HSC Public Health Agency

2011: Issue 2

Transmit

Health protection service bulletin March 2011

Foreword

This month's *Transmit* focuses on the blood-borne viruses and sexually transmitted infections team. It includes links to information on hepatitis C that has been produced by the health protection service of the PHA and the Northern Ireland Hepatitis C Managed Clinical Network (MCN): www.hepcni.net Of note, hepatitis B is to be added to the work programme of the MCN. This is a very positive development for the regional work on prevention and management of hepatitis B. This bulletin also includes practical information for health professionals on how to manage sharps injuries on members of the public.

March 2011 has been a busy month for the healthcare associated infections (HCAI) team, with the publication of the public inquiry report into the outbreak of *clostridium difficile* in Northern Trust hospitals during 2007/08. Details of the full report can be accessed through the inquiry website at: www.cdiffinquiry.org/inquiry-report.htm We also hosted a very successful HCAI symposium on 30 March at the King's Hall.

The recent devastating earthquake and tsunami in Japan has obviously raised concerns about the risk to public health internationally. There is currently no health risk to people living in the UK from the release of radioactive material from the Japanese nuclear power plant. Further information is available on the website of the Health Protection Agency: www.hpa.org.uk

Lorraine Doherty

Dr Lorraine Doherty
Assistant Director of Public Health (Health Protection)

Contents

Blood-borne viruses and sexually transmitted infections team update

We are pleased to welcome Mr PJ O'Neill to the team. PJ has recently been appointed to the PHA as a nurse in health protection.

Nicola Cunningham, who has been the team's excellent information officer, has moved to a new

Continued on page 2

position within the PHA, so congratulations and thanks to her. Lewis Shilliday and Joy Miskimmons will undertake the team's surveillance in future.

Hepatitis B to be added to Northern Ireland Hepatitis C Managed Clinical Network (MCN)

There are many similar issues involved in the control and management of hepatitis B and C, for example:

- awareness of prevention measures;
- coordination of professional education;
- gaps in identification and referral;
- many of the same links required;
- treatment available by same clinicians.

There are additional considerations for hepatitis B, such as the availability of vaccination and the much greater importance of sexual transmission in acute infection.

It has been agreed to extend the work of the current Northern Ireland Hepatitis C MCN to include hepatitis B, thus allowing greater integration and coordination of services. Over the next three months, the MCN will:

- expand its aims and terms of reference to include control and management of hepatitis B;
- augment steering group membership by inviting additional representatives from service users, genito-urinary medicine, antenatal screening, vaccination programmes and relevant voluntary groups;
- commence work to:
    - involve stakeholders;
    - recruit new members to the steering group and network;
    - develop an initial work plan.

Please let us know if you would like to be involved.

Date for diary

The Northern Ireland Hepatitis C MCN annual update day will be held on Friday 24 June 2011 from 9am to 1pm at Clady Villa, Knockbracken. The addition of hepatitis B will also be discussed at this event. Please get in touch with Annelies McCurley, network manager, for further information or if you would like to attend: annelies.mccurley@belfasttrust.hscni.net

