



When research reports and academic journals are clearly not enough

Strengthening the links between Aboriginal health research and health outcomes

Sally Matthews
(CRCATH)

Rebekah Jenkin, Michael Frommer, Michelle Tjhin, George Rubin
(University of Sydney)

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The ideas and opinions presented in this occasional paper are the authors' own, and do not necessarily reflect the ideas and opinions of the CRCATH, its board, executive committee or other stakeholders.

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In 1998, the CRCATH Board asked the CRCATH Director to convene a board working party to explore the links between research, policy practice and health outcomes. In May 1999 the Board approved commissioning a team from Effective Healthcare Australia based at the University of Sydney to undertake a literature review to examine this issue. The authors from this team are listed below.

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Executive summary

The Cooperative Research Centre for Aboriginal and Tropical Health (CRCATH) was established in 1997 as a collaborative research organisation bringing together six core partners. The core partners include health services delivery organisations (government and community controlled), a research institution and two tertiary institutions. The overall intent of the collaboration was to bring together the *users* of research with the *providers* of research.

Under the 1997 Commonwealth Agreement, Aboriginal control over the centre was ensured by the requirement that the chairperson of the board be Aboriginal, and that the board have an Aboriginal majority.

The CRCATH has developed a strong commitment to managing and supporting research that results in health outcomes. This paper documents the steps that have been undertaken to support the development of a *health-outcomes-oriented* research culture.


Part 1 of the paper documents the establishment phase of the CRCATH from 1997 to the middle of 1999. During this phase, the organisation focused on the practicalities of bringing together the diverse core partners who have not always worked well together in the past. By the end of 1998, twenty-nine research projects had been approved, and essential administrative, financial and policy processes has been established. However, there was increasing concern in the CRCATH community that the unique potential of the CRCATH was not being met. In late 1998 the CRCATH Board commissioned an internal review. The review report reinforced both the complex nature of the CRCATH, and its commitment to achieving health outcomes through research.

In late 1998 the Board also asked the Director to convene a board working party to examine mechanisms to strengthen the links between research, policy, practice and health outcomes. In May 1999 the Board approved the commissioning of a literature review to examine this issue. This work, subsequently, was undertaken by a team from Effective Healthcare Australia based at the University of Sydney under the leadership of Associate Professor Michael Frommer, resulting in the report which forms part 2 of this occasional paper.

The final, major, health-outcomes-oriented action during the establishment phase of the CRCATH was the development of the 1999-2004 Strategic Plan. This plan placed health outcomes and research transfer at the centre of the CRCATH's endeavours. The planning process also contributed to increased understanding and trust between the Board and researchers.

Part 2 of the paper, 'Links between Aboriginal health research, policy and practice', is the report of the commissioned research undertaken by Effective Healthcare Australia; the report is also known as the Frommer report. This work has informed many of the health-outcomes-oriented actions of the CRCATH. The major health-outcomes-oriented recommendations of Part 2 are:

- that the CRCATH should divide its research investment between research and the development and support of models of research organisation designed to promote the implementation of research findings
- that the CRCATH should agree on criteria for setting research priorities and on policies and processes for application of these criteria
- that the CRCATH should agree on criteria by which the success of its research investment will be judged



Part 3 of the paper covers what could be called the ‘development phase’ of the CRCATH from mid-1999 to mid-2000. During this phase, the CRCATH worked towards implementing the recommendations from the commissioned research. It also invested heavily in consultations and negotiations towards the development of highly collaborative research proposals, consistent with the recently established strategic priorities and directions.

Major health-outcomes-oriented activities undertaken during the development phase of the CRCATH include:

- the development of an action-research proposal-approved by the Board in June 2000-designed to assist the CRCATH explore models of research organisation to assist in research transfer
- the development and promotion of criteria for setting research priorities
- considerable thought about the nature of research culture and how this might need to change, resulting in a simple chart comparing and contrasting the ‘traditional’ culture of research with a health-outcomes-oriented culture of research (the chart is now part of CRCATH promotional literature with the aim of stimulating thinking about broader change agendas, see page 37)
- the re-design of the research project application form to include health-outcomes-oriented information such as identification of major audiences for the research and the development of a research transfer and dissemination strategy
- the re-focusing of the research transfer and communication functions of the CRCATH to explore and promote creative and effective approaches to disseminating research findings and conclusions to various target audiences

Part 3 concludes with some observations on the health-outcomes-oriented agenda that has been pursued by the CRCATH.



Part 1: Introduction

Sally Matthews

(Deputy Director, CRCATH, and Coordinator, CRCATH Research
Transfer and Communication Function),

2000

1.1. The inaugural challenge:

'Making a difference' in Aboriginal health through research

The founding Chairperson of the CRCATH Board Dr Lowitja O'Donoghue threw down the gauntlet to the research and health services communities in her inaugural address at the opening of the centre in Darwin in July 1998:

Until very recently . . . scientific research has been a very top-down approach. For Aboriginal peoples, this has meant we have been amongst the most studied and researched group in the world . . . few, if any, tangible benefits have flowed to our people, as the research papers and the academic accolades have stacked up. Researchers have, by and large, defined the problems and sought solutions that they have seen as the correct 'scientific' way to go . . .

Implicit in the above statement were many challenges to 'traditional' ways of thinking about Aboriginal health research, including:

- whether any researcher has the right to undertake research without extensive Aboriginal involvement or control at all stages of the research process
- whether research which does not result in improved health outcomes for Aboriginal people is justifiable
- whether Aboriginal health researchers can build ethical careers on research which, although published in prestigious academic journals, demonstrably fails to contribute to improved health outcomes for Aboriginal people

In its entirety, Dr O'Donoghue's inaugural speech¹ can be seen as a clarion call for a paradigm shift towards managing and undertaking Aboriginal health research in such a way as to contribute to improved health outcomes. It was clear that the Aboriginal-majority Board of the CRCATH was committed to new approaches to research; the CRCATH would be expected to do things significantly differently in order to genuinely contribute to improved health outcomes for Aboriginal people.

