South West Peninsula Health Protection Unit

Communicable Disease News

Including environmental issues

March 2010 Volume 1, Issue 1

Tuberculosis (TB) – World TB Day 24 March

We are seeing an increase in TB nationally and locally. Our numbers in Devon and Cornwall are low overall, compared to the national average, but there are areas with somewhat higher incidence, including the urban areas of Torbay, Plymouth and Exeter. In Newton Abbot in 2000 to 2001 there was an outbreak of TB in a social group. Since then, cases have continued to occur in the wider community. But cases of TB are seen from time to time throughout Devon and Cornwall, and doctors must consider the diagnosis in someone with compatible symptoms.

The demography of our cases is generally different from that seen in major urban areas such as London, the Midlands and the North West. In those areas, most cases occur in people who were born abroad. In Devon and Cornwall, most are born in the UK. Some of these are reactivation of disease acquired much earlier in life. But we are also seeing young and middle-aged adults with TB who have recently acquired the infection. In some cases risk factors such as high alcohol consumption play a part, but cases are also seen in people without obvious risk factors.

TB can affect any part of the body but is most common in the lungs and lymph glands.

Although the average risk to individuals in Devon and Cornwall remains low, it is important that we all recognise the common symptoms of TB, which include:

1. Cough - lasting for more than two weeks and sometimes with blood streaked sputum
2. Shortness of breath
3. Loss of appetite and weight loss
4. Fever and sweating - particularly at night
5. Extreme fatigue and tiredness

These are the most common symptoms, but because TB can affect almost any part of the body the symptoms are extremely varied.

The mainstay of TB control is the early identification and adequate treatment of infectious cases. Someone with infectious TB of the lungs may infect a number of people if the disease goes unrecognised. Generally close, prolonged contact is needed to transmit TB, and the household contacts are most at risk, but settings such as pubs can be important in some cases. Treatment is vitally important for the patient and to prevent it from spreading.

If someone suspects they might have TB they should discuss this with their doctor. If a GP suspects a patient might have TB they should arrange a chest radiograph and send three consecutive morning sputum samples to microbiology for staining and culture for Acid Fast Bacilli. Early advice from a Respiratory Physician is appropriate if there is uncertainty. More information about TB is available at www.hpa.org.uk

Article written by: Dr Geoffrey Thould, Consultant in Communicable Disease Control, South West Peninsula HPU

Inside This Issue...

Welcome!

Welcome to the first issue of Communicable Disease News. This is the official newsletter of the South West Peninsula Health Protection Unit.

In this issue we give you the latest information on infection prevention and control in the community, radon and E.Coli O157 and hazards of bathing waters.

If you would like further information on any of the articles contained in this issue or if you know anyone who would like to receive a copy of this newsletter, please contact the Unit using the contact details on page 5❖

Radon – all you need to know!

Radon is a colourless, odourless, radioactive gas formed from the radioactive disintegration of the uranium atoms in ordinary rocks and soil. Radon has a "half-life" of only 4 days from when it forms, so most radon disintegrates safely while still underground. Some radon diffuses through the soil and escapes into the atmosphere or is pulled into houses; pulled because houses are slightly de-pressured compared to the outside air.

Radon in homes accounts for about half of all non-medical exposure to ionising radiation in the UK. When inhaled, radon can cause lung cancer, especially in people whose lungs are already damaged by tobacco. Radon in homes causes about 20,000 lung cancer deaths a year in Europe (9% of all lung cancer deaths, and 2% of all cancer deaths) (Darby et al 2004). Radon causes 1000 lung cancer deaths a year in the UK (1% of all cancer deaths). The unit of measurement is Becquerels per cubic metre (Bqm^{-3}), which is equivalent to one radon disintegration per second per cubic metre of air.

Remediation

Most local authorities have the capability to advise on how to remediate buildings affected by radon. Detailed information can be obtained from the Building Research Establishment (BRE.co.uk). Generally speaking most mechanisms to reduce radon levels remove the pressure differential, which pulls radon into the home. The most expensive scheme for the average house is approximately £1500 (+£60 $year^{-1}$), but may be as little as a couple of hundred pounds with no running costs.

