

COMMUNICABLE DISEASES

Monthly Report

ISSN 1361-1887

WEEKS 33-36/08

VOL 17 NO 9

NORTHERN IRELAND EDITION

www.cdscni.org.uk

October 2008

This edition of Monthly Report sees the start of Winter surveillance for the seasonal influenza surveillance programme for 2008/9. With an additional two GP practices participating this year, the 29 sentinel GP practices will cover 9.3% of the Northern Ireland population.

Once again we report coverage statistics from the Childhood Vaccination Programme. MMR uptake has fallen again for the second consecutive month to 88%. At a time when there is resurgent measles activity in GB this remains a cause for concern.

Finally, we provide some key points from the recently published *Staphylococcus aureus* and *Clostridium difficile* quarterly reports. While the Northern Ireland rate of *S. aureus* has remained constant compared with the previous quarter there has been a decrease in the number of *C. difficile* inpatient cases in those >65 years of age, with patient episode rates falling below the warning limit of the Statistical Process Control chart.

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Childhood vaccine preventable illnesses and the vaccination programme

This edition of the Monthly Report presents statistics up to epidemiological week 36, 2008.

Vaccination uptake (COVER) statistics are now available for the quarter ended June 2008 and show MMR1 uptake at 24 months of age, at 88.80%; a decrease of 1.0 percentage points compared to the previous quarter's figure.

Childhood Vaccine Preventable Diseases

Routine information on childhood vaccine preventable diseases is available from three sources:

1. Clinical notifications

Table 1: Notifications of Vaccine Preventable Infectious Diseases, Northern Ireland

Disease	Weeks 25-28, 2008	Weeks 29-32, 2008	Weeks 33-36, 2008	Cumulative Total to Week 36, 2008	Cumulative Total to Week 36, 2007
Diphtheria	0	0	0	1*	0
Measles	5	1	2	16	23
Mumps	11	9	11	85	106
Polio	0	0	0	0	0
Rubella	1	2	2	19	19
Tetanus	0	0	0	0	0
Whooping Cough	5	4	2	19	9

*Non-toxigenic strain

2. Laboratory reports

Table 2: Laboratory Reports of Vaccine Preventable Infectious Diseases, Northern Ireland

Disease	Weeks 25-28, 2008	Weeks 29-32, 2008	Weeks 33-36, 2008	Cumulative Total to Week 36, 2008	Cumulative Total to Week 36, 2007
Diphtheria	0	0	0	0	0
Invasive Hib disease†	0	0	0	0	0
Measles	0	0	0	3	0
Mumps*	0	0	0	3	8
Polio	0	0	0	0	0
Rubella	0	0	0	0	0
Tetanus	0	0	0	0	0
Whooping Cough	1	1	0	6	1

* Serologically confirmed by RVL

† Invasive disease due to all types of H. Influenzae (including untyped) is reported in the regular Positive Blood Culture tables

Note: Invasive disease due to *N. meningitidis* and *S. pneumoniae* are reported as separate epidemiological reports

3. Salivary Antibody Testing Results

Table 3: Salivary Antibody Testing Results, 2006, Northern Ireland

	Board	Quarter 3, 2008				Cumulative to Quarter 3, 2008		
		Notifications*	Salivary test completed†	Confirmed Case	Not Confirmed	Notifications*	Salivary test completed†	Confirmed Case
Measles	NHSSB	0	0	0	0	4	3	0
	SHSSB	2	2	0	2	8	10	1
	EHSSB	1	0	0	0	3	6	0
	WHSSB	1	1	0	1	1	3	0
	Total	4	3	0	3	16	22	1
Mumps	NHSSB	8	5	1	4	22	14	1
	SHSSB	2	4	2	2	14	7	2
	EHSSB	13	8	3	5	31	19	4
	WHSSB	4	2	0	2	18	10	1
	Total	27	19	6	13	85	50	8
Rubella	NHSSB	1	1	0	1	1	2	0
	SHSSB	2	2	0	2	8	5	0
	EHSSB	0	0	0	0	6	4	0
	WHSSB	2	3	0	3	4	4	0
	Total	5	6	0	6	19	15	0

Source: HPA (Centre for Infections, Colindale),
CDSC (NI)