But what exactly should be done differently, if research was to demonstrably result in improved health outcomes for Aboriginal people? *This was, and remains, the central dilemma and learning imperative for the CRCATH.*

1. Quoted in full on the CRCATH website: www.ath.crc.org.au





1.2. The structure of this occasional paper

This paper documents various aspects of the CRCATH's efforts to respond to the dilemma outlined above, that is to systematically manage and undertake research in such a way as to contribute to improved Aboriginal health outcomes. The paper covers the period between the CRCATH's establishment in 1997 to July 2000, and is divided into three distinct parts:

Part 1: **Introduction**

(Sally Matthews): Part 1 of the paper places the CRCATH's focus on health outcomes in context, and explains the origin of the research report included as Part 2.

Part 2: **Report on links between Aboriginal health research, policy and practice**

(Rebekah Jenkin, Michael Frommer, Michelle Tjhin, George Rubin): Part 2 of the paper reproduces the commissioned research report which provided the foundation for CRCATH systems thinking and action around the issue of health-outcomes-oriented research.

Part 3: **CRCATH's efforts to strengthen the links between Aboriginal health research and health outcomes**

(Sally Matthews): Part 3 provides an overview of CRCATH's early initiatives to support positive health outcomes through research.





1.3. What is health-outcomes-oriented research?

Health outcomes have been defined as ‘a change in the health of an individual, or a group of people or population, which is attributable to an intervention or a series of interventions’ (Australian Health Ministers Advisory Council 1993).

This definition has been criticised for failing to recognise the multiplicity of socio-economic health determinants. Nevertheless, recent years have seen a definite shift in Australia towards outcome-focused and evidence-based health care and health systems.

Increasingly, it is accepted that there is need for a strong research base for an outcomes-oriented health system: a research base which addresses both the ultimate health outcomes which may be attributed to health-care interventions, and to the plethora of underlying socio-economic determinants of health.

Health-outcomes-oriented research is, therefore, a critical developmental building block for an outcomes-oriented health system.

Health-outcomes-oriented research seeks to maximise health outcomes by providing:

- basic research to inform critical questions of policy development
- sound epidemiological analysis to assist with planning and evaluation of health outcomes
- strong evidence to guide high-quality clinical care
- analysis and guidance for clinical and administrative planning and decision-making
- evidence on the short- and long-term health gains from improving and standardising clinical practices and health services
- assessments on how to most effectively address the underlying socio-economic determinants of health in such a way as to bring about health gains

Health-outcomes-oriented research is, therefore, vitally concerned with the development, the application and the evaluation of new knowledge, and has a particular focus on ensuring that the results of research are known and understood by the relevant target audiences. An outcomes orientation supports evidence-based changes to the health services policy, practice and delivery considered necessary for health outcomes at both an individual and general population level. Efforts to determine and answer critical policy and service delivery questions are, therefore, given a high priority in a health-outcomes-oriented research environment.

Health-outcomes-oriented researchers see proactive research dissemination as a critical way to support evidence-based changes to health policy, to health practice, to the attitudes, values and behaviours of health professionals, and to health consumer behaviours and beliefs. Such changes are seen as important factors that ultimately contribute to improved health outcomes.

Health-outcomes-oriented research stands in marked contrast to ‘curiosity-driven’ research, which seeks to provide answers to questions of interest to the researcher, with little attention to the application of this new knowledge, or to the potential outcomes to be derived from it.





1.4. The establishment phase of the CRCATH

The CRCATH was established as a collaborative research institute in July 1998 under the Commonwealth Government's Cooperative Research Centre (CRC) Program.²

The successful submission resulting in the CRCATH, followed three unsuccessful submissions and an extended period of consultation and negotiation. The successful submission described a unique structure and focus for a 'public good' CRC, critical features being the requirements that the board chairperson be of Aboriginal descent, and that there be an Aboriginal-majority board of management. Both features provided a mechanism for Aboriginal control of the Centre.

The Centre's mission, as stated in the successful submission, continues to drive the activities of the Centre:

To provide a cross-cultural framework for strategic research leading to:

- evidence-based improvements in education and health practice
- a more highly skilled health workforce
- more effective health services
- reconciliation between Aboriginal and Western perspectives of health

For the first few months after the establishment of this unique and, in view of its geographically diverse constituents, 'virtual' organisation, the CRCATH grappled with the intricacies of process and procedure. This early establishment phase was characterised by a very hands-on approach by the Board, which struggled to harness the expertise and considerable good intent of core partners³ who, historically, had not always worked well together.

Unlike most other CRCs, the founding Director of the CRCATH Professor John Mathews⁴ was not employed on a full-time basis, and there was no permanent deputy director. Inarguably, the management and secretariat function for this complex organisation, struggling to find new approaches to address Aboriginal health research, was extremely lean.

It is a credit to the determination of the Board, Professor Mathews, Ms Terry Dunbar (Business Manager and Secretariat), Ms Liz Williams (Administrative Officer), and early program leaders that the CRCATH continued to grapple with a range of complex issues in its establishment phase, while maintaining the support and involvement of core partners and researchers.

2. The Commonwealth Government's Cooperative Research Centre initiative aims to strengthen research links between industry, researchers and academic institutions. There are currently more than 60 CRC's across six Australian industry sectors.

