Australian Indigenous Health InfoNet: bridging the gap between research and practice and policy in Indigenous health

Neil Thomson¹, Richard Midford¹
¹Australian Indigenous Health InfoNet

Introduction

Some progress has been achieved in the past few decades in bridging the gap between health research and practice and policy, particularly in clinical medicine, but much more needs to be done before the health sector can claim that its work is really informed by the best evidence available.

Much of the progress that has been achieved in recent decades was stimulated by Archie Cochrane’s landmark 1972 book, *Effectiveness and efficiency: random reflections on health services*, which led to the so-called evidence-based medicine (EBM) movement. The international Cochrane Collaboration, established in 1993, and similar organisations have already made major contributions to the evidence base, particularly for clinical interventions.

The success of the Cochrane Collaboration’s systematic reviews in improving the evidence base about specific clinical interventions prompted the establishment in 1998 of what is now known as the Cochrane Public Health Group. This Group focuses on building the evidence base for population level health, rather than clinical, interventions.

The Cochrane success led also to the establishment in 2000 of the Campbell Collaboration, which aims to perform a similar function in relation to social and interventions. The Campbell Collaboration addresses three areas: crime and justice, education, and social welfare.

Evidence-based decision-making (EBDM) is crucial for policy-makers, senior managers and other people working in a broadly-defined health system to enable the system to function effectively and efficiently. These people include health professionals (including clinicians), health program managers, administrators, academics and other teachers, students, and researchers.

As a result, a wide range of people in the health industry need access to the best evidence on which to base their decisions. But, apart from the traditional means of the dissemination of research findings—academic journals—and the material made available by the Cochrane groups and similar organisations, very little attention has been directed to making research findings accessible—and understandable. This shortcoming, which is being recognised increasingly, requires more systematic knowledge synthesis and dissemination in forms that are appropriate to the wide range of target audiences in the health sector.

The Internet provides the capacity for the most effective dissemination of synthesised knowledge, along with ‘contextual’ knowledge and information, and the provision of clearinghouse functions (for both literature and resources).

With its capacity to support online networks—called either ‘communities of practice’ or ‘online communities’—the Internet also enables people with common interests and purposes to share information, knowledge and experiences, even when they live in different locations, come from different backgrounds and disciplines, and work for different sectors (such as health, education and justice) and organisations.
The following sections of this paper summarise the work of the Australian Indigenous HealthInfoNet (www.healthinfonet.ecu.edu), an expanding, dynamic web resource that is a 'one-stop info-shop' for people interested in improving the health of Indigenous people. The resource provides quality, up-to-date knowledge and information and makes published, unpublished and specially-developed material about Indigenous health accessible to policy makers, service providers, researchers, students and the general community. Access to the information is free, and available to anyone with an Internet connection. Yarning places (electronic networks) are incorporated to encourage information-sharing and collaboration among people working in health and related sectors, and are particularly valuable for people living in rural and remote areas.

The work of the HealthInfoNet is undertaken currently by a small team based in Kurongkurl Katitjin, the Centre for Indigenous Australian Education and Research at Edith Cowan University (ECU) in Perth. There are two concepts that underpin this work. The first is evidence-based or evidence-informed practice and policy. This concept is linked with that of knowledge utilisation/translation, which involves making research and other information available in a form that has immediate, practical utility. Implementation of these two concepts involves synthesis, exchange and ethical application of knowledge through ongoing interaction with key stakeholders.

Core funding for the HealthInfoNet’s work is provided by the Australian Department of Health and Ageing’s Office for Aboriginal and Torres Strait Islander Health (OATSIH) with the Department’s Drug Strategy Branch funding sections devoted to substance misuse. Other research is supported by funds from a variety of sources.

The following sections of this paper summarise the HealthInfoNet’s approach to bridging the gap between research and practice and policy in the area of Indigenous health.

The HealthInfoNet’s approach to bridging the gap between research and practice and policy

Background

The HealthInfoNet has been operating since 1997 when it was known as the National Aboriginal and Torres Strait Islander Health Clearinghouse (even though its work at that stage also involved ‘value-adding’ as well as literature clearinghouse functions).1

The HealthInfoNet defines its target audience broadly as all people working, studying or interested in the area of Indigenous health—including policy officers, analyst (including researchers), program managers, population/public health workers (such as health promotion officers), and health service providers (such as Indigenous health workers, doctors, nurses, psychologists, etc.). The site is not targeted at health consumers, but much of the information and some of the materials on the site would be of value to consumers, as well as to other members of the general population with an interest in Indigenous health.

