

Methicillin-resistant *Staphylococcus aureus*



Andrew Simor

Andrew Simor and colleagues report on the first 5 years of surveillance for methicillin-resistant *Staphylococcus aureus* (MRSA) in sentinel Canadian hospitals. From January 1995 to December 1999 the MRSA isolation rate increased each year from a mean of 0.95 per 100 isolates in 1995 to 5.97 per 100 isolates in 1999 (0.46 per 1000 admissions in 1995 to 4.12 per 1000 admissions in 1999) ($p < 0.05$). Of the 3009 cases for which the site of acquisition could be identified, 86% were acquired in hospital, 8% in a long-term care facility and 6% in the community. Most (81%) of the isolates were related to 1 of the 4 Canadian epidemic strains. In

a related commentary Jan Verhoef describes the experience in the Netherlands, where stringent (albeit costly) infection control measures keep the infection and colonization rates to one fifth of those in Canada.

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Systemic steroid therapy and preterm infants

For very premature infants, systemic steroid therapy reduces oxygen requirement and shortens the duration of assisted ventilation and as a result has become widely used. It does not, however, improve survival to discharge or decrease the proportion of infants discharged home who require oxygen therapy. Recent results of long-term follow-up studies show that systemic steroid therapy is associated with increased rates of cerebral palsy and possibly developmental delay. To Keith Barrington, these results mean that such therapy should be considered only in infants at high risk of death from their lung disease and permitted only in the context of a randomized controlled trial, with full disclosure to the parents of the potential risks.

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Antidote supplies in Ontario's acute care hospitals

For the poisoned patient, timely administration of an antidote may be life-saving. David Juurlink and co-authors describe the results of a survey of the availability of 10 antidotes in Ontario acute care hospitals. In all, 179 (97%) of the 184 hospitals responded. Only 1 hospital reported an adequate supply (sufficient to treat 1 case of severe poisoning in an adult) of all 10 antidotes. Only 9% of the hospitals stocked an adequate supply of digoxin immune Fab antibody fragments, a proven antidote to digoxin-induced arrhythmias, whereas 59% reported having none in stock. Adequate stocking was associated with higher emergency department volume, teaching hospital status and designation as a trauma centre. Inadequate stocking was associated with small hospital size and geographic isolation. Cost correlated only weakly with stocking rates.

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Variant CJD

Michael Coulthart and Neil Cashman review the natural history, pathobiology and epidemiology of the following transmissible spongiform encephalopathies: "classic" Creutzfeldt-Jakob disease (cCJD), bovine spongiform encephalopathy (BSE) and variant CJD (vCJD). Since the identification of the first case of vCJD in 1995, exposure to BSE, possibly through contaminated food, has been implicated as the key risk factor for vCJD and very possibly the cause. Other recent findings raise the possibility of secondary transmission, through blood and peripheral tissues.



Given the magnitude of human exposure to BSE, the human epidemic of vCJD may continue for a

decade or more, but uncertainties about such factors as incubation period and individual susceptibility result in widely varying estimates of its eventual size.

CJD, the blood supply and policy decisions

Kumanan Wilson and colleagues examine decisions made in 1995 and 1999 involving transmissible encephalopathies and the risk to Canada's blood supply. During this period, substantial changes occurred in the structure and regulation of the blood services, including the transition from supply by the Red Cross to Canadian Blood Services and Héma-Québec. The authors found that, by 1999, decision-making had become more proactive and consultative and allowed more consumer involvement. The impact of the transition to a 2-operator system on decision-making was uncertain. There was a perception that further improvement could occur in the areas of interaction of organizations, transparency of process and public consultation.

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