3. The core partner organisations are Central Australian Aboriginal Congress, Danila Dilba Aboriginal Medical Service, Menzies School of Health Research, Flinders University of South Australia, Northern Territory University and Territory Health Services.

4. Professor Mathews was also the full-time director of the Menzies School of Health Research (MSHR), one of the CRCATH's core partners. As Director of MSHR, Professor Mathews was the major, and determined, driving force behind the negotiations and various submissions that eventually led to the establishment of the CRCATH.



By the end of 1998 the following milestones had been achieved:

- a total of 29 research projects had been developed and approved
- complex financial systems were in place and operational
- the first version of an evolving project-approval pathway (which took into account the collaborative nature of the CRCATH) had been developed, approved and implemented
- six full board meetings had been held with almost 100% attendance
- several policies had been developed and approved

However, in spite of these substantial achievements there was a growing sense of unease that the potential of the CRCATH was not being realised. Some CRCATH stakeholders, including board members, expressed concern that the new research organisation was becoming a more complex and bureaucratic version of existing research organisations, and was demonstrably failing to make a difference in Aboriginal health.





1.5. The Internal Review and other initial steps towards a health-outcomes focus for the CRCATH

In light of the considerable financial and in-kind investment in the centre, the CRCATH Board commissioned an internal review in late 1998. The review was undertaken in February 1999 by an independent team of assessors led by Professor Ross Kalucey from Flinders University of South Australia.

In the review's (unpublished) report, Professor Kalucey described the challenges and complexity involved in the CRCATH's attempts to achieve its goals:

This CRC is a unique organisation in Australia. The internal review committee has not heard of an organisation like this anywhere in the world, addressing the problems of Indigenous people's health. Its uniqueness lies in the bringing together of relevant service organisations and education organisations, under a set of objectives with an *absolute commitment to collaboration and to focus on health outcomes* [my emphasis]. The questions that will have to be addressed have frustrated both Indigenous Australian communities and health workers, and research health workers, for decades . . . Every opportunity must be made to learn from experiences, whether these arrive from brilliant innovation or mistakes. There will be great virtue in establishing a project from now, whose function is to study the CRC itself, prospectively, rather than in ten years' time retrospectively and historically. Learning from experience should be a very high priority for this CRC, and the things learnt should be regarded as of value throughout the nation and to other organisations around the world who are attempting to work within the area of Indigenous people's health [Kalucey 1999].

In February 1999 the Board asked the then Director, Professor John Mathews, to convene a board subcommittee to examine mechanisms to strengthen the links between research, policy, practice and behaviour. I was asked to coordinate this work on my appointment as the first full-time CRCATH Deputy Director in March 1999,

After a brief literature review and discussions with some board members, a short concept paper was prepared for the May 1999 board meeting. The paper proposed research aimed at producing guidelines to assist Aboriginal health researchers and administrators to plan and manage research in such a way as to result in policy and service delivery changes and, ultimately, improved health outcomes. The first stage of the proposed research was 'to review and summarise the academic literature on the links between health research, and policy and service delivery change'. The Board approved the commissioning of the literature review, with further research possibly to be considered at a later date.

The commissioned work was subsequently undertaken by several researchers, coordinated by Associate Professor Michael Frommer of Effective Healthcare Australia based at the University of Sydney. The resulting paper 'Report on the links between Aboriginal health research, policy and practice', was presented to the CRCATH Board in August 1999, and is reproduced in full in Part 2 of this occasional paper.





1.6. Health outcomes and the CRCATH strategic planning process

While the commissioned research was underway, the CRCATH embarked on a comprehensive strategic planning process. In August 1999, a two-day retreat was attended by the CRCATH Board, Executive Committee and researchers. The retreat provided the first opportunity for various key players to meet and discuss strategic issues and directions. At the retreat several participants challenged the wider CRCATH community to consider how it could contribute directly to improved health outcomes for Aboriginal people, and lobbied the need for a shift from the more traditional 'investigator-initiated' research to, what they termed, 'health-outcomes-oriented' or 'strategic' research.

