

ORAL HEALTH: SURVEILLANCE, RESEARCH AND INFORMATION TECHNOLOGY

GUEST EDITORIAL

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Dentistry shares an interest with public health in using surveillance data to assess the oral health of the population, define dental public health priorities, evaluate public health programs and identify emerging problems and research priorities.¹

However, dentistry has had a rather limited engagement with public health surveillance. When surveillance was driven by notifications of death and disease, there was little room for collection of information describing specific chronic lifestyle diseases like dental decay or gum disease. With the broadening of public health surveillance to include the ongoing systematic collection, analysis and interpretation of outcome-specific data, and their timely dissemination to those who set policy or implement programs, the door has opened for dentistry to be actively involved.²

The longest standing and most extensive surveillance activity in dentistry has been the Child Dental Health Survey, which has been conducted through the school dental services of the states and territories since the mid-1970s. This survey has monitored the burden of dental decay in children and adolescents; identified geographic regions, age cohorts or social groups who should be the priority of oral health promotion; provided data for evaluating the school dental services; and helped to set priorities for research.

The boundary between surveillance and research activity is illustrated by the work assessing the effectiveness of water fluoridation in preventing oral disease in children. Using data collected by the Child Dental Health Survey, crude ecological comparisons can be made

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of indicators of oral health between children living in non-fluoridated Brisbane and children in Adelaide or Canberra where the water is fluoridated. However, while surveillance data may help formulate hypotheses, research data are required to test them. Hypotheses developed from the Child Dental Health Survey about the effectiveness of water fluoridation have been tested by the Child Fluoride Study, a research study conducted in Queensland, South Australia and the Australian Capital Territory.

While the Child Dental Health Survey is an example of surveillance, it was the only notable dental public health surveillance activity for two decades. There is a need in dentistry to both strengthen some of the existing surveillance activities and develop data collections where surveillance is inadequate. The usefulness of existing surveillance activities could be improved by collecting better quality data; for example, surface rather than tooth level observations on decay and the socio-demographic characteristics of populations. Links could also be developed with information describing service provision and with dental health records over time.

Efforts are being made to close some gaps in knowledge of the oral health of adults through surveillance activities, using both population-based interviewer-administered surveys and provider-based data collections, within the public dental services. These developments require both agreed indicators of oral health and access to dental care. Recent initiatives by the Oral Health Branch of the NSW Department of Health to develop indicators for dental caries in NSW are described by Osborn in this issue.

The dramatic increase in the numbers of older Australians, with their associated increased need for oral health services (from preventive to tertiary level) highlights the lack of quality data describing both their oral health status and needs. King discusses this situation and how difficult it makes the planning of appropriate services.

Improvements in the quality of surveillance data in dental public health may follow if those responsible for developing policy and implementing programs demand better quality information to guide their decision-making. Information technology could assist by reducing the burden on data providers and improving access to information. As new information technology is developed, an emphasis is needed on establishing agreed core data elements, timeliness of data provision, accessibility and an encouragement of flexibility in collecting additional data. Dentistry is well placed to move forward in these areas and to improve the response to the population's oral health problems through surveillance activity.

The usefulness of existing data collections for describing public oral health is limited. However, using information from the NSW Central Cancer Registry and other registries, Walker describes the trends in the incidence and mortality of oral cancer in NSW, as well as the public health implications of these data. Much remains to be done to improve the community's oral health. Spencer discusses future directions for oral health research.

To conclude the series in oral health, Barnard describes the oral health workforce in NSW and changes to it over the last 10 years. This is the stock of dental personnel who must drive changes in surveillance, research and information technology, and then apply the information gained to improving oral health.

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