*Notification data to week 38

† Salivary tests may sometimes be performed without the case being notified

- Salivary testing completed on 78% (28/36) notifications of measles, mumps and rubella for quarter 3, 2008; compared with 64% (104/162) for the same period in 2007.
- No cases of measles confirmed
- Six cases of mumps confirmed
- No cases of rubella confirmed

Vaccination coverage statistics for children in Northern Ireland

COVER/Korner statistics now available for quarter April to June 2008:

- MMR uptake at 24 months decreases to 88.80%

The vaccination coverage statistics for Northern Ireland (COVER/Korner Programme) are now available for the second quarter of 2008. The statistics give detailed coverage data and numbers of children in the four Boards in Northern Ireland. The tables below show the coverage data for the children in the four Boards in Northern Ireland and the United Kingdom as a whole.

Table 4: Completed Primary Immunisations by 12 months of age (April – June 2008), Northern Ireland

Board	% Coverage at 12 months			
	No of children in cohort	DTaP/IPV/Hib3	MenC2	PCV2
Eastern	2107	95.20%	95.30%	94.10%
Northern	1473	96.90%	96.80%	96.50%
Southern	1366	96.90%	96.90%	96.50%
Western	1006	97.90%	97.70%	94.00%
NI Total	5952	96.50%	96.40%	95.20%

- Uptake of DTaP/IPV/Hib3 have increased by 0.3 percentage points compared to last quarter
- Uptake of MenC has increased by 0.4 percentage points
- Uptake of PCV has increased by 3.10 percentage points
- Uptake is above 90% for all DTaP/IPV/Hib3, MenC & PCV at 12 months

Table 5: Completed Primary Immunisations by 24 months of age (April – June 2008), Northern Ireland

Board	% Coverage at 24 months					
	No of children in cohort	DTaP/IPV/Hib3	Infant MenC	PCV Booster	Hib/MenC	MMR1
Eastern	2073	97.10%	96.10%	75.40%	61.00%	86.40%
Northern	1473	98.40%	97.30%	81.70%	76.20%	89.20%
Southern	1324	98.00%	96.80%	81.10%	73.20%	91.00%
Western	958	98.00%	97.00%	81.30%	76.60%	90.60%
NI Total	5828	97.80%	96.70%	79.30%	70.20%	88.80%

- Uptake of MMR1 has decreased by 1.0 percentage points compared to last quarter
- MenC has decreased by 0.5 percentage points
- Coverage of PCV booster and Hib/MenC vaccines at 24 months has increased by 3.0 and 3.3 percentage points respectively
- All other vaccinations show an increase of 0.2 percentage points
- With the exception of MMR1, PCV and Hib/MenC, uptake remains at 95% or above at 24 months

Fig 1: Vaccination uptake rates at 24 months Northern Ireland: 1997 – 2008

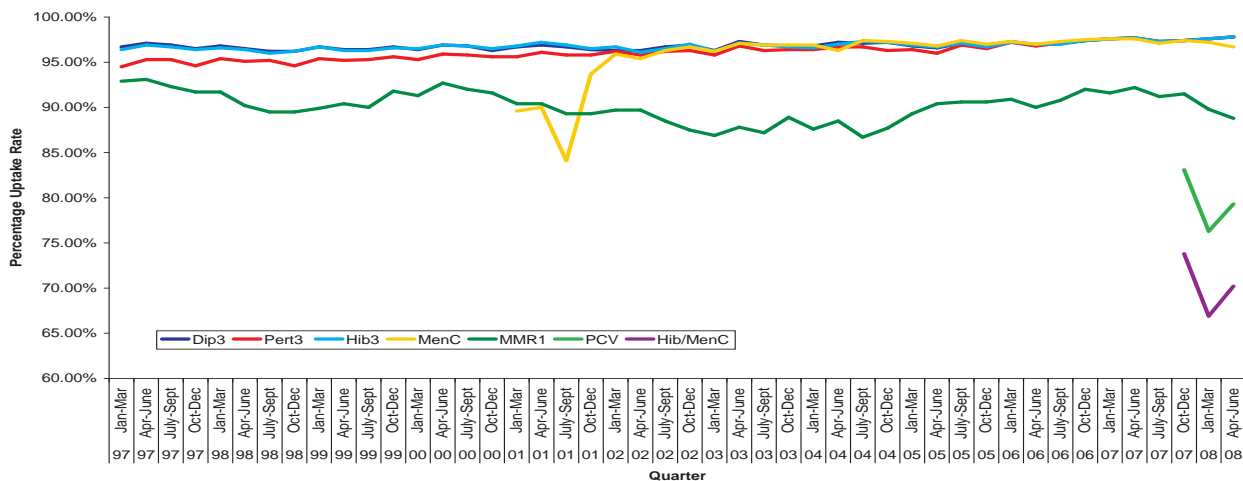


Table 6: Completed Primary Immunisations by 12 and 24 months of age (April – June 2008), UK