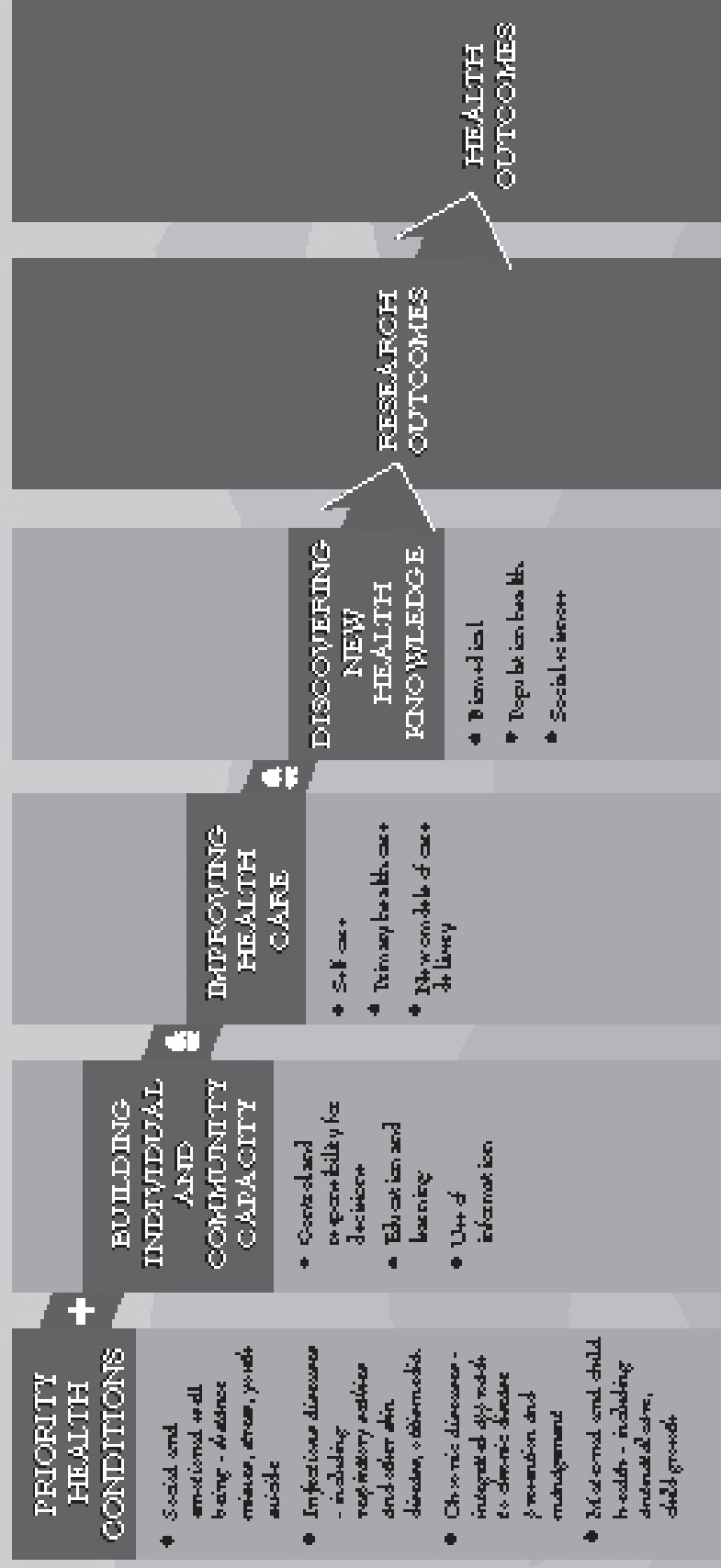
The retreat was followed by the appointment of the first full-time Director, Professor Tony Barnes. Professor Barnes was a central player in further developing and finalising the CRCATH's first strategic plan.

The 1999-2004 CRCATH Strategic Plan represents a significant step on the road to health outcomes through research, with health outcomes now placed at the very centre of the CRCATH's endeavours.

Research Focus

- Conducting research
- Turning research into policy and practice
- Evaluating programs and procedures
- Building Aboriginal research capacity

"...working together...making a difference"





The strategic plan also articulated ‘strengthening research, policy and services links’ as a key philosophy and direction:

Many Aboriginal people are justifiably wary of research, and speak of being the subject of research which does not result in clear health benefits. Research reports are often criticised for not being accessible, and for failing to draw out the implications for changed health policy and practice. The role of the CRCATH is to strengthen the links between health research and policy, services and consumers. This will be achieved by building on the unique collaborative nature of the CRCATH, which brings together health service providers, researchers and tertiary educators.

This directional statement clearly establishes the requirement that a health-outcomes focus should drive *all* management and research actions.

In mid-1999 the scheduled Commonwealth Second-Year Review took place. In the (unpublished) report of this review, the review panel continued with the themes raised by Professor Kalucey in the Internal Review’s report. The Second-Year Review report commended the CRCATH’s strategic plan, with its strongly articulated health-outcomes focus, and went on to say:

The outcome focus of programs, and concentration on establishing a new culture of research with Aboriginal control is admirable. It is commendable that the proposed research-approval process, which focuses on priority for producing outcomes, has been developed and is being implemented. This has the potential to lead in the long term to wider application nationally and internationally. [AusIndustry 1999]

