Global data on influenza vaccine provision

A new study shows that despite influenza vaccine provision increasing, levels globally remain low and the rate of growth is slowing (Palache, 2011). Only 20% of countries achieved the study's conservative threshold.

Official vaccination recommendations alone do not drive higher coverage; instead public health policies with a direct impact on patients are associated with higher levels of seasonal influenza vaccination.

These factors appeared substantially more important than United Nations development status, which does not seem to correlate directly to coverage levels.

'The growth seen in vaccination levels in recent years is encouraging, but coverage rates do not meet local official immunization targets in many countries,' commented Dr Lance C Jennings, Clinical Associate Professor, Canterbury Health Laboratories & Pathology Department, University of Otago, Christchurch, New Zealand, 'Therefore, the results of this study, showing that effective communication and reimbursement policies help improve uptake irrespective of national development status, are particularly welcome.'

The data were provided by the International Federation of Pharmaceutical Manufacturers and Associations. Although seasonal influenza places a major burden on public health, with over 40% of national governments recommending vaccination of at-risk groups, no systematic global data have been available to assess vaccine provision nor the effect of immunization policies. For this reason, the International Federation of Pharmaceutical Manufacturers and Associations compiled global vaccine supply data for 157 countries from 2004 and 2009.

The study measured seasonal influenza vaccine provision worldwide and found coverage needs to continue to grow strongly to meet vaccination recommendations. Global vaccine supply increased by more than 70% to 449 million doses during the study period (2004–2009), but only 20% of the 157 study countries reached the study's low threshold level, which was based on World Health Organization seasonal influenza immunization recommendations for the elderly only, and did not include other at-risk groups.

Palache A (2011) Seasonal influenza vaccine provision in 157 countries (2004 to 2009) and the potential influence of national public health policies. *Vaccine* **29**(51): 9459–66

Incidence of tuberculosis increased postpartum

The incidence of tuberculosis diagnosis is significantly increased in women postpartum according to a new UK-wide cohort study (Zenner et al, 2011), suggesting a potential new population for screening.

Researchers analysed data from the General Practice Research Database on all women with pregnancies between 1996 and 2008, representing 5.5% of the UK population.

A total of 192 801 women with a total of 264 136 pregnancies were included in the study. Of 177 tuberculosis events that occurred during the study, 22 were during pregnancy and 22 were in the 180 days after pregnancy. The crude tuberculosis rate for the combined pregnancy and post-partum period was 15.4 per 100 000 person years, significantly higher than the rate outside of pregnancy (9.1 per 100 000 person years, P=0.02).

Dr Dominik Zenner, Consultant in Public Health, Respiratory Diseases Department, Health Protection Agency

After adjustment for age, region and socioeconomic status, post-partum tuberculosis risk was significantly higher than tuberculosis risk outside pregnancy (incidence rate ratio 1.95, confidence interval 1.24–3.07), whereas no significant increase was seen during pregnancy (incidence rate ratio 1.29, confidence interval 0.82–2.03).

'Although we found a significantly increased risk of tuberculosis in the 6 months following pregnancy, but not during pregnancy, the risk during pregnancy is almost certainly also increased,' said Dr Dominik Zenner, Consultant in Public Health, Respiratory Diseases Department at the Health Protection Agency.

Zenner D, Kruijshaar ME, Andrews N, Abubakar I (2011) Risk of tuberculosis in pregnancy: A national, primary care based cohort and self-controlled case series study. *Am J Respir Crit Care Med* Dec 8 [Epub ahead of print]

Endurance exercise linked to right ventricular damage

Researchers have found the first evidence that some athletes who take part in extreme endurance exercise such as marathons, endurance triathlons, alpine cycling or ultra triathlons may incur damage to the right ventricles of their hearts.

Although the damage was reversed within a week of a competitive event in most of the 40 athletes studied, five of them (13%) showed evidence of more permanent damage, with magnetic resonance imaging showing fibrosis of the heart muscle. These five athletes had been competing in endurance sports for longer than those who did not show the same damage.

Dr André La Gerche, a postdoctoral research fellow at St Vincent's Hospital, University of Melbourne, Australia, currently based at the University Hospitals Leuven, Belgium, said: 'It is most important that our findings are not over-extrapolated to infer that endurance exercise is unhealthy. Our data do not support this premise.' However, he said that the findings suggest that some athletes might have been born with a susceptibility to develop damage as a result of long-term endurance exercise.

La Gerche A, Burns AT, Mooney DJ et al (2011) Exercise-induced right ventricular dysfunction and structural remodelling in endurance athletes. *Eur Heart J* Dec 6 [Epub ahead of print]