Its initial work was focused more for policy makers, analysts (including researchers), and program managers than for practitioners. The focus has changed steadily over time, so that now much greater attention is directed at the usefulness of the HealthInfoNet to practitioners, particularly Indigenous health workers and population/public health workers. This changed focus is seen in features like plain-language sections, a new section for Indigenous health workers and the much greater attention directed to health promotion resources.
An important aspect of the HealthInfoNet’s development was extension of its work to support the sharing of knowledge and experiences among people involved in Indigenous health. As well as a general e-message stick (listserv), the HealthInfoNet now supports yarning places in a number of specific areas of Indigenous health (see below).

Thus, the HealthInfoNet combines:

• the identification and collection of relevant information, its ‘translation’ and synthesis where appropriate, and dissemination largely via the Internet; with

• online mechanisms to enable people working in the area to actively share their knowledge and experiences.

The HealthInfoNet’s Internet resource

The HealthInfoNet’s massive Internet resource is structured to enable users to access, as simply as possible, the information they’re seeking. Its home page provides primary navigation points into the ten main areas: health facts; chronic conditions; infectious conditions; other health conditions; related issues; determinants; protective and risk factors; population groups; States and Territories; and health systems.

A drop-down menu from each of these navigation points enables a user to access the index page for specific areas, such as nutrition (from the ‘Protective and risk factors’ button). The index pages for specific health issues are structured in a consistent manner, comprising the following main sections: reviews; policies and strategies; programs and projects; resources; publications; and organisations. Some health issues also have a plain language and other relevant sections. The right-hand-side of the index page provides some general information about the area and access to the yarning place (if one is supported for that area).

The home page also provides easy access to three important HealthInfoNet features: its ‘Overview of Indigenous health status’ (which is also accessible via ‘Health facts’); the Australian Indigenous Health Bulletin (its online, peer-reviewed journal); and the Australian Indigenous Health Bibliography (the most comprehensive, up-to-date bibliography on Indigenous health) (see later for more details of each of these features). Access to the HealthInfoNet’s yarning places is also provided from the home page.

Identification and collection of the evidence

The HealthInfoNet attempts to identify and collect all Indigenous-specific information and materials of relevance to each health and related topic. As well as the basic literature, comprising journal articles, reports, books and the like, attention is directed to practice-related information, such as details of programs and projects and health promotion and other resources.

The means of identifying and collecting information vary in some ways according to the type of materials. The relevant literature is relatively simple to identify and collect, but the identification of projects and resource materials is quite staff-intensive involving direct contact with relevant organisations and individuals across Australia as well as the more standard identification via electronic searches and the like. The direct-contact processes are usually restricted to those areas for which the HealthInfoNet has acquired special funds (examples are: substance misuse, social and emotional wellbeing and nutrition).

The HealthInfoNet has taken an inclusive approach to identification of the relevant literature, with a major focus on identification of the ‘grey’ literature (defined as ‘that which is produced on all levels of government, academia, business and industry in print and electronic formats, but which is not controlled by commercial publishers’). Attention to the Indigenous health grey literature recognises its great
importance for practitioners and policy-makers addressing various aspects of health and well-being among Indigenous people.

Literature searches are mainly conducted online and are focused on four main resources: journal articles; and reports by government and non-government organisations, and by university institutions.

The HealthInfoNet closely monitors the standard databases and similar sources (such as PubMed, Wiley Interscience, BioMedCentral, and SearchMedica) as well regularly accessing almost 200 institutional websites, including those of government and non-government agencies and of Indigenous agencies. Around 300 further websites are accessed less often.

The HealthInfoNet takes advantage of electronic alerts and RSS feeds that many databases, government departments, publishers and other organisations have put in place. These send lists of publications daily, weekly, or monthly.

The HealthInfoNet's searches for relevant grey literature include attention to academic theses. These are identified using relevant terms in searching a number of databases, including Australian Digital Thesis Program and ProQuest Dissertations and Theses. The HealthInfoNet also encourages postgraduate researchers and their supervisors to provide copies of their theses directly.

Some of the websites accessed also provide information about programs, projects and resource materials (such as flipcharts, pamphlets, DVDs, and CDs). As noted above, the identification of materials of these types generally requires more staff-intensive methods. These direct-contact methods have been used recently in the identification of information about projects in the areas of nutrition and alcohol misuse, and of health promotional resource materials.

As well as identifying the evidence, the HealthInfoNet also tries to collect all relevant literature and materials, so that its researchers have ready access to assist them in their work.

Providing access to specific evidence

The HealthInfoNet enables users to access specific evidence in three ways.