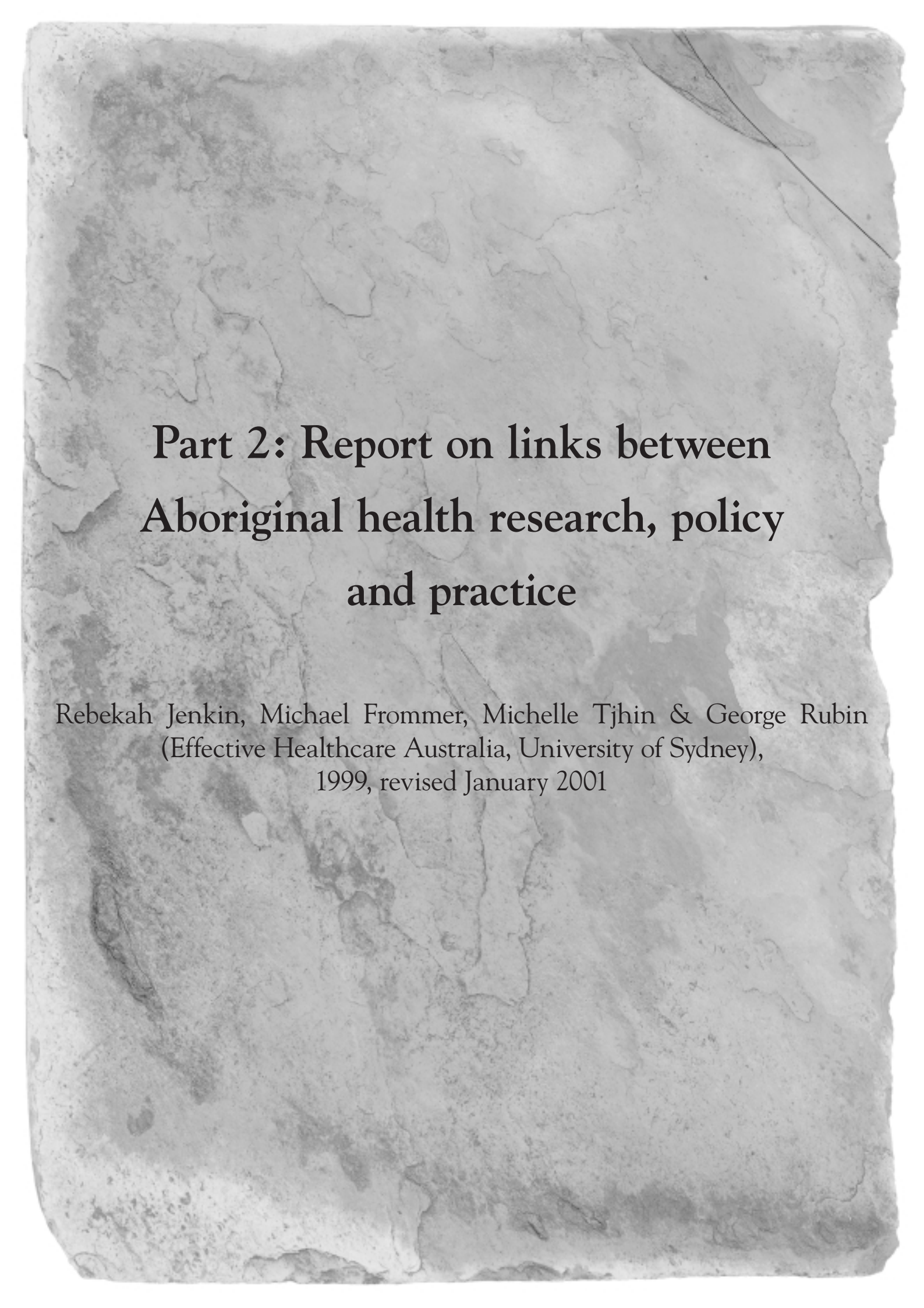


1.7. Initial steps: Conclusions

The two review reports and the commissioned ‘Report on links between Aboriginal health research, policy and practice’, made it clear that the CRCATH was heading in the right direction in its efforts to articulate and implement a health-outcomes orientation in its efforts to make a difference in Aboriginal health.

However, the initial steps towards achieving health outcomes through research were directional only. By early 2000 it was evident that much careful thought, reflection and learning was necessary in order to operationalise this strategic intent.





**Part 2: Report on links between
Aboriginal health research, policy
and practice**

Rebekah Jenkin, Michael Frommer, Michelle Tjhin & George Rubin
(Effective Healthcare Australia, University of Sydney),
1999, revised January 2001



2.1 Introduction

This discussion paper was commissioned by the Cooperative Research Centre for Aboriginal and Tropical Health (CRCATH) to address the following question:

How should the CRCATH set research priorities which are likely to lead to improvements in Aboriginal health, not just increases in knowledge?

The paper concentrates on *research transfer* in relation to Aboriginal health. Research transfer is the linkage between the processes of research and the processes of decision-making in policy and practice, and in relation to behaviour at population, community and individual levels. Research transfer operates in two directions: research-based knowledge can influence decisions, and the problems of the decision-maker and/or consumer can guide the researcher.

In preparing this paper, we reviewed the published literature on research transfer generally and with reference to Indigenous and/or minority disadvantaged groups. We examined the literature on aspects of health policy relevant to research transfer and Indigenous health. We also studied published examples of Indigenous health research, seeking to identify characteristics of the research that appeared to favour effective implementation. While we focused specifically on articles about Aboriginal and Torres Strait Islander health, our searches extended to international published English-language literature on Indigenous health elsewhere in the world and on the health of non-Indigenous, minority, disadvantaged groups, in the hope of finding clues that might be relevant to the problems of Aboriginal health. Our searches also went beyond the field of health into education, the social sciences and related fields.

Based on our reading of the literature, we make recommendations for some approaches that the CRCATH might adopt in formulating a strategic program of research investment to strengthen Aboriginal health research and enhance Aboriginal health, health policy and practice.





2.2. Recommendations

We make three main recommendations:

Recommendation 1

Our principal recommendation is that the CRCATH should divide its investment in research between:

- research projects and programs; and
- the development and support of models of research organisation designed to *promote the implementation of research findings* which are likely to lead to improvements in Aboriginal health.

Unless there is a strategic investment in the development of models of research organisation and infrastructure to support these models, the impact of the CRCATH's investment in research projects and programs will be dissipated. By investing in the organisation of research as well as in the research itself, the CRCATH has a unique opportunity not only to enhance the impact of the research which it funds, but also to provide national leadership in the methods and mechanisms of research implementation for Aboriginal health. An investment in infrastructure will enable the CRCATH to build a research program which (a) draws upon the combined experience and expertise of its member organisations and those outside its auspices; (b) ensures the quality, acceptability, validity and international competitiveness of its research program; and (c) provides a basis for translating the results of Aboriginal health research into policy and/or practice beyond the lifespan of individual projects.

Recommendation 2

Aside from the development and support of models of research organisation, the CRCATH should agree on criteria for setting priorities within its overall research program, and on policies and processes for the application of these criteria. Possible criteria and issues to be considered in applying them are listed in section 2.7.2.

Recommendation 3

The CRCATH should agree on criteria by which the success of its research investment will be judged. While empirical evidence of improvements in Aboriginal health (at population or community levels) is the major criterion, such improvements will not be evident in the short term. Other possible criteria are listed in section 2.8.