Country	% Coverage at 12 months			% Coverage at 24 months				
	DTaP/IPV/Hib3	MenC2	PCV2	DTaP/IPV/Hib3	Infant MenC	PCV Booster	Hib/MenC	MMR1
England	90.70%	90.00%	89.90%	93.60%	90.90%	74.90%	79.40%	82.40%
Wales	94.90%	94.60%	94.60%	96.90%	95.70%	82.80%	89.50%	86.40%
Scotland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
UK	91.50%	90.90%	90.80%	94.30%	91.80%	76.80%	79.90%	83.60%

Table 7: Vaccine Coverage at 5 years (April – June 2008), Northern Ireland

Board	% Coverage at 5 years					
	DTP/Pol3	Hib3	MenC	MMR1	MMR2	DTaP/IPV
Eastern	96.30%	92.20%	94.10%	95.10%	86.70%	89.60%
Northern	97.70%	93.70%	95.10%	95.50%	89.70%	92.80%
Southern	95.80%	92.80%	92.80%	95.10%	88.80%	91.10%
Western	96.90%	93.20%	94.50%	95.90%	92.20%	93.10%
NI	96.70%	92.90%	94.20%	95.30%	88.90%	91.40%
England	92.80%	92.00%	91.80%	87.70%	75.20%	78.20%
Wales	95.80%	95.40%	93.50%	90.30%	81.20%	86.80%
Scotland	n/a	n/a	n/a	n/a	n/a	n/a
UK	93.50%	92.60%	92.50%	88.70%	76.40%	79.60%

- Uptake of DTP/Pol3 and MMR1 remain the same as last quarter
- Uptake of MenC and Hib3 have decreased by 0.4 and 0.6 percentage points respectively
- MMR2 uptake has increased by 0.3 percentage points
- DTaP/IPV has increased by 0.1 percentage points
- Uptake is above 90% for all DTP/Pol3, Hib3, MenC, MMR1 & DTaP/IPV at 5 years

Healthcare associated infections in Northern Ireland: April - June quarterly report 2008

