Indigenous safety promotion program evaluation: lessons and challenges.

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Abstract
The purpose of this paper is to share key lessons and identify ongoing challenges for the evaluation of interventions which address complex Indigenous health and safety issues. The paper draws on a review of the available literature as well as our experience in intervention studies which address injury and safety issues in Indigenous communities. We demonstrate that while there is no one correct approach to evaluation of policy and programs in this field, there is a need for multi-disciplinary approaches, cultural sensitivity and Indigenous leadership.

Injury which occurs in Indigenous communities must be understood within a broad context of historical, social and economic Indigenous disadvantage (Ivers et al 2007, Helps and Harrison 2006, Harrison et al 2001, Moller et al 2004). Preventing or reducing injury requires multi-level approaches and collaboration across government, non-government and community sectors to promote safety by addressing the multiple and often interrelated factors underlying the high rates of injury and violence in Indigenous, compared to non-indigenous sectors of the Australian population. Action is needed at many levels including systems level changes, workforce development and capacity building in addition to programs which address educational and behavioural change.

Indigenous injury prevention and safety promotion has received some specific policy attention, for example, the National Aboriginal and Torres Strait Islander Safety Promotion Strategy (National Public Health Partnership, 2004). Community safety is one of the Closing the Gap building blocks (Department of Families, Housing, Community Services and Indigenous Affairs, 2009). However there have been few rigorous evaluations of interventions and therefore a lack of evidence on which to base sound policy and programs to address the safety issues which affect Indigenous people (Boufous et al., 2010, Martiniuk et al., 2010, Senserrick et al., 2010).

Findings from research in New South Wales highlight the need for the evaluation of Indigenous safety programs which focus strongly on culturally appropriate evaluation processes. In addition to leadership, capacity building and community engagement (Anderson, 2011), studies point to the need for a greater understanding of the contextual factors for the successful implementation of interventions, the collection and analysis of both qualitative and quantitative data and the value of participatory approaches. They also indicate the need for broad and critical thinking around what constitutes evidence and how to more effectively translate evidence into policy and practice.

Introduction

Indigenous disadvantage has been identified as one of a number of 'wicked' problems confronting contemporary Australian society. Wicked problems are complex problems that go beyond the capacity of any one organisation or sector to solve. They are characterised by disagreement around causes, which by their nature are multi factoral and which challenge the traditional 'siloed' approaches and skill sets of policy makers. Amongst many other factors, the solutions to wicked problems include changing the behaviour of individuals and groups (Australian Public Service Commission, 2010).

Community safety has been identified as one of the seven building blocks for closing the gap on Indigenous disadvantage (Department of Families, Housing, Community Services and Indigenous Affairs 2009). The inclusion of safety in the issues which contribute the the gap in life expectancy between Indigenous and non-indigenous Australians is important because Indigenous people experience injury from a range of causes at much higher rates than those of the non Indigenous population. Injury is amongst the leading causes of death amongst the Australian Indigenous population. Available data show that Indigenous people are almost three times as likely to die as a result of injury than non-Indigenous people (Australian Institute of Health and Welfare 2011, Helps and Harrison 2004) and at least twice as likely to be hospitalised (Helps and Harrison 2006). The leading causes of fatal injury in the Indigenous population are intentional self harm, land transport and assault. Injury from both intentional and unintentional causes is also amongst the top ten causes of morbidity in the Indigenous population (Vos et al 2007). The leading causes of severe injury requiring hospitalisation include assault, falls, transport and intentional self harm. There are also high rates of preventable injury to children from both intentional and unintentional causes (Australian Institute of Health and Welfare 2011).

The incidence of injury is commonly measured in terms of death and hospitalisation from information which is routinely collected. However many injuries which occur in Indigenous communities are not recorded in formal data systems and the identification of Indigenous status in health databases may be unreliable (Australian Institute of Health and Welfare, 2010); the under-reporting of Indigenous injury makes it difficult to accurately quantify the burden of injury in the Indigenous population.

Addressing injury and safety problems

Injury in Indigenous communities must be understood within a broad context of historical, social and economic Indigenous disadvantage (Clapham et al 2006, Ivers et al 2007, Helps and Harrison 2006, Harrison et al 2001, Moller et al 2004).). A number of interrelated factors underlie the much higher rates of injury and violence in Indigenous, compared to non-indigenous sectors of the Australian population. Preventing or reducing injury therefore requires multi-level approaches and collaboration across government, non-government and community sectors. Action is needed at many levels including systems level changes, workforce development and capacity building in addition to programs which address educational and behavioural change.