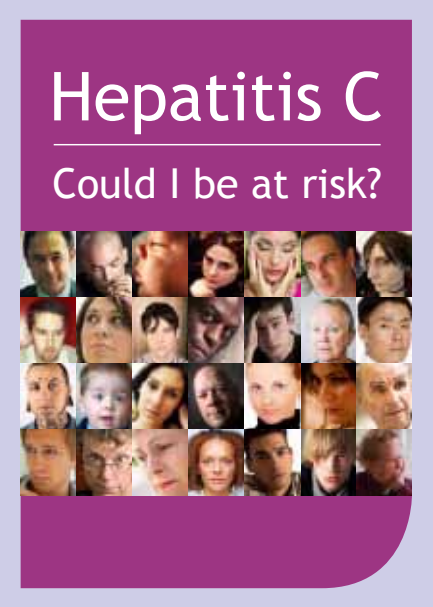
Hepatitis C leaflets

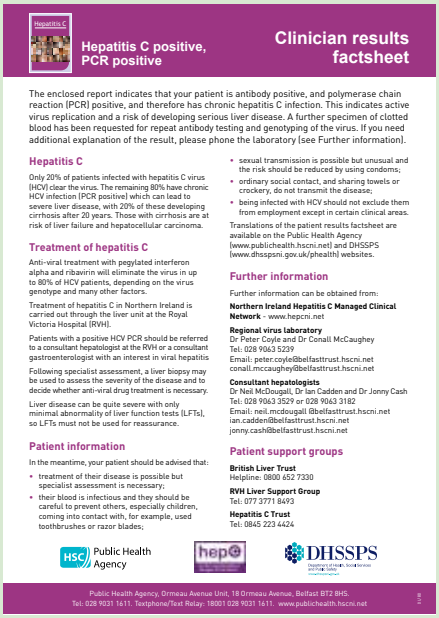
The PHA and MCN have produced the following updated leaflets:

Information for the general public, which includes information on who should be tested: http://hepcni.net/userfiles/file/HepC%20patient%20A6_Leaflet.pdf

Information for clinicians, which is sent by the Regional Virology Laboratory when a patient is diagnosed with chronic hepatitis C: http://hepcni.net/userfiles/file/HepC_A4_Clinicians_Leaflet.pdf

Information for patients diagnosed with chronic hepatitis C, which is also sent by the Regional Virology Laboratory: http://hepcni.net/userfiles/file/HepC_A4_Patients_Leaflet.pdf




Hepatitis C positive, PCR positive

Clinician results factsheet

The enclosed report indicates that your patient is antibody positive, and polymerase chain reaction (PCR) positive, and therefore has chronic hepatitis C infection. This indicates active virus replication and a risk of developing serious liver disease. A further specimen of clotted blood has been requested for repeat antibody testing and genotyping of the virus. If you need additional explanation of the result, please phone the laboratory (see Further information).

Hepatitis C

Only 20% of patients infected with hepatitis C virus (HCV) clear the virus. The remaining 80% have chronic HCV infection (PCR positive) which can lead to severe liver disease, with 20% of these developing cirrhosis after 20 years. Those with cirrhosis are at risk of liver failure and hepatocellular carcinoma.

Treatment of hepatitis C

Anti-viral treatment with pegylated interferon alpha and ribavirin will eliminate the virus in up to 80% of HCV patients, depending on the virus genotype and many other factors.

Treatment of hepatitis C in Northern Ireland is carried out through the liver unit at the Royal Victoria Hospital (RVH).

Patients with a positive HCV PCR should be referred to a consultant hepatologist at the RVH or a consultant gastroenterologist with an interest in viral hepatitis

Following specialist assessment, a liver biopsy may be used to assess the severity of the disease and to decide whether anti-viral drug treatment is necessary.

Liver disease can be quite severe with only minimal abnormality of liver function tests (LFTs), so LFTs must not be used for reassurance.

Patient information

In the meantime, your patient should be advised that:

- treatment of their disease is possible but specialist assessment is necessary;
- their blood is infectious and they should be careful to prevent others, especially children, coming into contact with, for example, used toothbrushes or razor blades;
- sexual transmission is possible but unusual and the risk should be reduced by using condoms;
- ordinary social contact, and sharing towels or crockery, do not transmit the disease;
- being infected with HCV should not exclude them from employment except in certain clinical areas.

Translations of the patient results factsheet are available on the Public Health Agency (www.publichealth.hscni.net) and DHSSPS (www.dhsspsni.gov.uk/phealth) websites.

