

To improve and structure our medical decision making, we need to continue to develop standardised protocols based on best evidence. Subsequent careful recording of consent processes, together with documentation of the decisions reached and the reasons behind them, will shed further light on the issues raised by Cunningham's data. Cunningham's article shows why clinicians need to contribute to the interpretation of population health information. As presented, these data do not identify the specific clinical procedures possibly denied to Aboriginal and Torres Strait Islander inpatients, and, although the findings have flagged the disparity in procedures, more information is needed for clinicians to take these concerns to the next level of analysis.

Specifically, these findings should prompt us to review the decision-making processes determining use of diagnostic and therapeutic procedures in Aboriginal and Torres Strait Islander inpatients. Specialist colleges, societies, hospital units and individual clinicians now have a responsibility to review their own data and establish whether the trend in differential use of procedures applies to their area and, if so, what is driving this difference. The next chapter in this story needs to tease out the connections between healthcare need, use of procedures and health outcomes. If healthcare services are to foster equity rather than further institutionalise inequity, inappropriate reasons

for different use of procedures need to be identified and the problems rectified.

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Measles transmission in healthcare settings in Australia

Healthcare settings should not be the place to get measles

IN A RECENT ISSUE OF THE JOURNAL, Blake and colleagues described a cluster of three cases of measles from western Sydney.¹ The index patient acquired measles overseas, while the other two patients acquired the infection during a hospital visit and probably in the waiting room of a general practice, respectively. Measles is highly contagious and can spread with relative ease in healthcare settings, especially if there is a failure to diagnose the infection, to isolate the infectious patient or to notify the case so that other infection control measures can be implemented.

Other recent Australian outbreaks of measles have also been associated with virus importation from overseas and subsequent nosocomial transmission.²⁻⁴ Measles was imported in nine separate incidents investigated in Western Australia between March 1999 and October 2000, and subsequently transmitted among hospital patients, visitors and healthcare workers on two separate occasions.² Victoria has experienced two outbreaks in the past three years,^{3,4} and a third is evolving (Dr Sean Tobin, Medical Officer, Communicable Diseases Section, Department of Human Services, Victoria, personal communication). In two of the three outbreaks, the index patient had returned from overseas during the incubation period, and genotyping

provided strong evidence that the viruses were imported. All three outbreaks involved predominantly young adults.

Healthcare staff aged in their 20s or early 30s accounted for six of the 75 cases in the 1999 Victorian outbreak (a doctor, three nurses, a social worker and a medical student³), and for two of the 51 cases in the first of the 2001 Victorian outbreaks (a medical student [the index case] and a nurse who remained unvaccinated despite being identified as susceptible in the previous outbreak⁵). In the latter outbreak, an unvaccinated 11-year-old child also became infected after attending an emergency department at the same time as an infectious patient. In the current outbreak, one case was in a 36-year-old hospital orderly, and another in a 30-year-old pharmacy assistant, both almost certainly infected while at work (Dr Sean Tobin, personal communication).

The hospital orderly, born in 1965, might have been expected to be immune to measles, having grown up when measles virus was circulating in the community and measles epidemics occurred every two years.⁶ However, people born between about 1968 (when measles vaccine was first licensed in Australia) and 1981 (when a measles-mumps combination vaccine was introduced to the Australian

childhood schedule) grew up when exposure to wild measles virus was decreasing. Because of initial poor vaccine coverage, there was inadequate compensation for the subsequent decline in natural immunity in the population, leaving a proportion of this age group, now aged 20–33 years, at risk of measles infection.⁷

These cases of measles transmission in healthcare settings in Victoria, Western Australia and New South Wales illustrate failure to implement the published guidelines for measles control.⁸ These involve four key components: isolate the patient, confirm the diagnosis, identify other cases and identify and protect all susceptible persons. However, the failures may be caused by a general lack of awareness of the guidelines rather than an unwillingness to follow their recommendations. In particular, the guidelines are not useful if measles has not been diagnosed. Measles is now relatively uncommon and more likely to affect young adults than children.² A high index of suspicion is needed, and measles should always be considered in the differential diagnosis of fever and rash in an unwell adult, especially if the person was born between 1968 and 1981.

Had the four key components of outbreak control been implemented in some or all of the reported measles outbreaks, some or all of the infections in these outbreaks may have been prevented. As recommended in the guidelines for measles control,⁸ vaccination of some or all of the young adults involved in these outbreaks may also have prevented further cases.

Australia has recently spent more than \$30 million on a highly successful mass-vaccination campaign that has effectively protected school-aged children against measles.⁹ It seems extraordinary that measles transmission can still occur in hospitals or general practice surgeries. Case reports are very unlikely to reveal the extent of the problem. It might be said that transmission of measles — or any other vaccine-preventable disease — in a healthcare setting is a sentinel sign of system failure. Offering susceptible healthcare workers measles–mumps–rubella vaccine has been made a quality standard for all healthcare workers in the United States,¹⁰ and a similar approach may be warranted in Australia.

Healthcare providers in hospitals and the wider community should record which staff members are

susceptible to vaccine-preventable diseases that may be occupationally transmitted, and should provide facilities for vaccination of all those who wish to protect themselves and their patients. As recommended in the Australian guidelines for measles control, young adults intending to travel to measles-endemic countries should be advised to check and update their measles vaccination status. At a time when measles transmission has probably been interrupted in several Australian States,^{2,11} it is important to suspect the diagnosis of measles in young adults with rash and fever, especially those with a history of international travel, and to take pro-active infection control measures to prevent measles transmission in healthcare settings.

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