clinical assessment of their most likely method of exposure and subsequent infection.

Estimated number of diagnosed persons living in Scotland: This estimate is calculated by adding persons currently attending, persons recently reported but not yet attending, persons of Scots origin/ethnicity who are lost to follow-up, and 54% of individuals of non-Scots origin/ethnicity who are lost to follow-up. Data from the 2010/2011 HIV Action Plan (Action 6) quantitative project, the 2011 BASHH Scotland Audit (both investigating reported HIV-positive individuals lost to follow-up), and routine follow-up of cases performed by HPS indicate that approximately 46% of non-Scots who have not attended for specialist monitoring/treatment are presumed to have left Scotland.

The last HIV and AIDS Surveillance Report was in Issue 16/11
The next HIV and AIDS Surveillance Report will be in Issue 16/36

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				

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