Social, economic and environmental factors account for much of the burden of injury in the Indigenous population. Income poverty, high unemployment, poorer educational outcomes and poorer housing are some of the broader factors which underlie the high rates of injury. For example, second hand and poorly maintained vehicles along with increased driving exposure due to long road trips to remote areas distances, low rates of seat belt wearing and child car restraint and use of alcohol all greatly increases the risk of road injury. Hazardous home environments and overcrowding contribute to unintentional injury to children. Youth boredom, access to alcohol and

other drugs and lack of adult supervision can lead to increased youth risk taking, violence, self harm and road fatalities.

Knowing that most injury is preventable makes it imperative to take action to reduce or prevent injuries from occurring. The solution to many injury problems are already known. For most injury types numerous effective counter measures have been developed and tested over a number of decades in the developed world. The public health model of undertaking epidemiological studies to identify disease patterns, develop and evaluate counter measures and advocate for policy change has been successfully applied to unintentional injury and increasingly to violence issues over a number of years. Injury prevention success stories include the introduction of both passive measures such as traffic pacifiers, child proof medicine bottles, product safety legislation, or 'active' measures such as seat belt legislation, child car restraints, traffic speed limits and their enforcement, anti-violence education and social marketing campaigns. What is less clear is how to implement and evaluate these countermeasures in the context of different social and cultural contexts. Much more emphasis needs to be placed on the science of implementation and evaluation.

Despite the likely benefits of prevention in terms of reduction in death, injury and disability, injury has not been high on the Indigenous health agenda. This is largely due to injuries being 'hidden' amongst the many health concerns of Indigenous people and because injuries continue to be viewed as 'accidents' or 'bolts from the blue'. Interventions which have reduced or prevented injury within the broader community have not benefited the Indigenous community to the same extent. More work is needed to better understand the contextual and other factors which would explain the poorer outcomes from preventable injuries and the factors which would increase the uptake of known effective injury prevention measures. The fact that Indigenous people have not benefited from known effective injury prevention countermeasures is matter of social injustice that should be urgently addressed. Solutions include changing the behaviour of individuals (Indigenous and non-indigenous, including policy makers) and groups (communities and organisations). They also involve engaging with different ways of viewing the world.

Building the evidence base

There is no one solution to the complex injury problems which confront Indigenous communities. A national review of injury prevention activity (Clapham 2004, Moller et al 2004) identified numerous Indigenous community based and community led initiatives which were being undertaken across Australia to address injury and safety concerns including alcohol and violence. Many of these initiatives were challenged by a lack of ongoing funding, limited organisational and workforce capacity, and limited recognition of small but notable success stories due to a lack of evaluation and the inability to access funds to carry out evaluations which could contribute to their sustainability.

In 2004 the National Aboriginal and Torres Strait Islander Safety Promotion Strategy (National Public Health Partnership, 2004) was developed providing a comprehensive way forward to addressing many of the injury and violence issues confronting Indigenous communities. The strategy, however, was never properly implemented. Injury and violence prevention overall continues to suffer from a lack of a coordinating framework in Australia such as that offered by the Centers for Disease Control in the United States.

In order to effect policy change to address injury and safety in a comprehensive way in Indigenous communities we need to build the evidence base. Health policy consistently emphasises the need for evidence based policy. This includes research and evidence-based improvements to the delivery and organisation of health services as well as building the evidence base as to what works in preventive health. But policy makers are often confronted with lack of clear evidence from scientists; there may be multiple interpretations and solutions offered and best guesses frequently prevail. Evidence, where it exists, can be used selectively and often 'lack of evidence' is an excuse for no action. Policy

decisions occur within the context of an electoral cycle which favours short term gain over long term solutions. Addressing the social determinants which underlie health issues invariably involves action across many areas by government and non-government organisations.

Typically the 'best' evidence for policy and program development comes from large scale studies or pilot studies suitable to be scaled up and rolled out across multiple sites. However few large scale injury interventions have specifically targeted Indigenous populations (Martiniuk et al 2011, Senserrick et al 2011). There are a number of major challenges in implementing interventions in Indigenous communities from a public health perspective. The first challenge to that a large number of health determinants lie outside the health sector. Secondly, interventions must build on existing community strengths and thirdly, they must be generalisable (Clapham et at 2007). Much health-health related activity that occurs at the community level is disparate, undocumented and unevaluated, so promising initiatives that Indigenous communities regard as successful and worthwhile are unrecognized because they do not always appear in the public health and academic literature, particularly if the community has initiated the activity. Additionally, interventions which work in one context may not be successful in another, often because they have been developed with distinct research methodologies, notably 'biomedical' and 'social' approaches creating competing interests (Clapham et al 2007).