2.3. Key observations

Based on our experience of research transfer and implementation research, and our review of the literature, we make the following key observations which inform our thinking in this paper:

- (1) Health research can be categorised according to its intent with regard to application.
 - *Curiosity-driven research* aims to increase the pool of knowledge but is not conducted with a view to a particular application. An example is a biomedical research project which may improve our understanding of a particular disease process but does not itself produce a new treatment.
 - *Mission-oriented research* is conducted with the explicit intention of providing information to answer a particular practical question. Examples include pharmacological research to develop agents with particular biological effects, or epidemiological research to determine patterns of disease in particular populations.
 - *Experimental development research* is aimed at developing identifiable products, such as technological equipment, pharmaceutical agents, health promotion strategies, or health information (Gillet & Harrow 1993). Experimental development research is an extension of mission-oriented research.
 - *Evaluation research* which seeks to determine whether a health-care intervention or policy achieves its intended effects, and to provide feedback leading to improvement, continuation, intensification or cessation of particular initiatives.

While research funding programs such as that under consideration by the CRCATH understandably concentrate on research which has a clear potential for implementation (the latter three categories above), the contribution of curiosity-driven research to overall knowledge and research standards has been enormous. Many important research discoveries have been serendipitous, and mission-oriented research and experimental development research often fail to meet expectations.

The implementation of curiosity-driven research is likely to follow different processes from the implementation of mission-oriented, experimental development or evaluation research.

- (2) Regardless of its quality and relevance, research does not automatically influence health care and health-related behaviour. Thus, more high-quality research in high-priority areas will not of itself lead to better health. The implementation of research findings is not necessarily related to their importance or their potential value to health and society. Many important research findings have been applied in policy or practice only after long delays, and some have never been implemented. (Frommer & Rubin 2000).
- (3) Research and decision-making about health care or health policy are processes which tend to occur separately from each other, unless a deliberate organisational effort is made to link them (Lomas 1997).
- (4) The unit of research transfer may be the results of an individual study, but more often it is a body of knowledge assembled from several research studies. This can be compiled from similar studies (e.g. using meta-analytic and systematic review techniques) or the results of different types of research (e.g. epidemiology and pharmacology). Knowledge includes information about failures as well as successes and information that is problem-specific as well as general.
- (5) Research transfer occurs in two distinct types of situations. In the first situation ('pull'), the decision-maker has a question or problem and seeks answers to it, either by searching through reports on existing knowledge (e.g. in books or on the Internet), or by commissioning research specially to shed light on the problem. In the second situation ('push'), the researcher produces some important findings and deliberate steps are taken to implement them. It seems reasonable to assume that the impetus for implementation will be stronger in the 'pull' than in the 'push' situation. Curiosity-driven research typifies the 'push' situation. Mission-oriented, experimental development and evaluation research usually (but not invariably) typify the 'pull' situation.



2.4. Literature review

2.4.1. Methods

Our literature review covered the following databases on health, education and the social sciences: Medline, Sociofile, Embase, Psych Info, ERIC and APAIS.

2.4.2. Findings

Utilisation of research

Research transfer is predicated on the use of research results and processes to inform policy, practice and behaviour, and vice versa. It therefore entails people—whether they are researchers or decision-makers or members of a community—doing something with the information arising out of research. This can range from active and specific implementation of changes in practice to the subconscious inclusion of information in decision-making processes. The critical measure of success of research transfer is, therefore, not change per se but *use* of the results of the research which may or may not result in change. Two factors affect use: *cognitions*, which determine the aspects of research that people see as relevant to themselves or their particular problem, and *feelings*, which represent the values that people place on alternatives. In selecting alternatives and/or acting, people integrate cognitions and feelings to make conscious or subconscious choices.

These distinctions are important for two reasons. First, they identify stages of the research transfer process at which influence can be exerted to enhance uptake of knowledge or facilitate change arising out of the implementation of knowledge. Second, the CRCATH, in assessing the impact of its research program, needs to differentiate between the success of its efforts to facilitate research transfer and the success of research transfer in improving Aboriginal health.


Attributing health improvements to research

Our search of the world literature on Indigenous health and the health of disadvantaged minority groups suggest that improvements in Indigenous health have not necessarily reflected the level of investment in research, the extent of research conducted, or even the research findings. This observation holds for Indigenous populations whose health has improved (such as the Maori and Native American populations) as well as for those where there has been little or no improvement (such as the Australian Aboriginal population). The gains which have been made in Maori and Native American health do not seem to be attributable either wholly or largely to the application of research findings in those populations, but rather are more directly attributable to improved nutrition and standards of living (Noren et al. 1998).

The capacity for further improvement as a direct result of the application of research knowledge, therefore, appears significant and worthy of specific policy attention and resource investment. Indeed, the literature on health in non-Indigenous, minority, disadvantaged populations indicates that disadvantage and minority status are not impediments to improving health through the application of research findings. For example, perinatal outcomes in the USA are better for Hispanic women than for African American or Native American women regardless of their socio-economic status or education, and may reflect cultural differences in the uptake and use of research findings on the importance of antenatal care and the nature of the antenatal environment.

Superficially, the lack of a linkage between research and health improvement in Indigenous populations seems not to be due simply to a failure of implementation of research findings at a *health system* level. However, it is possible that the lack of health improvement may be due to a failure to translate practice recommendations made at health system levels into action at *health service* or *community* levels.

There is an alternative or additional explanation for the apparent failure of improved health knowledge to deliver improvements in Aboriginal health: institutional racism. Institutional racism is ‘the systematic and more covert forms



of racism that are perpetrated by dominant groups, social systems and institutions' rather than by individuals, and that are 'manifested through history, ideology, community relations, research, education and the professions' (King 1996).