First, details of new evidence identified by the HealthInfoNet are provided under the relevant sections of its HealthBulletin ('journal articles' and 'resources', for example) (see healthbulletin.org.au). The 'Just in' section lists new entries in reverse chronological order and each entry in the relevant section shows when it was posted to the HealthBulletin. Users can also check for entries on specific issues from the 'Topics' navigation button.

Second, evidence about a specific health topic is made available on the section devoted to that topic, mainly in the 'publications' and 'resources' sub-sections. The publications are also grouped according to sub-topic. The publications section also provides a short list of key references and a downloadable topic-specific bibliography (in three forms: EndNote (a bibliographic software package), Word, and PDF).

Third, users are able to undertake an online, library-level search of HealthBibliography, which now includes more than 13,500 entries. Copies of the HealthBibliography are also included in AUSThealth and ATSIROM, two databases marketed by Informit. An online, search capacity for the HealthInfoNet's health resources database is under development.

Synthesis of the evidence

The HealthInfoNet complements its basic clearinghouse functions with the synthesis of information related to specific health issues. The purpose of these syntheses is to provide comprehensive, authoritative, up-
to-date reviews of specific health issues among Indigenous people that could provide a blueprint for development/refinement of policies, strategies and programs.

These reviews provide an overview of the issue in terms of:

- the extent and impact of the health issue among Indigenous people;
- factors contributing to the health issue among Indigenous people—including attention to the ‘upstream’ or underlying factors, as well as more proximal risk factors;
- policies and strategies addressing the health issue among Indigenous people;
- services addressing the health issue among Indigenous people;
- policy implications; and
- a summary and/or conclusion.

The HealthInfoNet's reviews attempt to provide a macro view of the issue, unlike traditional systematic reviews that focus on the synthesis of evidence related to specific interventions, such as a medical procedure or a specific public/population health intervention.

The reviews draw on all relevant evidence, including the relevant scientific literature and essential contextual evidence. The process requires some knowledge translation, to ensure that highly technical evidence is comprehensible to most people accessing the review.

Ideally, these reviews would be largely prepared externally and involve a suitable combination of Indigenous and non-Indigenous experts in the area and policy-makers, but, to date, most have been prepared internally with some experts being involved in a peer-review and/or advisory capacity.

The HealthInfoNet also synthesises evidence of Indigenous health in its ‘Overview of Indigenous health status’, a comprehensive summary of the major issues. The overview is updated as important new information becomes available, usually around three times per year.

**Contextual information and knowledge**

To function effectively within specific areas of Indigenous health, practitioners need to have an awareness of what has been termed ‘tacit’ knowledge in the area as well as explicit evidence and resources.

Tacit knowledge includes a variety of contextual information, including information about relevant:

- relevant policies and strategies;
- projects and programs; and
- organisations (such as the National Rural Health Alliance in the area of rural health).

The HealthInfoNet provides this type of contextual information for each of its substantial sections.

**Ensuring quality and timeliness**

Ensuring the quality of the information made available on the HealthInfoNet site is addressed in two main ways. First, all information and materials specially prepared for inclusion on the site are subject to formalised quality control mechanisms that include formal peer-review for substantial documents. Informal peer-review has also been provided in some instances by some of the HealthInfoNet's honorary Consultants (see below).
Second, the quality of less substantial documents and information is ensured by internal procedures. All new additions to the HealthInfoNet are subjected to a ‘two set of eyes’ policy (all additions developed by a staff member are checked by at least one other person). Substantial documents (but not to the level requiring external peer review) and those of a sensitive nature are checked by the Director and/or Deputy Director.

The HealthInfoNet provides very timely information about new external literature and resources, making these details available through its HealthBulletin (see above). Information about these materials is also added to the specific HealthInfoNet sections to which they relate.

Ensuring that the materials developed by the HealthInfoNet are fully up-to-date is difficult, however, and is very much influenced by the availability of staff to undertake substantial updates. This is influenced to some degree by the extent of funding for specific sections. This means that some sections may be less up-to-date than others.

Importantly, the site complies with the HONcode, the internationally accepted code that assesses compliance with eight principles: authoritative; complementarity; privacy; attribution; justifiability; transparency; financial disclosure; and advertising policy (see: www.hon.ch/HONcode/Conduct.html?HONConduct762634).

Facilitating the sharing of knowledge and experiences
As well as its information synthesis and dissemination functions, the HealthInfoNet also enables people to share their information and experiences. Its yarning places, membership of which is free, comprise:

- e-message stick—an email distribution list (listserve)
- e-yarning board—a discussion board for debate about relevant topics.
- e-mob list—a personnel ‘yellow pages’ of members’ contact details (with their permission).