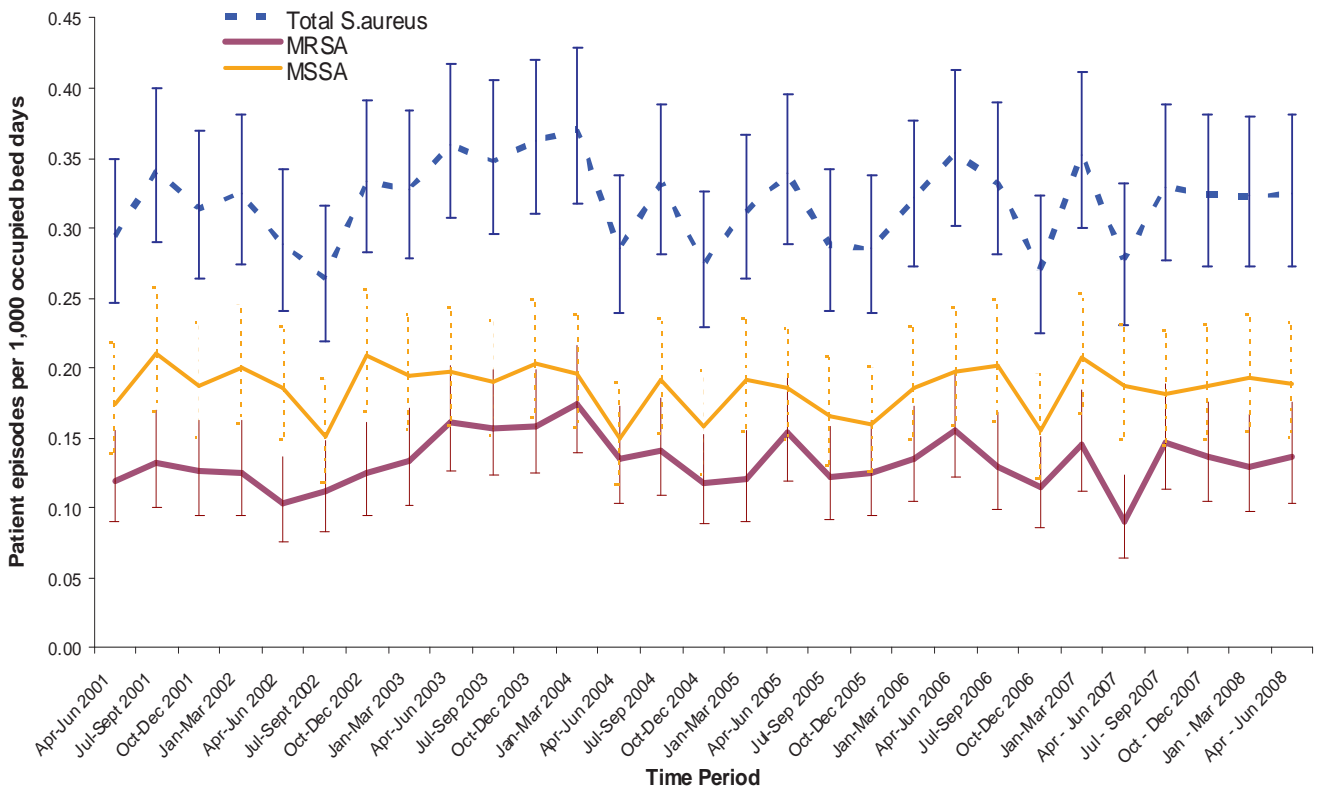
The full April - June 2008 quarterly *Staphylococcus aureus* and *Clostridium difficile* reports, based on the mandatory reporting schemes, are available online at: <http://www.cdscni.org.uk>.

Key findings

Staphylococcus aureus bacteraemias

- This quarter the Northern Ireland rate of *S. aureus* (MRSA plus MSSA) has **remained constant** at 0.32 per 1,000 occupied bed days when compared with the previous quarter (Figure 2).
- The MRSA rate **increased** (5.4%) from 0.129 last quarter to 0.136 (Figure 2).
- The MSSA rate **decreased** (2.6%) from 0.193 last quarter to 0.188 this quarter (Figure 2).
- For Northern Ireland as a whole and for each Trust, MRSA and MSSA rates are fluctuating within normal parameters.

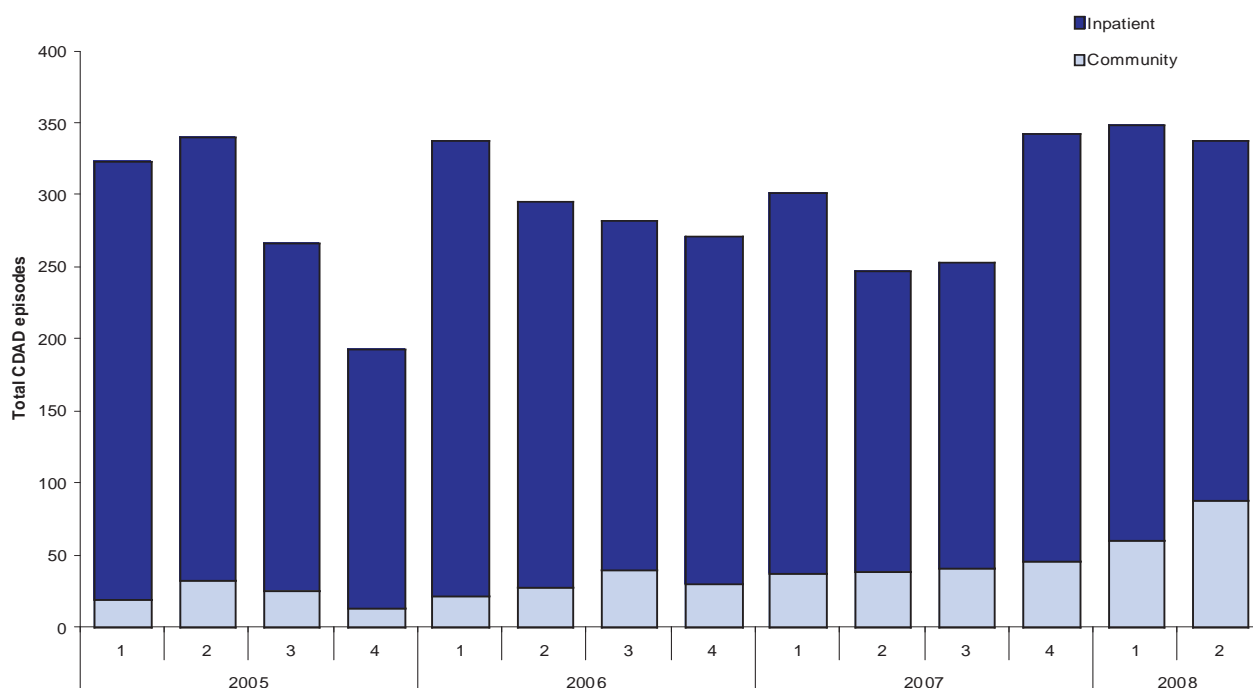
Figure 2: MSSA, MRSA and S.aureus patient episodes rates in Northern Ireland by quarter, with 95% Confidence Intervals, April-June 2008