Further information

Further information can be obtained from:

Northern Ireland Hepatitis C Managed Clinical Network - www.hepcni.net

Regional virus laboratory
Dr Peter Coyle and Dr Conall McCaughey
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Email: peter.coyle@belfasttrust.hscni.net
conall.mccaughey@belfasttrust.hscni.net

Consultant hepatologists
Dr Neil McDougall, Dr Ian Cadden and Dr Jonny Cash
Tel: 028 9063 3529 or 028 9063 3182
Email: neil.mcdougall @belfasttrust.hscni.net
ian.cadden@belfasttrust.hscni.net
jonny.cash@belfasttrust.hscni.net

Patient support groups

British Liver Trust
Helpline: 0800 652 7330

RVH Liver Support Group
Tel: 077 3771 8493

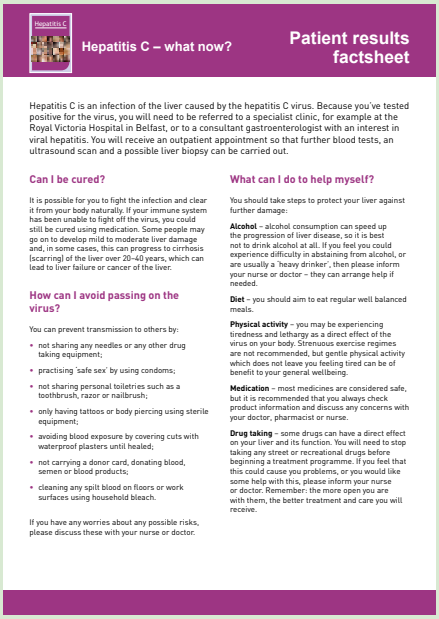
Hepatitis C Trust
Tel: 0845 223 4424

HSC Public Health Agency

hepc

DHSSPS

Public Health Agency, Ormeau Avenue Unit, 18 Ormeau Avenue, Belfast BT2 8HS.
Tel: 028 9031 1611. Textphone/Text Relay: 18001 028 9031 1611. www.publichealth.hscni.net


Hepatitis C – what now?

Patient results factsheet

Hepatitis C is an infection of the liver caused by the hepatitis C virus. Because you've tested positive for the virus, you will need to be referred to a specialist clinic, for example at the Royal Victoria Hospital in Belfast, or to a consultant gastroenterologist with an interest in viral hepatitis. You will receive an outpatient appointment so that further blood tests, an ultrasound scan and a possible liver biopsy can be carried out.

Can I be cured?

It is possible for you to fight the infection and clear it from your body naturally. If your immune system has been unable to fight off the virus, you could still be cured using medication. Some people may go on to develop mild to moderate liver damage and, in some cases, this can progress to cirrhosis (scarring) of the liver over 20–40 years, which can lead to liver failure or cancer of the liver.

How can I avoid passing on the virus?

You can prevent transmission to others by:

- not sharing any needles or any other drug taking equipment;
- practising 'safe sex' by using condoms;
- not sharing personal toiletries such as a toothbrush, razor or nailbrush;
- only having tattoos or body piercing using sterile equipment;
- avoiding blood exposure by covering cuts with waterproof plasters until healed;
- not carrying a donor card, donating blood, semen or blood products;
- cleaning any spilt blood on floors or work surfaces using household bleach.

If you have any worries about any possible risks, please discuss these with your nurse or doctor.

What can I do to help myself?

You should take steps to protect your liver against further damage:

Alcohol – alcohol consumption can speed up the progression of liver disease, so it is best not to drink alcohol at all. If you feel you could experience difficulty in abstaining from alcohol, or are usually a 'heavy drinker', then please inform your nurse or doctor – they can arrange help if needed.

Diet – you should aim to eat regular well balanced meals.

Physical activity – you may be experiencing tiredness and lethargy as a direct effect of the virus on your body. Strenuous exercise regimes are not recommended, but gentle physical activity which does not leave you feeling tired can be of benefit to your general wellbeing.

Medication – most medicines are considered safe, but it is recommended that you always check product information and discuss any concerns with your doctor, pharmacist or nurse.

Drug taking – some drugs can have a direct effect on your liver and its function. You will need to stop taking any street or recreational drugs before beginning a treatment programme. If you feel that this could cause you problems, or you would like some help with this, please inform your nurse or doctor. Remember: the more open you are with them, the better treatment and care you will receive.

