



Greater Manchester HPU Showcase

2 0 1 2

Greater Manchester HPU

Floor 7B Sentinel House
Albert Street, Eccles
Manchester M30 0NJ

Tel: 0844 225 1295 opt 1
then opt 3

Welcome from Unit Director

We hope that you enjoy reading this report and finding out about some of the work that the Greater Manchester Health Protection Unit has been involved in during 2011. There are many health protection challenges in Greater Manchester but also many examples of success in controlling infectious diseases and environmental hazards to health. In this report, we have included a series of short articles covering the broad spectrum of work activities, including response to outbreaks and incidents we have led or been involved in during 2011. We would be unable to operate without the support of key partners in hospitals, primary care trusts



(PCTs), general practice, local authority environmental health departments and many others. In 2013, the HPA will move into a new organisation, Public Health England. At the same time, our public health colleagues within PCTs will move to Local Authorities and 2 new organisations, Clinical commissioning groups and the NHS commissioning board, will formally take up their roles. Against this background of change, we hope that this report helps these new bodies to understand our functions and enables us to work effectively together in the future for the good of the health of the people of Greater Manchester.

Health protection challenges

Greater Manchester Health Protection unit serves a population of 2.7 million people, across 10 PCTs and 1276 square kilometres. As well as a large inner city population, we have a sizable black and ethnic minority population; a significant refugee and asylum seeker population; a sizeable homeless population and the largest student population in Europe. Manchester also has a large international airport. Some of the key Health Protection challenges for Greater Manchester include:

Tuberculosis — Achieving the delivery of TB nursing services across the conurbation to the standards set out in national guidance is critical to achieving TB control.

HIV and sexually transmitted diseases — Greater Manchester has some of the highest rates of sexually transmitted infections outside London.

Hepatitis C — Greater Manchester has the highest burden of disease in the region.

Health care associated infections — The emergence

of carbapenemase producing coliforms has highlighted the ongoing risk from the development and spread of antibiotic resistance. We need to learn from the systems introduced to control MRSA and C difficile to tackle these new emerging threats.

Environmental hazards — As most cities do, we have a legacy of industrial contamination, and also the challenges of modern industrial and traffic pollution, incidents such as fires and spillages, and in some places natural hazards such as radon.

Acknowledgement

Many members of GMHPU have contributed to this report and I am grateful to them all for their hard work.

*Dr Rosemary McCann
Unit Director*

Home HIV and syphilis dry blood spot testing

A pilot scheme was established with partners to evaluate the feasibility, acceptability and cost effectiveness of self-taken home testing for HIV and syphilis. Test kits were requested via the RUClear website following a brief online risk assessment questionnaire. The postal kit contained instructions and everything necessary to perform the test at home as well as a questionnaire which had questions on demographics,

sexual orientation, access to sexual health services and previous testing. In the questionnaire we also explored the person's experience of taking the test and how acceptable they felt this route of accessing HIV and syphilis testing was.

The interim analysis of the first 6 months of testing showed that testing was mainly accessed by UK born 15-24 year olds. 9.4% identified as men who have sex

with men (MSM). 90% of all respondents were registered with a GP, though 73% of these had not discussed sexual health with their GP and 52% of all respondents had never had an HIV test. 99% of respondents found the instructions in the test kit clear and easy to follow; the test was described as painless by 89% of respondents.

The RUClear site is www.ruclear.co.uk/.

“people who have been diagnosed with cryptosporidium should not swim for 14 days after symptoms have resolved”

Publication of “Guidance for investigation of *Cryptosporidium* linked to swimming pools”

Infection with cryptosporidium causes water diarrhoea, abdominal pain and nausea and vomiting lasting up to 3 weeks. For most people, it is unpleasant but in those with lowered immunity the disease can be life threatening. Following investigation of an outbreak of cryptosporidium linked to a local swimming pool, a consultant from Greater Manchester HPU and an environmental health officer from Trafford MBC Envi-

ronmental Health Department were invited on to a national working group to develop guidance for public health professionals on the prevention and investigation of cases of cryptosporidiosis linked to swimming pools in England and Wales.