Clostridium difficile associated disease

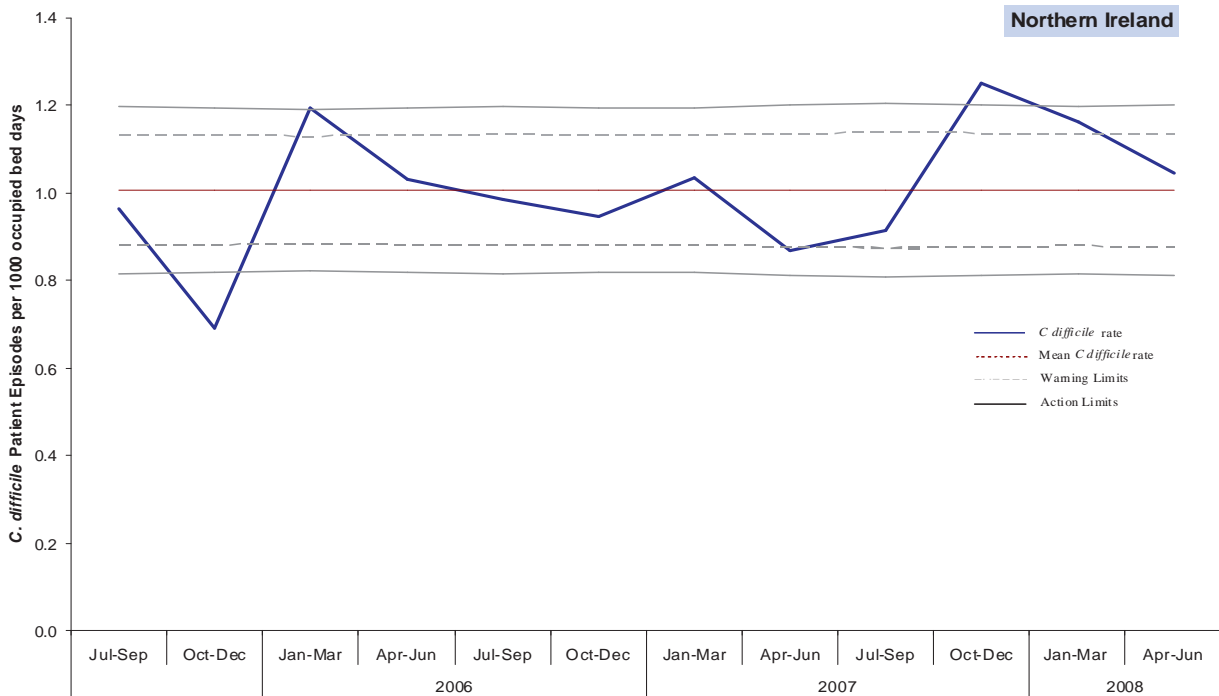
- For inpatients >65 years of age there has been a **decrease** of 38 cases (13.2%) in the number of inpatient cases reported in this quarter (250) compared with the previous quarter (288). This is the second consecutive quarter in 2008 where there has been a reduction in inpatient episodes (Figure 3).
- Community isolates have **risen** by 27 episodes (44.3%) this quarter (61 reports in quarter 1 to 88 reports in quarter 2; Figure 3).