Migrant health

The Health Protection Agency recently published an online resource on migrant health: www.hpa.org.uk/MigrantHealthGuide/ Although some aspects of this may not be relevant to Northern Ireland, it does contain a useful summary about blood-borne viruses in migrants.

A group on migrant health, chaired by Dr Leslie Boydell of Belfast HSCT and involving the PHA, is to consider adapting this for Northern Ireland. Key points from this resource include the following:

- It is estimated there are 170 million carriers of hepatitis C worldwide and three to four million people are newly infected each year.
- Global regions with the highest prevalence of hepatitis C include Africa, the eastern Mediterranean, south-east Asia (including the Indian sub-continent) and the western Pacific.
- Consideration should be given to screening patients from countries with a higher prevalence of hepatitis C virus (HCV) than the UK, particularly those where the prevalence of HCV is considerably higher or when other risk factors apply.
- Screening of contacts of HCV-infected patients should also be considered.

A guide to interpreting serological markers of hepatitis B

The Regional Virology Laboratory routinely tests only for HBsAg when a hepatitis B screen is requested. If this is negative, then it is reported. If it is positive, markers are done. Detection of past infection (ie testing for anti-Hbc) is only done where it is specifically asked for.

Table 1: Summary of the interpretation of serological markers of hepatitis B

	anti-HBc	anti-HBc IgM	HBsAg	anti-HBs	HBeAg	anti-HBe
Acute	+	+	+	-	+/-	+/-
Carrier (low infectivity)	+	-	+	-	-	+
Carrier (high infectivity)	+	-	+	-	+	-
Recovery (immunity)	+	-	-	+	-	+/-
Immunity (after vaccination)	-	-	-	+	-	-

Viral antigens that denote infectiousness

Hepatitis B surface antigen (HBsAg): The earliest to be detected, high concentrations are produced during viral replication. This antigen is cleared if the acute infection resolves; if it persists for more than six months, the infection is defined as chronic. Presence of the antigen indicates that the patient is infectious and that viral replication is occurring.

Hepatitis B e antigen (HBeAg): Detected soon after HBsAg, this is a marker of infectiousness and viral replication. This antigen is also normally cleared if the acute infection resolves. In chronic infections it may persist. Note that among those who are HBsAg positive, those who are also HBeAg positive are the most infectious to others.

Sharps injuries to the public

Sharps injuries to the public, especially from carelessly discarded needles, are quite common. Often these injuries occur to children, and may cause considerable anxiety. The risk of blood-borne virus infection from these injuries is generally very low, as needles have often been discarded some time previously. A sharp injury/contamination incident includes:

- inoculation of blood by a needle or other ‘sharp’;
- contamination of broken skin with blood;
- blood splashes to mucous membrane, eg eyes or mouth;
- bites (where the skin is broken);
- swallowing a person’s blood, eg after mouth-to-mouth resuscitation;
- contamination where the individual has an open wound, and clothes have been soaked by blood.

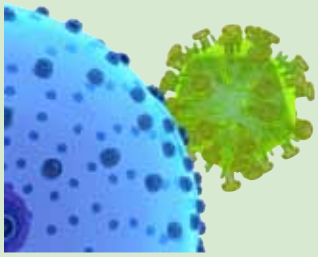
First aid

- Encourage bleeding from the wound.
- Wash the wound in soap and warm running water (do not scrub). Wash affected eyes or mouth in plenty of water.
- Cover the wound with a dressing.
- Ensure the sharp is disposed of safely, ie using a non-touch method into a sharps container. It is often useful to report discarded needles to the local council, who should check and clear the area.

Further action

- Assess whether a significant injury has occurred. If not (no penetration of skin), reassure.
- The source is rarely known and members of the public are usually managed as for an unknown source.
- If the source can be identified, risk assessment and testing should be undertaken urgently. If source testing is undertaken, samples need to be sent to the Regional Virology Laboratory urgently and the lab informed.

HIV



Transmission of HIV from a needle of unknown source has never been documented in the UK. If the source is known to be HIV-positive or high risk, the patient should attend a HIV service or accident and emergency (out of hours) urgently for consideration of HIV prophylaxis.