A large and growing body of evidence from the USA and Europe suggests that the apparently intractable problem of negative health differentials between whites and non-whites and whites and other ethnic groups is due, in part, to institutional racism, rather than disadvantage or poverty (Leslie 1990; Krieger et al. 1993; King 1996; Menefee 1996; LeBlanc 1997). Concepts of race are inadequate both in terms of which individuals are identified and which research findings are analysed (Williams 1996). The Australian literature on Aboriginal health appears to skirt the issue of racism, preferring to concentrate on disadvantage and dispossession-concepts that do not appear to differ greatly from racism in their origins and impact. Although there is a body of literature examining the effects of dispossession and disadvantage on the Aboriginal population, systematic analysis of the sort applied to the role of racism in the health of African Americans does not appear to have been undertaken.

Thus, it is not clear whether any studies have systematically examined the impact of racism on the conduct of research and the uptake and application of research findings across the Australian health system. Certainly, the characteristics of institutional racism appear to have been or to be present in the Australian research environment. These characteristics, as described by King (1996), include the systematic omission of minority groups from biomedical and socio-behavioural research, the perpetuation of negative stereotypes, and the legitimisation of inequities in medical care and access to services.

Participants in research transfer


Typically five groups are involved in the research transfer process:

- researchers
- policy-makers
- practitioners
- communities
- consumers

These groups have very different needs, aspirations, imperatives, expectations and modes of communication.

Researchers tend to follow meticulous processes which are time-consuming and (in relation to the needs of decision-makers) slow and unpredictable. Researchers are geared to ask specific 'researchable' questions which may not correspond with the questions in decision-makers' minds. Moreover, researchers expect to communicate their findings through traditional scientific channels (e.g. peer-reviewed journals) which are mostly too specialised for decision-makers and inaccessible to consumers or communities. A keen focus of most researchers is the quality of research and its capacity to impress peers, thereby increasing the likelihood of prestigious publications and successful applications for grants. For most researchers, career opportunities (i.e. future funding) depend more upon these outcomes than upon the relevance of research to the problems of practitioners and policy-makers (Lomas 1997) or the accessibility of research and research findings to consumers.

Many researchers have orientations, experiences, methodological approaches, and protocols and goals which are in conflict with, or differ from, the health priorities of minorities or disadvantaged groups. Regrettably, some researchers have been implicated for poor treatment, exploitation, and misinformation of subjects. There have also been instances of inappropriate use of research, and this has affected minority and/or Indigenous groups' perceptions of the legitimacy and credibility of research and the research process (Andersen 1998; The Tuskegee Study Legacy Report 1996; King 1996).



Unfortunately, both anecdotal and published literature indicate that such practices have also tarnished the reputation of research and researchers studying the Aboriginal population. The history of Aboriginal health research is blemished by examples of studies that have exploited individual Indigenous people and Indigenous communities, that have been culturally insensitive, and that have been undertaken without proper consent from, provision of information to, or involvement of subjects. While it is to be hoped that research standards are higher and that researchers are more ethical and culturally sensitive today than in the past, the need for researchers to step outside their research paradigm and examine broader issues of relevance, appropriateness and ethics cannot be over-emphasised when dealing with Indigenous groups.

Researchers often fail to understand that, no matter how scientifically important and valid their results, the impact of their research will be minimal if it is not framed in terms of the specific problem confronting potential users (Evans & Stoddart 1990). Likewise, researchers may not recognise that they are competing for the attention of potential users and that there may often be as many incentives to ignore research as to use it.


Policy-makers (both political and bureaucratic) are most likely to seek or take notice of research findings when they intend to make change or justify action. Thus, research is more likely to be implemented in policy when there is an impetus to change the status quo or justify maintaining a position in the face of pressure to do otherwise. Such an impetus, which is external to the research (and possibly unrelated to its scientific importance or quality), is a necessary condition for implementation (Andersen 1998; Paul-Shaheen 1998). An understanding of contemporary policy directions can thus identify opportunities that could be exploited to enhance research transfer. However, the use of research in policy may differ from the researcher's perception of the scientific value of his or her findings. Research results may be used selectively, and they may be used to support a pre-determined position or to justify some action.

Policy-makers who have successfully championed or orchestrated radical changes in health-care policy have been characterised as pragmatic, entrepreneurial, and well-connected with political power and public opinion (Rice 1997). They are successful in seizing 'windows of opportunity' for change or action and in engaging media and public attention (Paul-Shaheen 1998). Thus, when policy-makers want research results, they tend to want them within a very short time and in a non-academic form. The time requirements, publication styles and peer-review processes which are dear to researchers are largely irrelevant in the policy-making setting (Andersen 1998).

Practitioners are increasingly inclined to seek research-based knowledge, especially that which can be applied to practice problems, for example to help in treating patients and improving patient outcomes. The use of empirical research findings in clinical decisions has been enhanced by recent developments in techniques of summarising research results into practice recommendations, notably through the efforts of the International Cochrane Collaboration over the last five years (Frommer & Rubin 2000). The proliferation of affordable information technology has also facilitated access to research reports and practice recommendations. Nevertheless, practitioners have been slow to shift from traditional modes of decision-making (based on direct or accumulated experience and opinion) to decision-making based on research (Young & Ward 1999). Practitioners are, however, able to clearly distinguish between different stages (awareness, integration and application) and sources (peers, supervisors, print and visual media, and formal education) of knowledge, and accord each a status or importance commensurate with perceived value in terms of relevance, quality, reliability and useability (Baskett 1986).

The literature suggests that important factors for the implementation of research in practice (as distinct from policy) are timeliness, trust and dialogue:

- Timeliness means that the research-based knowledge must be available to the practitioner, when s/he needs it, where s/he needs it (Classen 1998; Hunt et al. 1998).
- Trust refers to the credibility of the research results. If they are to take notice of the findings, practitioners must respect the researcher, the institution from which the research emanates, and the methods used. Practitioners tend to be more critical of the quality and relevance of research than policy-makers, and are more likely to have skills in critical appraisal.
- Dialogue between researchers and practitioners can also promote implementation. Unlike policy-makers, practitioners may sometimes be interested in being involved in the research process.