Figure 3: Total CDAD reports, inpatient and community, in Northern Ireland, by quarter (patients ≥65 years), between 2005 and 2008



- In Northern Ireland, this quarter, the rate of *C. difficile* patient episodes has fallen below the warning limit of the chart (Figure 4).

Figure 4: Statistical process control chart for quarterly C difficile rates in inpatients, in Northern Ireland



Enhanced surveillance of influenza in Northern Ireland (ESINI)

The traditional influenza surveillance reporting period in Europe starts at week 40 (early October) and continues to week 20 next year (mid May). This October marks the start of the of the ninth year of ESINI winter surveillance. Last season was associated with normal rates of 'flu/flu-like illness with peak morbidity in January and February. Highest Rates were recorded in the 5-64 age group and the predominant strain was Influenza B. There were two Residential Nursing Home Outbreaks (FluB).

Further details of influenza last season can be obtained from:-

<http://www.cdscni.org.uk/publications/AnnualReports/pdf/0708ESINIsummary.pdf>

The main objectives of this surveillance programme are to:

- provide an early warning scheme for influenza virus circulation in Northern Ireland;
- identify those age groups most affected and;
- identify circulating influenza virus and its matching to the seasonal influenza vaccine.

The scheme involves the weekly compilation of data from sentinel GP practices, Out-of-Hours Centres (formerly Co-Operatives), the Regional Virus Laboratory and the Northern Ireland Statistics and Research Agency.

This season an extra two sentinel practices have been recruited. There are now twenty nine practices participating covering 9.3% of the Northern Ireland population. These are not uniformly spread throughout Northern Ireland as the majority are in the east of the Province. Twenty two practices have agreed to take nasal and oro-pharyngeal swabs from patients presenting with clinical influenza. The Regional Virus Laboratory will analyse these samples using PCR techniques for influenza A, B and RSV.

Morbidity information from sentinel GPs is supplemented by call rate data from the Out-of-Hours (OOH) primary care centres. Previously this data related to all calls and it was not possible to extract details of calls due to influenza/flu-like illness. New software is currently being installed in the OOH centres and it will therefore be possible later this winter to extract 'flu/flu-like illness calls and calculate age specific call rates.

Mortality data is provided by the Northern Ireland Statistics and Research Agency. The data includes total deaths registered by week and the proportion due to bronchitis, bronchiolitis, influenza and pneumonia. The reporting period for the registered deaths is the same as that for reported consultations in primary care.

All this information is collated and published in a 'flu bulletin. When respiratory indices are quiet the bulletin will be published every two weeks, but weekly (Wednesday) when influenza starts to circulate. Surveillance continues throughout the year but a bulletin is only produced during the influenza reporting period as defined earlier. The bulletin compares this season's trends with those from previous years and contains a short summary of influenza activity in GB, Ireland and Europe with related web links. In addition to data providers the bulletin is distributed to the Department of Health, Social Services and Public Safety, Health and Social Services Boards and Trusts to enable them to take appropriate action once influenza starts to circulate in Northern Ireland. Should you wish to be on the mailing list to be alerted when the bulletin is available on the CDSC (NI) website please contact Eileen Morelli at 028 9026 3386 or E-mail at eileen.morelli@hpa.org.uk.

UK Zoonoses report 2007

This annual report has just been published by the Department for Environment Food and Rural Affairs (Defra) and is available from the Defra website at:-

<http://www.defra.gov.uk/animalh/diseases/zoonoses/reports.htm>.

The report is the result of collaboration with the Devolved Administrations, the Veterinary Laboratories Agency, the Scottish Agricultural College, the Food Standards Agency, the HPA and other national surveillance centres. It draws together information from a wide number of sources on zoonoses in man, food and animals and, where appropriate, provides comparable data from previous years. Zoonoses covered include the major food and water borne zoonoses (campylobacter, salmonella, *E. coli* O157 and cryptosporidium) and the main notifiable zoonotic diseases of animals including bovine TB, brucellosis, anthrax, rabies, avian influenza, West Nile Virus and BSE.