The HealthInfoNet currently supports yarning places for cardiovascular disease, ear health and hearing, nutrition, road safety, social and emotional wellbeing, and substance misuse, all areas for which supplementary funds have been acquired. Yarning places for Indigenous health workers and the Western Australian Indigenous Health Promotion Network are also supported.

Guidance and feedback
The HealthInfoNet has always recognised that its day-to-day work needs to be supported and guided by key individuals and organisations involved in Indigenous health. As well as informal feedback mechanisms, the HealthInfoNet’s work is assisted by a national Advisory Board, a number of subject-specific reference groups, and a network of honorary HealthInfoNet Consultants.

The Advisory Board of 11 members, with a balance of representation from key stakeholder groups and key individuals, provides expert strategic advice. Nine of the 11 members are Indigenous, four of whom are also members of the Australian Government’s National Indigenous Health Equality Council.

Guidance in specific areas is provided by HealthInfoNet reference groups. The HealthInfoNet currently has four formal Reference Groups assisting in the areas of ear health and hearing, substance misuse, social and emotional wellbeing, and road safety, all areas supported by special funds. The Steering Committee of the National Aboriginal and Torres Strait Islander Nutrition Strategic Action Plan (NATSINSAP) performs a similar role in the area of nutrition.
As well as the advice provided by the formal groups, the HealthInfoNet also seeks advice from key individuals in various areas of Indigenous health. It does so through its network of around 110 honorary HealthInfoNet Consultants, leading experts in various areas of Indigenous health.

More generally, the HealthInfoNet seeks and receives feedback from users in a number of ways, including: responses at conferences and the like; the Guestbook; emails and telephone calls, and responses from key informants (including the honorary HealthInfoNet Consultants).

The HealthInfoNet undertook an online survey in late 2007 to get feedback about the site’s navigation and design, ease of use and understanding and how well the site met users’ needs and expectations. The responses contributed to the site upgrade, the soft launch of which took place on 10 March 2009.

Other issues for the HealthInfoNet

Raising awareness of the evidence base

The availability of an evidence base, like the HealthInfoNet, is an essential component for practitioners and policy-makers, but two other aspects are also required to actually inform practice and policy. First, people need to be aware of the evidence base, and, second, they need to be receptive to the incorporation of new evidence into their work.

The second aspect is a particularly complex issue, and some expert commentators have noted that the work of most practitioners is ‘opinion-based’ rather than evidence-based. It is beyond the scope of the HealthInfoNet to really address this aspect, but the first aspect is addressed with a range of promotional activities including:

- mail and electronic distribution of information and relevant materials to selected target groups (such as Indigenous community-controlled health services);
- direct contact with key individuals and agencies;
- presentations at conferences, etc.;
- conduct of HealthInternet cafés at relevant conferences;
- provision of promotional materials to relevant conferences, etc. that HealthInfoNet staff do not attend;
- publications and limited advertisements;
- responding to media requests;
- participation in committees and related bodies; and
- visits to the HealthInfoNet’s operations.

The HealthInfoNet is currently refining its communication strategy to make it much more targeted according to target group. Tailoring of these strategies is being assisted by key people from each target group.

The HealthInfoNet is also working currently on two specific areas that could make substantial contributions to raising awareness among specific target groups.

First, the HealthInfoNet is seeking financial support to provide training workshops in rural and remote areas of Western Australia as a pilot project for possible extension to other jurisdictions.
Second, planning has commenced for the development of a series of e-learning modules. These self-directed learning modules will provide essential information for people interested in expanding their knowledge about factual aspects of Indigenous health. (Being offered online generically, the modules are not intended to have a cultural awareness role.)

Such modules could play a vital role in orientation/induction programs for employees new to Indigenous health. For example, modules could be provided for new employees in health services across the country: a brief introductory module for all employees, and a more detailed follow-up module for employees working in Indigenous-specific roles.

Coverage of key health topics

There is some variability in the HealthInfoNet's coverage of health and related topics of importance to Indigenous health, mainly because a full coverage of all health-related topics for all potential users has proven to be well beyond available resources.

The HealthInfoNet uses a rating system where the number of gecko symbols indicates the 'level of coverage' of specific sections. A 5-gecko rating indicates that coverage of the topic is comprehensive (including a review of the topic) and that the topic has its own dedicated yarning place. A topic with comprehensive coverage but lacking either a review or a dedicated yarning place has a 4-gecko rating. A 3-gecko rating means that the coverage is good, but not to the levels required for a higher rating. The 2-gecko and 1-gecko ratings apply to topics with much more limited coverage.

