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GGNHSB PHPU NEWSLETTER

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Measles outbreaks - estimating the risk

Although all claims of serious side effects of the MMR vaccine (particularly autism) have been consistently and scientifically refuted, there has been a decline in uptake of the MMR vaccine in the UK in the last few years.

A recent research paper¹ published in the journal, *Science*, examined data on recent measles outbreaks in England and Wales. Using a predictive mathematical model, the authors examined the present and future scope of disease outbreaks of measles

While factors such as seasonality as well as the social, spatial and age structure of the population are important in the population biology of measles, the course of an epidemic can be predicted by a single parameter, R , (reproductive number) which is defined as the mean number of secondary infections per infection. This is approximately proportional to the fraction of the population that is not immunised.

If $R < 1$, the disease will not easily persist in a population, relying on imported disease to trigger outbreaks of varying size. As R approaches 1, large outbreaks become increasingly likely and if $R > 1$, the disease can become endemic. If $R = 1$ the situation is said to be at *criticality*.

The R number in England and Wales for 1995-1998 was 0.47 and for 1998-2002, (which takes into account the main years of unfounded MMR scares), R was 0.82. This large increase brings the situation close to *criticality*.

Although uptake-rates of MMR have been consistently higher in Scotland, (average 86.1% for all health boards), there is no room for complacency. Measles is a highly contagious and potentially dangerous disease. Uptake of the MMR vaccine should be rigorously encouraged, otherwise more unvaccinated children will increase the R number leading to a higher risk of outbreaks and associated deaths.

Scotland has had 7 confirmed cases of measles this year but these were either imported cases or contacts of imported cases. Please note that GPs who report clinical cases to the PHPU are offered salivary-testing kits to allow laboratory confirmation of the disease.

BCG immunisation at the Princess Royal Maternity

A new clinic at the Princess Royal Maternity (PRM) is offering BCG to babies born at the hospital who are identified as candidates for immunisation. This is done either prior to discharge or by appointment at the PRM clinic.

Before arranging BCG immunisation for babies through the Southbank Centre, health visitors/practice nurses are asked to make sure that at-risk babies born at the PRM have not received BCG at birth or been given an appointment for BCG at the PRM clinic.

The PHPU is currently involved in setting up a system that will ensure all relevant people are notified when a BCG has been given. Our unit is also in the process of reviewing the current BCG service and assessing future needs in Glasgow.

TB case in Glasgow nursery

The PHPU was recently involved in a case of tuberculosis in a child who attends a local nursery. Although the risk of transmission to other children in the nursery is very low, screening has been offered to those children in contact with the case. Parents have been reassured that similar screening exercises in Glasgow in recent years have not identified TB in nursery contacts.

Cryptosporidiosis in Spain

Since July, a total of 32 cases of *Cryptosporidium* infection in Glasgow residents returning from a hotel in Alcudia in Majorca have been reported to the PHPU. This brings the total number of Scottish cases related to the Alcudia hotel to 170 with 112 of these microbiologically confirmed. The Spanish authorities reported that the hotel pool was closed on 23rd July.

Cryptosporidium has also been reported in people who stayed at eight other hotels/apartments in Majorca and two hotels/apartments in Menorca. GPs are therefore reminded to request faecal samples from anyone who is ill and has recently been in Majorca or Menorca.

If you would like to comment on this newsletter, please contact Dr Marie Laurie on 201 4933 or by e-mail at marie.laurie@gghb.scot.nhs.uk.

¹Science, 8 Aug 2003; Vol 301; p804