

6.4 INFECTION AND ENVIRONMENT

Chair: Prof. Cairns Smith, UK

06-4.1 USING CROSS-SECTIONAL EPIDEMIOLOGICAL DATA TO INFORM NATIONAL HEALTHCARE ASSOCIATED INFECTION POLICY

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A National Point Prevalence Survey of Healthcare Associated Infection (HAI) was carried out in Scotland in 2005/2006 at the request of the Scottish Government. The point prevalence survey included 13754 patients and reported that 9.5% of patients in acute care hospitals and 7.3% of patients in non-acute care hospitals had a HAI at the time of survey. The inpatient cost to the National Health Service in Scotland was estimated to be £183 million.

The results from this cross-sectional survey were used to make evidence-based recommendations on priority areas for interventions to prevent HAI and priority areas for targeted incidence surveillance programmes in Scotland. These recommendations were based on risk, volume, potential for prevention and potential for cost savings.

The results from the survey were used to provide an epidemiological evidence base that informed the Scottish Government's HAI Task Force Delivery Plan for 2008–2011. The plan included deliverables relating to interventions to reduce HAI in priority areas, education for National Health Service staff, surveillance of HAI and antimicrobial prescribing and development of guidance and standards for priority areas.

The results from this epidemiological survey have been used to effectively prioritise and target national initiatives to prevent and control HAI in Scottish hospitals and to target incidence surveillance programmes to priority areas. A second national survey will be carried out at the end of 2011 and will inform future strategies and policy.

06-4.2 HIV MORTALITY AND INFECTION IN INDIA: ESTIMATES FROM NATIONALLY REPRESENTATIVE MORTALITY SURVEY OF 1.1 MILLION HOMES

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Introduction To determine the rates of death and infection from HIV in India in a nationally-representative survey of deaths among 1.1 million homes.

Methods Survey of 123 000 deaths at all ages from 2001 to 2003. Main outcome measures HIV mortality and infection.

Results HIV accounted for 8.1% (99% CI 5.0% to 11.2%) of all deaths among adults aged 25–34 years. In this age group, about 40% of deaths from HIV were due to AIDS and 26% were due to tuberculosis. Nationally, HIV infection accounted for about 100 000 (59 000 to 140 000) deaths or 3.2% (1.9% to 4.6%) of all deaths among people aged 15–59 years. Deaths from HIV were concentrated in the states

and districts with higher HIV prevalence and in men. The mortality results imply an HIV prevalence at age 15–49 years of 0.26% (0.13% to 0.39%) in 2004, comparable to results from a 2005/2006 household survey that tested for HIV (0.28%). Collectively, these data suggest that India had about 1.4–1.6 million HIV infected adults aged 15–49 years in 2004–2006, about 40% lower than the official estimate of 2.3 million for 2006. All cause mortality in men aged 25–34 years in the states with higher HIV prevalence has declined since 2002. HIV mortality and prevalence may have fallen further since our study as prevalence among young women attending antenatal clinics has declined from 2000 to 2007.

Conclusion HIV attributable death and infection in India is substantial, although it is lower than previously estimated.

06-4.3 POLIOMYELITIS EPIDEMIC IN POINTE-NOIRE, OCTOBER–DECEMBER 2010: TROUBLED TIMES AHEAD FOR GLOBAL POLIO ERADICATION?

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Introduction On 4 November 2010, the Ministry of Health of the Republic of Congo declared a poliomyelitis outbreak in Pointe-Noire, the eastern economic capital. We conducted an outbreak investigation to describe the epidemic and estimate vaccination coverage to better understand virus spread.

Methods We collected clinical, demographic and geographic data about cases and vaccination policies from local health authorities. Cases were defined as residents of Pointe-Noire of any age, diagnosed with acute flaccid paralysis since 1 October 2010. We implemented a cross-sectional survey in a socially heterogeneous affected neighbourhood (representing 9.5% of the city population), selected from the Loandjili district (highest district attack rate: 71.6 cases per 100 000) following expert consultation.

Results From 1 October to 20 December 2010, 446 cases of acute flaccid paralysis were reported to health authorities (case fatality ratio: 41.3%). Males accounted for 68% of the cases, and 57.4% were between 15 and 24 years of age. Vaccination coverage in the surveyed population for one or more doses of oral polio vaccine was 55.5% on average and decreased with age to 33.5% for individuals older than 30. Sanitary conditions were poor to medium with latrines commonly shared between households (57.4%).

Conclusion Poor vaccination coverage led to a large susceptible population, particularly in young adults and spread was further facilitated by poor sanitary conditions. Moreover, polio causes more severe clinical symptoms among older age groups, which explains the high case-fatality ratio. To prevent similar outbreaks in other countries, supplementary vaccination activities should punctually target older age groups.

06-4.4 FIFTEEN YEARS OF TESTING THE NATION: THE ROLE OF BLOOD DONOR INFECTION SURVEILLANCE IN INFORMING THE SAFE SUPPLY OF BLOOD

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Introduction Surveillance of infections in UK blood donors and recipients commenced in 1995 with the aim of informing donor