Hepatitis B

The most transmissible blood-borne virus is hepatitis B and therefore a rapid course of hepatitis B vaccine at zero, one and two months should be offered. If the patient has had previous HBV vaccination or if they need HBIG, please see the Green Book.

Hepatitis C

There is no prophylaxis available against hepatitis C. If the source is known and has chronic hepatitis C, testing of the injured patient is recommended at four to six weeks post-injury, as early treatment is more successful.

Tetanus

Tetanus vaccination may also be appropriate.

Antibiotics

Antibiotics are not recommended prophylactically.

Blood sampling

Serum may be taken for archiving at the Regional Virology Laboratory.

Testing for hepatitis B (HbsAg and anti-HBc) and hepatitis C should be undertaken at six months, as should testing for HIV if the patient is very concerned.

One hundred and six cases were reported during 2010. Thirty six were female, aged between 16 and 84 years, while 69 were male, aged between 21 and 69 years. For one case, the gender was unknown. The majority (79%, 84/106) of cases were in the 25–54 age group. The number of cases identified annually has approximately doubled since 2000 due to increased testing, but levelled off in 2005 (Figure 1).

Figure 1: Laboratory reports of hepatitis C in Northern Ireland, 1995–2010

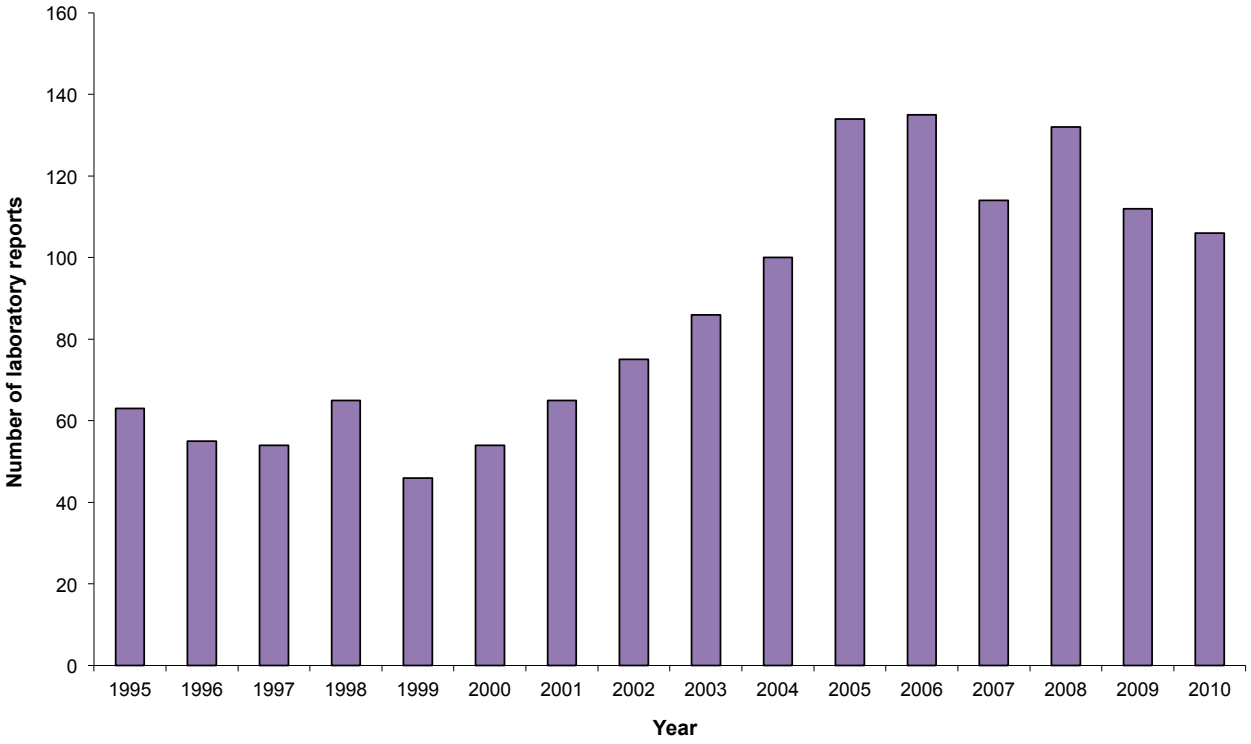
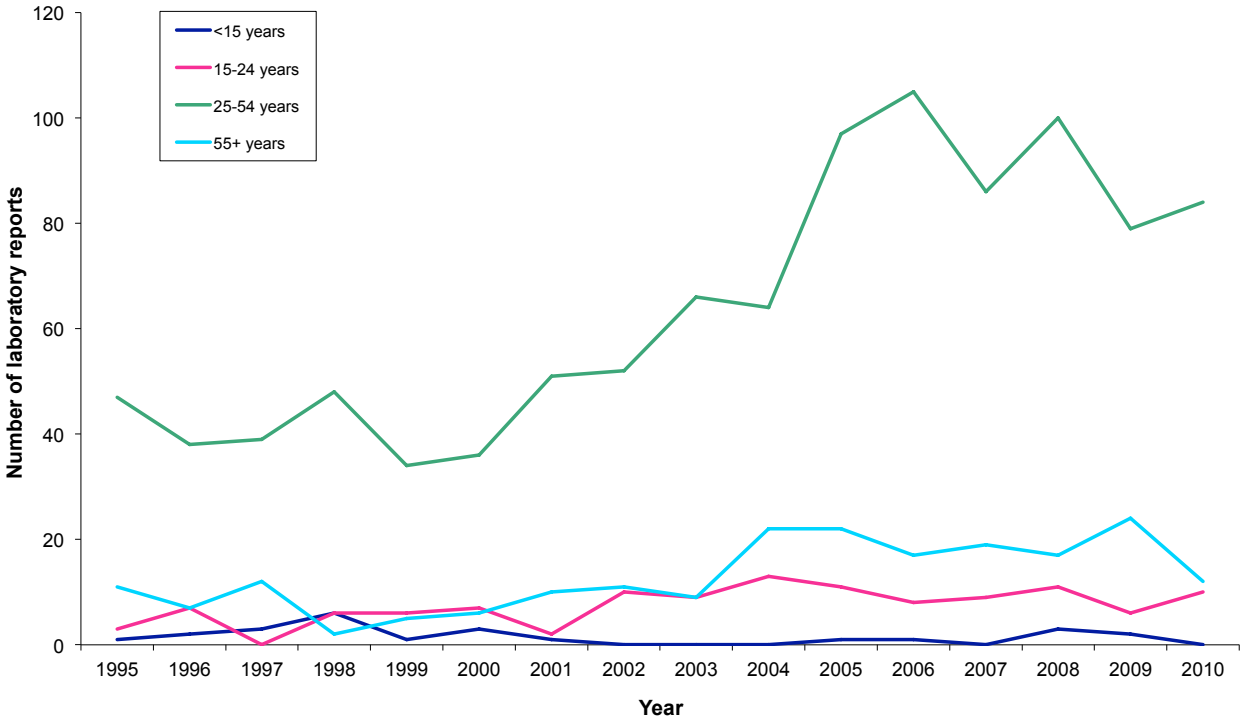


Figure 2: Laboratory reports of hepatitis C in Northern Ireland, by age group, 1995–2010



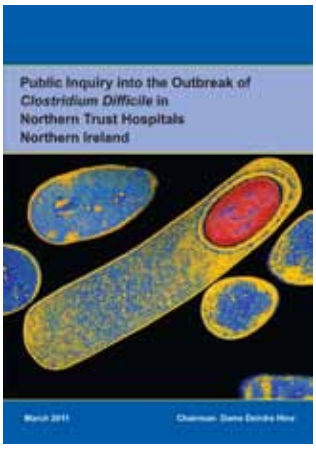
Fukushima nuclear incident

Everyone will be aware of the recent devastating earthquake and tsunami in Japan, and the subsequent difficulties at the Fukushima nuclear facility. This is an evolving situation but, at present, the UK Government is advising UK nationals in Tokyo and north of Tokyo to consider leaving the area. As an additional precaution, it has also extended the exclusion zone for UK nationals to 80km (50 miles) around the nuclear plant. On the basis of current information, UK citizens outside the exclusion zone will not have been exposed to potentially harmful levels of radiation. The Foreign and Commonwealth (FCO) latest advice to travellers/UK nationals who are residents in Japan can be found on its website: www.fco.gov.uk/en/

