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Immunisation in NSW

Using operational research to ensure that immunisation benefits are enjoyed by all

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In Australia, having government-funded vaccines with established efficacy against infectious diseases is a necessary measure to ensure that everyone enjoys the protection these vaccines offer. In addition mechanisms for effectively delivering these vaccines to hard-to-reach groups and those at greatest risk must also be identified, tested, refined and expanded appropriately. Locally generated evidence can inform immunisation strategies, both local and global, to ensure that children who need to be immunised will get vaccinated, and vaccinated on time.¹

The operational research model – the systematic search for knowledge on interventions, tools or strategies that enhance program effectiveness – is increasingly recognised as the most appropriate method for addressing perplexing questions within public health programs.² Even though the focus of operational research is usually a particular setting (e.g. closely assessing the quality of and access to local services, identifying ways in which they can be improved and evaluating the feasibility of local approaches or interventions), the findings can be of global relevance, depending on the quality of research design and methods, and the generalisability of the findings.³

The operational research agenda may explore innovative approaches to program delivery or it may introduce and test relatively small refinements to improve the quality of existing service provision. For ‘operational research’ the need for review by an ethics committee should always be considered and if in any doubt, full ethics review should occur.

Strengths of the operational research approach include: high local relevance, ability to convince local decision-makers, relatively short lag times before findings are implemented, and cost-effectiveness.⁴ This is patent in the three local operational research papers published in this edition of the *Bulletin*. It is encouraging to have contributions from three of the eight former area health services addressing priority immunisation issues that have important application beyond their local area. The timely identification and immunisation of Aboriginal infants; improved coverage with all antigens, including varicella, before school entry; and understanding the serotype replacement consequences of pneumococcal vaccination locally, are contributions that demonstrate the inherent value of the operational research approach. These three papers also demonstrate what can be achieved through investing in building the capacity for health program staff to apply appropriate research methods.

The remaining two papers in this special issue of the *Bulletin* can also be viewed broadly as operational research. The paper from the state’s three largest paediatric centres describing the children’s hospitals influenza vaccine initiative by Wood and Cashman demonstrates the value of effective collaboration to enable the timely investigation into an unexpected adverse event. Ongoing pertussis outbreaks pose questions about the appropriateness of current pertussis-vaccine containing schedules. The paper by Quinn and co-workers introduces the potential of pertussis serosurveillance as a relatively new tool to better understand perplexing pertussis epidemiology in Australia. This understanding will assist in decisions about optimal timing of vaccine doses.

The full benefits of operational immunisation research accrue when research findings are integrated into the immunisation program. Global public health bodies are strongly encouraging this ‘follow-through’ phase.⁵ This phase is

completed when dissemination of results has led to documented policy and/or guideline changes that are being monitored. The operational research philosophy is fully embraced when program staff continually consider ways of improving their program and test these ideas through further operational research.

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