Grants

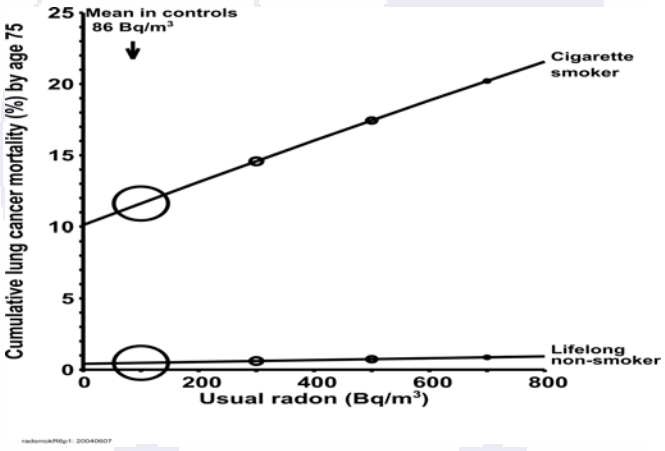
Local authorities consider radon as a hazard, when inspecting homes. They have discretion to award grants to homeowners where there are elevated radon levels. Most grants are means tested, but some authorities give grants just for having radon at an elevated level. To find your local authority click here. Landlords are not generally eligible for grants, and they can be required to carry out radon remediation as part of their duty of care by local authorities.

Risk Report & Testing

House buyers can purchase a report, using data from both the British Geological Survey and Health Protection Agency that is on the following website Risk Report. Householders can order a testing kit through the same site.

Risks to Health

Radon can cause lung cancer especially if the lungs are already damaged by tobacco smoke. Because radon is radiation, any exposure increases the risk of lung cancer. For smokers this risk is substantially greater than for non-smokers. The increased risk to smokers is highlighted in the following graph[1]:



Ex-smokers have an elevated risk compared to lifelong non-smokers and would fall between the two lines on the above figure dependant on the age at which they stopped smoking. Each year around 1100 deaths from lung cancer (3.3% of all deaths from lung cancer) are related to radon in the home[2]. The radon action level is the level that the government has decided represents a risk to health that should be reduced. The current action level is 200 Bqm^{-3}.

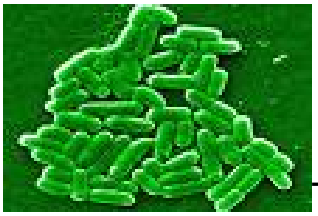
Over 85% of these arise from radon concentrations below 100 Bqm^{-3} and most are caused jointly by radon and active smoking[2]. Perhaps we should then be thinking that smokers and ex-smokers should reduce their radon exposure to as low as reasonably achievable (ALARA), rather than reducing their radon level to below the action level?

[1]Darby S, Hill D, Auvinen A, Barros-Dios JM, Baysson H, Bochicchio F, et al. **Radon** in homes and risk of lung cancer: collaborative analysis of individual data from 13 European case-control studies. *BMJ* 2005;330:223-8.[Link]

[2]Gray A, Read S, McGale P, Darby S. Lung cancer deaths from indoor radon and the cost effectiveness and potential of policies to reduce them. *BMJ* 2009;338:a3110. [Link] ❖

Article written by: Pete Smith, Health Protection Practitioner, South West Peninsula HPU

E. coli O157 and bathing waters



The South West Peninsula has a long and attractive coastline, rich in leisure and tourist resources, and many public health benefits are derived from the use of the beaches and bathing waters. The European Bathing Water directive provides water quality standards for designated bathing beaches, particularly regarding the levels of indicator organisms. The current European Bathing Water Directive is being replaced in 2015 with more stringent guidelines. Sea water at designated bathing beaches is sampled by the Environment Agency during the summer months (May to September). Work is already underway to identify bathing waters where previous bathing water results for indicator organisms show water quality failures, and to look at ways of preventing future failures. The new directive requires a beach manager to be responsible for the whole catchment area. This includes investigating the potential for contamination of the bathing waters from diffuse agricultural pollution, urban diffuse pollution, combined sewage overflows and local leaks from septic tanks. Many beaches have streams running across them into the sea that may, at times, contribute to high levels of indicator organisms in the bathing water. Under certain circumstances, the EA samples the stream water in addition to the bathing water in a particular locality, to inform the bathing water results. Streams are particularly susceptible to contamination, especially when passing through pasture where cows graze.

Outbreaks of infectious diseases associated with bathing waters have occurred in the past few years. In 2004, seven cases of E.coli O157 were shown to be statistically associated with playing in a stream that ran across a beach during times of heavy rainfall. (http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=613). The stream passed through a valley where cows were grazing on the adjacent fields, before running across the beach into the sea. Following this outbreak, a beach safety leaflet was developed and distributed to encourage people not to swallow or splash the water into their faces when playing in a stream – to reduce the risk of acquiring pathogens.

Many people have been affected by outbreaks of Norovirus (one in summer 2008 and the second in summer 2009) while holidaying on the north coast of Cornwall focussed around specific beach areas. Although multiple routes of transmission may contribute to the persistence of the incidence of new cases during the course of the outbreak, it is thought that some cases acquired the infection from sea water, again at times of high rainfall which may have increased the potential for contamination.