There is no health risk to UK residents from the release of radioactive material from the Fukushima nuclear power plant. The Health Protection Agency has started to publish information on radiation monitoring in the UK at: www.hpa.org.uk

CDI public inquiry report issued

The public inquiry into the outbreak of CDI in Northern Trust hospitals during 2007/08 issued its report on Monday 21 March 2011. The report contains 12 recommendations addressing:



- communication with patients;
- patient safety;
- quality of care;
- end of life care;
- record-keeping;
- death certification;
- outbreak control plans and guidance;
- isolation of patients with suspected or known CDI.

Details of the full report can be accessed through the inquiry's website at: www.cdiffinquiry.org/inquiry-report.htm

Second annual HCAI symposium, 30 March 2011

The PHA hosted our second annual HCAI symposium on Wednesday 30 March 2011 in the King's Hall, Belfast. The symposium was opened by the Chief Medical Officer and included presentations from HSCTs and the PHA that addressed HCAI improvements and work programmes currently ongoing. Dr Bharat Patel (Consultant Medical Microbiologist, Microbiology Services Lead for London, Health Protection Agency) outlined HCAI improvements that have been achieved nationally and discussed learning arising from work progressed to date.

CDI and cleanyourhands training sessions

To the end of March 2011, the HCAI team has delivered 13 training sessions to nursing and residential homes on our clean**your**hands campaign and best practice in the management of CDI. A total of 580 staff representing 187 homes attended this training. Further training sessions will be offered to staff who have not yet attended this training. The health protection/IPC nursing team is currently establishing a 'link system' to support IPC training and best practice across the nursing and residential home sector.

Patient information leaflets

The HCAI team is currently leading work to draft and agree an updated suite of HCAI patient information leaflets. Work on these leaflets is progressing in partnership with lead IPC nurses in the five HSCTs. Phase one of this work is nearing completion and includes leaflets on HCAI general information, hand hygiene, MRSA and norovirus. Phase two will include leaflets on laundry advice, ESBL infections and scabies.

Food borne and gastrointestinal tract infections

Provisional laboratory reports, weeks 1–12 2011, weeks 1–52 2010 (provisional), weeks 1–52 2009

	Number of reports received		Cumulative total	
	2011 weeks 1–12	**2010 weeks 1–12**	**2010 weeks 1–52**	**2009 weeks 1–52**
Campylobacter	195	169	1028	977
C. difficile toxin	170	159	684	956
C. perfringens	1	1	2	1
E. coli O 157	1	1	76	45
Salmonella total	46*	29	165	143
S. enteritidis (PT 4)	6 (0)	11 (2)	46 (4)	43 (5)
S. typhimurium (DT 104)	19 (13)	5 (2)	48 (5)	51 (5)
Salmonella other	21	13	71	49
Shigella	1	1	4	13
Cryptosporidium	26	18	114	113
Giardia	2	4	16	5
Adenovirus (faeces)	64	53	123	228
Enterovirus (faeces)	5	14	53	25
Rotavirus	111	181	597	591
Norovirus	109	390	621	420

* During this period, the rise in salmonella is due to five family clusters:

Number in family cluster	Organism
5	*Salmonella typhimurium* DT104
2	*Salmonella typhimurium* DT104
2	*Salmonella typhimurium* DT104
2	*Salmonella typhimurium* untyped
2	*Salmonella typhimurium* 1 DT104, 1 untyped

Further information for health professionals and other agencies:

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