A key prevention measure is to advise people with diarrhea not to swim while symptomatic and in addition people who have been diagnosed with

cryptosporidium should not swim for 14 days after symptoms have resolved.

One local initiative has been the development of a pack of resources for local pools to provide information for swimmers, pool managers and swimming teachers.

See the guidance at: www.publichealthwales.org/cryptopoolguidance/

Greater Manchester HPV vaccine workshop

The annual target for uptake of HPV vaccine in the routine programme for 12/13 year old girls is 90%. The vaccine is delivered in 3 doses over 7 months to Year 8 girls in school.

The programme is now in its 4th year, having started in September 2008. The uptake rate of HPV vaccine fell in the school year 2009/10 following the death of a young girl shortly after

receiving the first dose of the vaccine. This death was not related to the vaccine. However, parental concerns led to withdrawals of consent and resulting fall in vaccine uptake.

A workshop for all Greater Manchester health professionals involved in the delivery of the HPV programme was held in September 2011 to share good practice and discuss the

challenges in achieving and maintaining high uptake rates. Issues discussed included promotion of HPV vaccine, increasing return of consent forms, catching up on missing doses and working effectively with schools.

The programme is not yet complete for this school year 2011/12 but already shows improvement across Greater Manchester.



Emergency planning

Preparations for the 2012 Olympics are on track, in particular the emergency planning and surveillance arrangements both locally and as a contribution to the national system. The Olympics has been used to catalyse local developments and agreements. Local Scientific and Technical Advice Cell (STAC) arrangements have been drafted and will be exercised in 2012. The STAC provides a mechanism to bring together all the relevant experts to provide a single source of advice during a major incident.

Non-infectious environmental hazards

GMHPU, working closely with the HPA Centre for Radiation, Chemical and Environmental Hazards, has responded to a large number of environmental queries and incidents. Support has been provided to local authorities in a number of complex contaminated land situations, including one that presented a potential acute health risk to children. The HPA has also been involved in the multiagency response to several environmental incidents, including a large xylene release.

Surveillance

Our weekly surveillance review has been strengthened by the production of a weekly internal surveillance report, including time trends, comparison with historical data and specific contexts. An interpreted version of this is now circulated weekly to stakeholders. Data entry has been developed to support this. This should support the early identification of altered trends or clusters, as well as providing intelligence and reassurance to our stakeholders. Quarterly reports have also been developed and circulated.

“Preparations for the 2012 Olympics are on track”

Tuberculosis (TB)

GMHPU TB lead, Marko Petrovic provided health protection input to a number of national, regional and local TB workstreams including: the work of the NHS North West TB Summit (including an investigation into the increase in paediatric TB in Greater Manchester), the Greater Manchester TB Implementation Group and HPA TB Programme. Until 2011, when it was subsumed into the NHS North West TB Summit, He chaired a regional multi-

agency TB group which developed and updated guidance on TB in healthcare workers, TB in the prison setting and a MDR/XDR TB regional policy. Together with colleagues in the HPA NW regional office he was responsible for the production of an annual TB epidemiological report for the North West region.

Dr Petrovic took a national lead on behalf of the HPA regional TB leads for development of HPZone TB

guidance and support materials. HPZone is the case management system used by all Health Protection Units in the HPA to record cases, enquiries and situations (such as clusters and outbreaks). The work on HPZone includes the development of a standardized data entry protocol which will enhance the usefulness of the system and comparability across time and place of TB data that are derived from HPZone records.

“Dr Petrovic has taken a national lead for development of HPZone TB guidance and support materials”

Typhoid and paratyphoid

During 2011 a national working group, including membership from GMHPU, undertook a major revision of the guidance on public health action for cases of typhoid and paratyphoid. The previous guidelines advised extensive screening of cases and contacts, resulting in long periods of exclusion from work, especially for those in defined risk groups, and were labour intensive to implement. Compliance with the guidelines was often poor. The working group reviewed available evidence and developed algorithms which refocus

resources on investigation of cases not associated with travel abroad. It was noted that acute typhoid and paratyphoid infections are rarely asymptomatic, and so greater use is made of provision of information to contacts, rather than testing. The guidelines were launched in February 2012 and will be evaluated during the first year of implementation.