Information about the beach should be provided under the new legislation in order to inform public health and enable people to make their own decisions about which beaches they choose to visit. This can be by use of web sites (e.g. Local Authority, Environment Agency, the Royal National Lifeboat Institution), beach safety leaflets, and signage at the beach itself.

Multi agency working is currently ongoing between the Local Authorities, South West Water, the Environment Agency, the Department for the Environment, Food and Agriculture (DEFRA) and the Health Protection Agency to achieve the new guidelines and reduce the potential for transmission of pathogens to the public. ❖

Article written by: Maggie Barlow, Public Health Specialist, South West Peninsula HPU

Infection Prevention and Control in the Community

The Primary Care Trusts are committed to ensuring Infection Prevention and Control is embedded into all healthcare organisations including Nursing and Residential homes (Care Homes). As part of this process, training and support for infection control matters are offered across Devon and Cornwall. For care homes in Devon this is done through Infection Control Community Link Groups. Within Cornwall it is covered by the Health Protection Network.

These link worker networks provide an informal setting for education and training to take place with the objective that the information will be communicated back to the colleagues of the link worker in their work place. To achieve this, there has to be real commitment to infection prevention and control by the organisation with the link worker being fully supported by their line manager.

The infection control link worker also needs to hold a senior position in order to be influential when acting as a change agent, as well as being a role model for good practice within the organisation.

The Devon link groups meet regularly for a two to three hour session, with occasional all day training update sessions. The sessions are free.

The Cornwall Health Protection network has a slightly wider remit, including other health protection issues as well as Infection Control. This network is open to any professional working in a community health setting such as care homes, supported living, respite, GP or dental practices, schools and many more. There will be one full day conference and three half day meetings per year. Network membership is included in the conference fees. For those wishing to join but not attend the conference there is an administration fee of £10 per year.

Torbay Care Trust also has a Link Professional group, run by the Infection Control team, that meets every two months. This includes a variety of professions within the Trust and has now been extended to members from care homes in the bay.

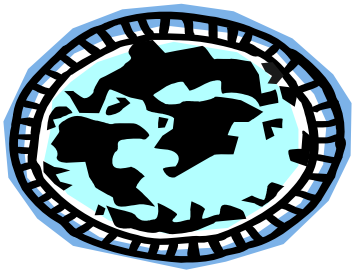
The meetings provide updates and training from both internal and external sources, and a forum to discuss infection control issues that members come across in their work. As with Devon and Cornwall the objective is to have this learning taken back to the workplace and shared with colleagues, and is reliant on the support of the member's line managers for this to work effectively. There is no charge for this service.

To find out about your local Link group contact:

PLYMOUTH	*Brenda Dale/Jenny Williams: 01752 434700*
DEVON	*Jacqui Morse/Matt Harris : 01392 205205*
CORNWALL	*Lynne Heard: 01726 627881 Maria Bennallick: 01872 256470*
TORBAY	*Anne Harding/Natalie Illingworth: 01803 557163*

Article written by: Brenda Dale, Nurse Consultant in Infection control, NHS Plymouth, Lynne Heard, Health Protection Specialist Nurse, HPA and Anne Harding Infection Prevention & Control Nurse, Torbay Care Trust.

WORLD TB DAY



24 MARCH 2010

The South West Peninsula Health Protection Unit - About us...

The South West Peninsula Health Protection Unit

Cornwall and Isles of Scilly Office

Sedgemoor Centre, Priory Road

St Austell, Cornwall, PL25 5AS

Tel: 01726 627881
Fax: 01726 627837

Devon Office

Lescaze Offices, Shinner's Bridge,

Dartington, Devon, TQ9 6JE

Tel: 01803 861833
Fax: 01803 861853

Our Team

Dr Brian Guttridge	Unit Director, Consultant in Communicable Disease Control
Dr Mark Kealy	Consultant in Communicable Disease Control
Dr Gill Lewendon	Consultant in Communicable Disease Control
Dr Geoffrey Thould	Consultant in Communicable Disease Control
Dr Babafemi Oshin	Consultant in Communicable Disease Control
Margaret Barlow	Public Health Specialist
Pam Mallalieu	Health Protection Nurse Practitioner
Rachel Campbell	Health Protection Nurse Practitioner
Linda Churm	Health Protection Nurse Practitioner
Lynne Heard	Health Protection Nurse Practitioner
Lee Evans	Health Protection Nurse Practitioner
Pete Smith	Health Protection Practitioner
Susan Mann	Administrator and Data Surveillance Assistant
Janine Ogborne	Administrator and Data Surveillance Assistant
Carole Hyde	Administrator and Data Surveillance Assistant
Karen Nicholls	PA to the Unit Director
Tatiana Cant	Administrative Assistant
Angela Datlen	Unit Manager
Jenny Barnes	Information and Clinical Governance Officer
Alison Henley	Regional Project Manager