In general, the ‘core’ funding provided by OATSIH has enabled the development and maintenance of sections devoted to major health issues to a 3-gecko level. Development and maintenance to a higher level has only been possible for health issues for which supplementary funds have been acquired. Examples are the sections on substance misuse (supported by the Australian Department of Health and Ageing's Drug Strategy Branch) and road safety (supported by an Australia-wide consortium of government road safety authorities), and the section devoted to the health of Indigenous Western Australians (supported by the WA Department of Health).

Reaching the needs of specific user groups

The HealthInfoNet attempts to make its content accessible and useful to its various user groups—policy officers, program managers, population/public health workers, health service providers (such as Indigenous health workers, doctors, and nurses), researchers, and others. It has limited capacity, however, to address the specific needs of individual user groups, particularly practitioners.

As noted above, work addressing the needs of Indigenous health workers has been proceeding for some time now. Work on a section for Indigenous environmental health practitioners has commenced, but more could be done to address the needs of other practitioners (such as nurses, doctors and allied health professionals).

As well as providing the general evidence to inform the specific work of the various types of practitioners, the simplification of practice materials—in the development of tool kits, for example—could greatly assist the uptake of substantial practice guidelines and procedures.

But, as with other recognised gaps, extension of the HealthInfoNet's coverage to practitioners other than Indigenous health workers and environmental health practitioners is limited by the funds available.
Concluding comments

The HealthInfoNet has become the leading overall source of information about Indigenous health. Its Internet resource continues to expand as the combination of synthesised knowledge, contextual information and clearinghouse functions is applied to key areas of Indigenous health. The evidence base for some areas is complemented with the support of yarning places, which encourage the sharing of information and experiences among practitioners and policy-makers in those areas.

Recognising that quality and timeliness are essential features for an evidence base, the HealthInfoNet places great emphasis on these aspects. It has developed appropriate procedures for ensuring the quality of specific materials added to the site, and ensures that new materials are made accessible to users as soon as possible.

The HealthInfoNet also places great emphasis on addressing the needs of key stakeholders. As well as encouraging ‘grass-roots’ feedback, the HealthInfoNet draws on the guidance of its Advisory Board, its reference groups, and its network of honorary Consultants.

Ensuring that practitioners, policy-makers and others are aware of the evidence base and associated services provided by the HealthInfoNet is vitally important. It is an area of its work that is being greatly expanded currently.

The HealthInfoNet is also actively exploring options for expanding its coverage of key health issues, extending its coverage to health-related issues, and widening the range of practitioners for whom information and materials are provided.

Internet resources like the HealthInfoNet attempt to bridge the gap between research and policy and practice, and, as so doing, contribute to efforts aimed at closing the gaps in health between Indigenous and other Australians.

Presenter

Richard Midford has recently been appointed as Associate Professor and Deputy Director of the Australian Indigenous HealthInfoNet at Edith Cowan University WA. He also holds a joint appointment as Associate Professor at the National Drug Research Institute. Richard joined Australian Indigenous HealthInfoNet in September 2008. He has been awarded the following degrees: BA, BPsych, MPsych, PhD. He is registered as a clinical psychologist in Western Australia and is a member of the Australian Psychological Society. Over the past six years he has received over AUS2 million in competitive grant or commissioned research funding. The School Health and Alcohol Harm Reduction Project (SHAHRP), of which he was a chief investigator, received the award for excellence in research at the inaugural National Drug and Alcohol Awards in 2004. He is president of the Injury Control Council of WA (ICCWA). He has been an assistant editor for Addiction. He is a past chair of the Western Australian Health Promotion Foundation (Healthway) research sub committee. He has published over 100 journal articles, monographs, books and book chapters on his work.
References

1. The term ‘clearinghouse’ is defined as an agency for ‘the collection, classification, and distribution especially of information’. The functions of a pure clearinghouse are thus relatively simple, but even groups that take on wider functions tend to keep using the term.

2. Such as the website of the Australian Institute of Health and Welfare and of research groups and agencies (such as the National Research Centre for HIV Epidemiology and Clinical Research).

3. Such as the websites of the Australian Indigenous Doctor’s Association and NACCHO.

4. The Health Bulletin is recognised as a peer-reviewed journal by the Australian Government, but its main focus is on making users aware of new evidence and developments in the area of Indigenous health.

5. The Health InfoNet’s yarning places are based on the international ‘community of practice’ model.

6. Reference groups have been formed only for those areas for which special funds have been acquired.

7. The gecko has been adopted as the Health InfoNet’s logo as it is one of a few animals that is found throughout most of Australia.