The key points include:

- Recorded human cases of campylobacter increased by 10% to 57,590 cases compared to 2006. This remains less than the peak in 2000 when over 65,000 cases were reported in the UK.
- Human salmonella infection decreased by 6% when compared to 2006 with *S. enteritidis* and *S. typhimurium* remaining the most commonly isolated serotypes. There was also a reduction in reports of salmonella in cattle, sheep, pigs and poultry, which may in part reflect reduced numbers of diagnostic samples received especially for cattle and sheep.
- Human cases of VTEC O157 fell nearly 10% compared with 2007.
- Increase in new incidents of bovine TB in cattle. There was also a cohort of epidemiologically linked human cases of *M. bovis* in the West Midlands.
- Increase in reports of Lyme Disease with comments that recent relatively mild wet winters will allow ticks to survive and continue to feed throughout the year.
- First internationally recognised outbreak of Avian Influenza (H7N2) affecting a number of people in NW England and North Wales in May 2007. Little is known about H7N2 infection, and while there have been a number of outbreaks worldwide amongst poultry, human illness is rare.

The Human Animal Infections and Risk Surveillance (HAIRS) Group first report 2004-2007

The HAIRS group carries out horizon scanning to identify emerging and potentially zoonotic infections which may pose a threat to UK public health. This is carried out by systematic examination of formal and informal reports on infectious incidents in animal and human populations globally. A wide range of sources of information are scanned, including informal news reports and bulletins, early warning communications, surveillance data and peer-reviewed scientific literature. The Secretariat and members of the group identify potential hazards, such as new or unusual syndromes or infections in animals, or increases in endemic disease, and these are then brought to the group for discussion and assessment. The multidisciplinary nature of the HAIRS group enables objective and scientific assessment of potential threats.

This first report covers a range of topics including: TB in cats and ferrets; squirrel Parapoxvirus; *Anisakis* infection in wild Atlantic salmon; and mycobacterial infection in camelids.

The report is available from http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1223534078963

Foodborne and gastrointestinal tract infections: Laboratory reports, weeks 33-36

	Number of Reports received		Cumulative total	
	08/33-36	07/33-36	08/01-36	07/01-36
<i>Campylobacter</i>	91	105	603	635
<i>C. difficile</i> Toxin	92	95	1162	858
<i>C. perfringens</i>	2	2	24	11
<i>E. coli</i> O 157	12	7	45	33
<i>Salmonella</i> total	19	21	106	111
<i>S. enteritidis</i> (PT 4)	4 (1)	4 (0)	31 (4)	35 (1)
<i>S. typhimurium</i> (DT 104)	2 (0)	4 (0)	19 (3)	23 (0)
<i>Salmonella</i> other	13	13	56	53
<i>Shigella</i>	0	0	7	11
<i>Cryptosporidium</i>	2	8	76	74
<i>Giardia</i>	0	0	2	3
Adenovirus (faeces)	15	10	223	76
Enterovirus (faeces)	1	9	25	24
Rotavirus	4	8	663	355
Norovirus	15	6	337	262

Salmonella (other than *enteritidis* or *typhimurium*):

S. spp 13

Table 8: Infection associated with foreign travel, weeks 33-36, 2008, Northern Ireland

Organism	Countries visited
Campylobacter (4)	France (2), Nepal (1), Peru (1)
E Coli O 157 (1)	France
<i>S. enteritidis</i> (3)	Cyprus (1), Kos (2)
<i>S. spp</i> (8)	Cuba (1), Cyprus (1), Hong Kong (1), Spain (2), Thailand (2), Turkey (1)

Respiratory tract infections: Laboratory reports, weeks 25-36

	Number of Reports received			Cumulative Total	
	08/25-28	08/29-32	08/33-36	08/01-36	07/01-36
<i>Coxiella burnetii</i>	1	8	2	14	4
<i>Mycoplasma pneumoniae</i>	0	0	0	2	5
Respiratory <i>Chlamydia</i>	0	1	0	3	12
<i>Adenovirus</i> (excluding faeces)	3	2	0	19	24
RSV	1	2	1	169	179

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Antrim	Regional Virus
Belfast City	Royal Hospitals Bacteriology
Causeway	Tyrone County
Craigavon	Ulster
Greenpark	

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