The new guidance can be seen at www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Typhoid/TyphoidGuidelines/



Public Health Operational Guidelines for Typhoid and Paratyphoid (Enteric Fever)

A joint policy from the Health Protection Agency and the Chartered Institute of Environmental Health



Childhood TB audit

There has been an increase in the incidence and prevalence of adult and paediatric cases of TB across Greater Manchester over the past 10 years. In 2011, an audit was undertaken to investigate the incidence, epidemiology and BCG vaccination eligibility and status of childhood TB cases in Greater Manchester between 2006 and 2010.

The audit found that 215 children (89 male; mean age 8.8 years) were notified over the five years, representing a rise of

64.5% in the overall number of cases from 2006 to 2010. Of 130 UK-born children, 111 were eligible for BCG vaccination, and 85 (75.6%) of these received the vaccine. Of 85 children born outside the UK, vaccination was confirmed in 53% of non-UK born children.

As a result of the audit a 95% uptake target for neonatal BCG has been introduced into both the TB service specification and the GM Maternity Services Contract.

Global public health

Dr Vinay Bothra has recently returned from a nine month secondment to New Delhi. The purpose of this was to lead and support the establishment of a Centre of Excellence for Infectious Diseases. This Centre aspires to conduct public health research and build institutional capacity for infectious disease priorities in India. It will serve as a platform for research collaboration between the Centre and UK

institutions such as NICE International, London School of Hygiene and Tropical Medicine, Royal Veterinary College, Imperial College and the HPA. A work plan for potential projects has been drawn up and the Centre is currently looking to attract funding to support its early activities. It is hoped that the Centre will be formally launched in 2013.

HCAIs in 2011

GMHPU has continued to work with NHS partners to achieve reductions in health care associated infections (HCAIs) throughout Greater Manchester and the North West region, and to support and provide expert advice during outbreaks and incidents involving HCAIs and issues related to infection prevention and control (IP&C).

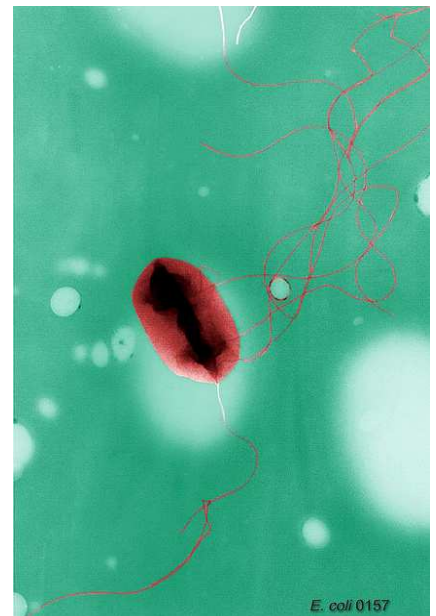
GMHPU co-ordinated & facilitated meetings between the HPA and GM wide IP&C nurses both in PCTs and provider services. These meetings provided an opportunity to discuss contemporary IP&C and HCAI issues and for the sharing of good practice across GM. These meetings have also produced some valuable pieces of collaborative working including the production of:

- newsletters for GP practices to support their CQC registration requirement;
- a *Clostridium difficile* infection tool-kit;
- a carer's leaflet advising on how to reduce the transmission of infection in the home.
- development and revision of a range of HCAI and IP&C advice leaflets.

GMHPU has ongoing work and co-operation with partners including close working relationships with NHS North West around *Clostridium difficile*, with NORWIC (North West Infection Control) in organising an NW HCAI conference and with North West Ambulance Service (HPA attendance at their IP&C committee providing expert advice and input).