Evaluating complex interventions in Indigenous communities

Associated with the different approaches to intervention are different methods of evaluation. The evaluation of biomedical interventions ideally involves clinical trials with a large number of participants randomly assigned, in order to demonstrate a direct causal link between the intervention and outcomes. In contrast, health promotion or community development interventions, are typically broader in scope, do not always have predetermined outcomes, and require longer timeframes to achieve the intended objectives. It is often difficult for interventions employing a community development approach to demonstrate a significant improvement in a defined health outcome. There is a pressing need to improve our capacity for rigorous well designed evaluations which are also culturally acceptable and Indigenous led (Clapham 2011).

There are practical challenges in evaluating interventions not least of which is the small diverse and disparate population and the expense of conducting large studies in remote areas. There are also issues related to data quality. Improving the quality of Indigenous data in routine health data sets to enable better baseline measurement for health interventions has been recognized as important priority and is currently being addressed through measures under the Closing the Gap strategy (Australia Institute for Health and Welfare 2010, COAG 2008).

There are also methodological and ethical issues to be considered. For example, issues related to the difficulty in establishing a cause-effect relationship in the evaluation of complex interventions and ethical issues such as withholding interventions in a randomised control model. It is important that evaluation indicators reflect the values of Indigenous people. A review of Indigenous health promotion literature by Mikhailovich and colleagues (2007) found that the ethical guidelines developed for Indigenous research (National Health and Medical Research Council 2003) were infrequently referred to in published evaluation literature even though they provide a useful basis for the evaluation of Indigenous programs. They report that the evaluations of many many well regarded health promotion programs were unable to report conclusively on the impact and health outcomes of the interventions, due to limitations in the evaluation design which were insufficiently robust to measure the complex and multi-faceted interventions described. They recommended the use of mixed methods approaches informed by ethical guidelines and the use of critical appraisal tools. Qualitative evaluation approaches can assist in providing a better understand the contextual factors influencing how change occurs and also how partnerships and collaborations work effectively.

An additional challenge is the need to significantly increase the capacity for Indigenous people to lead and meaningfully participate in intervention and evaluation studies. Building capacity has been identified as a process that strengthens participation, organizational structures and local leadership, allowing Indigenous people to engage with health services management and to take community based action on the underlying causes of their powerlessness (Laverack et al 2009). It includes workforce, cultural competence, leadership, organisational and community capacity. There are a number of opportunities for capacity building and meaningful Indigenous participation in programs, however this would involve strengthening existing community led initiatives.

Evaluation takes place in a wide range of settings that constrain researchers' choice of interventions to evaluate and their choice of evaluation methods (Craig et al 2008). Hawe and colleagues (2009), discuss the unpredictability of organisational systems into which interventions are introduced. They suggest that, rather than viewing interventions as discrete packages, they should be viewed as "events in systems". What this means in practice is that there are no evaluation approaches that are fit for all purposes.

Complex interventions in Indigenous communities should reflect the new arrangements for a whole of government approach to Indigenous affairs; the recognition of the broader determinants underlying good health; the understanding of the contribution individuals make to their own health; and the Indigenous preference for an holistic view of health. Empowering people to gain control over their own health needs underlies all efforts to improve the health of populations. As Desapriya and colleagues (2006) commenting on the failure to deliver sustainable interventions, argue that effective interventions in Indigenous health require 'transdisciplinary, holistic approaches that explicitly incorporate Indigenous health beliefs and engage with the social and cultural drivers of health. Culturally appropriate interventions tailored to specific local setting and problems will be necessary to reduce deaths and injury among Indigenous people '. The National Integrated Strategy for Closing the Gap in Indigenous Disadvantage recognises culture as playing a key role in the health and wellbeing of Indigenous people. It is important that cultural understandings are embeded within frameworks for evaluating injury and safety programs which deal with sensitive and often stigmatising issues.

Conclusions

Despite the high rates of intentional and unintentional injury which occur within the Australian Indigenous population, injury prevention has been a relatively neglected area of Indigenous health policy or program development. There is a lack of large scale targeted interventions and relatively few evaluations of promising community led initiatives which address injury and violence at the local or regional level. The lack of an evidence base on which to develop policy and programs and the lack of an overall coordinating framework for injury prevention within Australia, poses many challenges for research and evaluation in this important area.

Challenges for those working in this field include: the quality of Indigenous health data; the feasibility of undertaking intervention studies within this population; the higher cost of intervention and evaluation studies particularly in remote areas; and the ethical issues related to the withholding of intervention in addition to the cultural sensitivity of safety issues, particularly intentional injury and injury to children.

One of the most important lessons learnt from our experience in Indigenous injury research and evaluation is that there is no one correct approach. An evaluation approach needs to be developed to

fit the context and the particular injury and safety problem or problems which haven been prioritised by the community. Evaluations which employ a variety of methods, both qualitative and quantitative methods are better able to assess important process aspects thus contributing to our knowledge of implementation of interventions in different cultural contexts and the effectiveness of partnerships.

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