VTEC audit

An audit of the public health response to cases of *E. coli* O157 identified areas for improvement around documentation. The audit period coincided with the introduction of HPZone, a case management system. Although the evidence suggested that cases were managed according to HPA standards, documentation on HPZone was not always complete. As a result of the audit and increasing familiarisation with the case management system, changes have been made to how GMHPU documents follow-up of *E. coli* O157. The audit will be repeated next year.



Joint working with EHOs

A joint workshop was held in November 2011 in Oldham, attended by EHOs from every Local Authority in Greater Manchester and from High Peak Borough Council, staff from GMHPU, the HPA Laboratories in Manchester and Preston and the Food Standards Agency. The workshop comprised updates from the different agencies, a session where Local Authorities shared experiences and an outbreak exercise. It proved very popular and we hope to hold a further workshop next year.

Examples of outbreaks and incidents

E Coli O157 associated with agricultural show

Three confirmed cases of *E coli* O157 were reported in August 2011.

All cases had attended a one day agricultural show within the week prior to onset of symptoms. All cases had numerous contacts with animals and had eaten hog roast sandwiches at the event. Investigation revealed there were limited hand washing facilities at the show, no concerns regarding food preparation practices, and no other cases associated with consumption of hog roast.

The investigation concluded environmental exposure to be the source of the outbreak. In future the Local Authority event licensing department will notify the Environmental Health Department of such events in advance to allow advice to be given to event organizers.

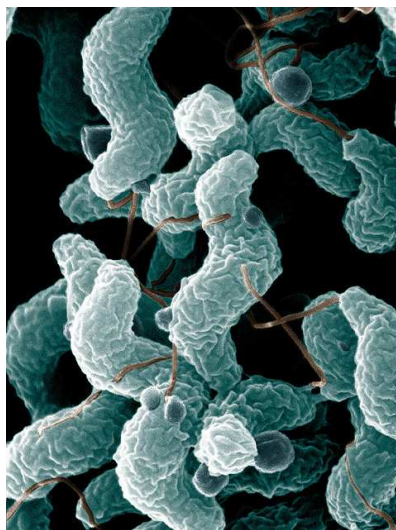


Meningococcal clusters

GMHPU undertakes public health follow-up of around 30 to 40 cases of meningococcal disease each year. The vast majority of cases are sporadic infections with no links to other cases. Clusters or outbreaks of meningococcal disease are rare events, but in 2011 there were four clusters of meningococcal disease in Greater Manchester, all within a few weeks of each other. Three of the clusters each involved two children at nurseries, and one involved two students in the same hall of residence at a university. None of the clusters were linked to each other. All required a rapid public health response, with antibiotics and information given to a large number of contacts. GMHPU worked closely with the relevant Primary Care Trusts to ensure these incidents were dealt with promptly and further cases prevented.

"..outbreaks of meningococcal disease are rare events. In 2011 there were four clusters .. within a few weeks"

Campylobacter associated with pâté



GMHPU was notified about a possible gastroenteritis outbreak associated with a dinner in Greater Manchester. Epidemiological investigations used a web based survey for data collection. This achieved a 71% response rate and proved to be highly efficient. There was a statistically significant association between illness and the consumption of chicken liver pâté. The outbreak was confirmed to be due to campylobacter. Over 90 per cent of campylobacter outbreaks at catering venues in 2011 were linked to undercooked chicken liver pâté. (www.hpa.org.uk/hpr/archives/2012/news1812.htm).

Problems with sewers

During 2011 GMHPU was involved with two chemical incidents concerning chemicals in sewers. The first was a spill of xylene which was washed into the sewer where it solidified. In addition to concerns about the impact of the chemical on human health there was an added problem of a blocked sewer. The second incident arose from a long-standing problem where toluene from a chemical factory had leaked from a pipe many years ago and had pooled on the water table. Fumes from pool of toluene tracked into a sewer pipe which was in a poor

condition and residents over a wide area complained of chemical smells in their properties. GMHPU sought advice from the HPA Centre for Radiation, Chemical and Environmental Hazards and worked closely with the Local Authority, Primary Care Trust and other agencies to ensure appropriate public health advice was provided. We are also engaging with United Utilities, Local Authorities and the Environment Agency to develop guidance for the management of such incidents in the future.

Publications, presentations and posters 2011

Publications

Welfare WS, Lighton L. Mapping of sexual health promotion in North West England, 2008. *Public Health*. 2011 Feb;125(2):101-5. Epub 2011 Jan 28.

Elden S, Lawes T, Kudsk-Iversen S, Vandelanotte J, Nkawanyana S, Welfare W, Walley J, Wright J. Integrating intensified case finding of tuberculosis into HIV care: an evaluation from rural Swaziland. *BMC Health Serv Res*. 2011 May 23;11:118.

Welfare W, Lacey H, Lighton L, Simms I. An outbreak of infectious syphilis among young heterosexuals in an English town. *Int J STD AIDS*. 2011 Sep;22(9):519-20.

Brabin L, Stretch R, Roberts SA, Elton P, Baxter D, McCann R. The school nurse, the school and HPV vaccination: a qualitative study of factors affecting HPV vaccine uptake. *Vaccine*. 2011 Apr 12;29(17):3192-6. Epub 2011 Feb 26.

Duffell EF, Milne LM, Seng C, Young Y, Xavier S, King S, Shukla H, Ijaz S, Ramsay M; local incident teams. Five hepatitis B outbreaks in care homes in the UK associated with deficiencies in infection control practice in blood glucose monitoring. *Epidemiol Infect*. 2011 Mar;139(3):327-35. Epub 2010 May 18

Conference presentations

Vivancos R, Thomas S, Corless V, Wood G, Duffell E, McCann R, Beeching NJ, Beardsworth MBJ. Pneumocystis jiroveci pneumonia in renal transplant patients in the United Kingdom: Increase incidence, clonal variability and outbreaks. 5 Nations Health Protection Conference, Deganwy, North Wales, May 2011

McCann R, Jones R, Snow J, Cleary P, Bothra V, Chalmers R. Swimming Teams – an efficient vector for transmission of Cryptosporidium. 5 Nations Health Protection Conference, Deganwy, North Wales, May 2011

Mullineux J, Walton E, McCann R, Kempster J, Meadows H, Snow J, Cleary P, Spendlove J. E.coli O157 at a nursery and Strep A at a nursing home – why does it take an outbreak to make things happen? 5 Nations Health Protection Conference, Deganwy, North Wales, May 2011

Modi A, Mitchem L, Kowalczyk G. Large para-xylene spill in the City Centre - public health implications. Health Protection Agency Scientific Conference, September 2011

Modi A, Lighton L. Facebook Group: I got campylobacter at ***** Hotel. 5 Nations Health Protection Conference, Deganwy, North Wales, May 2011

Posters

Modi A, Petrovic M, Lighton L. Use of genotyping in identifying and managing an outbreak of tuberculosis in a college – what if....?. 5 Nations Health Protection Conference, Deganwy, North Wales, May 2011

Alderson H, Chadwick P, Subudhi C, Corless C, Vivancos R, McCann R, Duffell E, Beardsworth M, Wood G. A UK single centre cluster of Pneumocystis jiroveci pneumonia in renal patients. British Renal Society and Renal Association Meeting Birmingham, June 2011

Wood G, Beardsworth MBJ, Thomas S, Beeching NJ, McCann R, Duffell E, Chadwick P⁴ Subudhi C, Vivancos R. Pneumocystis jiroveci pneumonia (PCP) in renal patients. A National Survey of Renal Units in the UK. British Renal Society and Renal Association Meeting Birmingham, 8 June 2011

Sakhinia F, Robinson J, McCann R, Bell C, Child F, Murray C. Rising Paediatric Tuberculosis in Greater Manchester – epidemiology and BCG vaccination status of cases. British Thoracic Society Winter Meeting: December 2011