Communities (definable groups within a population) and *consumers* (users of health services) should be distinguished from each other. The general literature on research transfer does not make this distinction, and tends to assume that the imperatives which drive the consumer also drive the community from which s/he originates.

The general literature on research transfer also tends to underestimate the impact of communities' or consumers' knowledge (or lack of knowledge) of health issues on health-related behaviour, access or outcomes. The literature on Indigenous health particularly explores the impact of lack of knowledge (Ryan 1992; Popay et al. 1998; Popay & Williams 1996). Moreover, because Aboriginal communities are relatively unfamiliar with the processes of health and medical research, they tend to have little confidence in the promise of long-term benefits from research. Their assessment of the value of research is based on perceived immediate tangible benefits, rather than on its potential to improve health in the longer term or increase the stock of knowledge. Because immediate benefits are often not apparent, Aboriginal communities tend to have negative perceptions of health research.


The literature also suggests that Indigenous communities respond more favourably to research efforts which actively engage and involve communities in the planning, conduct, evaluation and publication of research (MacMillan 1996; Reath & Usherwood 1998; Posti & Whitmore 1988; Tupper 1988) and which are culturally appropriate or sensitive (O'Neil 1995; Reath & Usherwood 1998; Miller & Rainow 1997). Power-sharing between researchers and subjects is uncommon, particularly in relation to minority, disadvantaged or Indigenous groups (Charles et al. 1997), and relates to both the issue of control and the availability and use of knowledge. Researchers tend to like both to maintain control of their research and to be the keepers of knowledge, with subjects passively engaged rather than actively participating in planning and learning. This inequality has been suggested as accounting for much of the distrust and suspicion with which researchers and research projects are viewed by Indigenous groups (King 1996).

A role exists for researchers with expertise in study design, conduct and analysis, who are willing to train and assist communities and community members in the completion of research; that is, researchers who are prepared to assist with research conducted in and run by Indigenous communities, rather than researchers who expect to conduct research on Indigenous groups.

In summary, researchers and users of research have very different values, interests and requirements, and these differences may impede utilisation of research. Bridging the gap may involve different approaches for different user groups, but will be characterised by:

- structural connections between researchers and users across the entire research process from planning to evaluation;
- active rather than passive dissemination and uptake efforts;
- timeliness on the part of researchers in the presentation and analysis of research findings;
- transparency and simplicity in communication of findings; and
- a pragmatic attitude on the part of researchers regarding the value, interest and relevance of particular findings to particular users, and on the part of users regarding the capacity of researchers to answer particular questions and incentives for research.

Before moving onto a discussion of the research transfer process, it is important to mention one other group involved in the transfer and utilisation of knowledge—the media. Research clearly demonstrates that the media plays an important role in educating the public and decision-makers regarding research findings (Cook 1998; Rice 1997), and in influencing the image held by the public of researchers, research, and particular health or social problems such as those confronting minority and Indigenous groups (Blaxter 1997; Schroedel & Jordan 1998; Spigner 1998).



The literature indicates that the media is interested in picking up the results of scientific research and bringing them to the attention of the public (Cook 1998). However, the portrayal of research and research findings may not necessarily be accurate or positive. It may not be welcomed by minority or Indigenous groups and may serve to reinforce negative public perceptions and misinformation (Cornely 1970; Cook 1998; Gandy et al. 1997; Spigner 1998). The literature also provides examples where minority or Indigenous groups have mobilised public support through strategic involvement with the media, thereby having a positive influence on public policy formulation, public knowledge and public consensus for intervention (Gandy et al. 1997; Rice 1997; Russell 1997). It is important, therefore, for any research transfer strategy to consider the potential of the media to both assist and detract from efforts to promote the uptake of research findings and the implementation of research results.

Processes of research transfer

Utilisation of research entails people doing something with the research results. Beyer and Trice (1982) have drawn attention to three types of use of research (after Pelz 1978):

- *instrumental use*, where a specific action or actions occur as a direct consequence of the research results;
- *conceptual use*, where research results produce an increase in knowledge, thereby influencing actions, but in less specific and more indirect ways than instrumental use; and
- *symbolic use*, which involves using research results to legitimate or support or sustain an existing or pre-determined action, or substituting the research process itself for action.

The researcher often concentrates on conceptual use of research. The interest of the practitioner, the community and the consumer is in instrumental use. In principle, the policy-maker is also interested in instrumental use, but may often have imperatives to concentrate on symbolic use.

Research transfer processes contribute to these three different types of research utilisation in different ways. For the user of research, research transfer can be considered as having three stages: *awareness* of research-based knowledge; *adoption* of the knowledge; and *institutionalisation*, leading to sustained use of the knowledge (Beyer & Trice 1982; Baskett 1986; Huberman 1990) If research is to have a certain impact on health, adoption and institutionalisation are necessary. There are hurdles between awareness and adoption, and an active process (over and above awareness-raising) is needed to overcome these hurdles. Awareness itself may result in change, especially over a long time period. Mostly, however, awareness alone will not be sufficient to produce action. Institutionalisation depends upon the appropriateness of the research-based knowledge to the social and organisational setting, and also on opportunities. The environment is a more critical determinant of institutionalisation than of awareness or adoption.

Instrumental use of research findings leading to adoption and institutionalisation can have impressive health outcomes in Aboriginal communities, for example a research project that developed, implemented and evaluated interventions to reduce skin infections in Tiwi communities, which lead to the institutionalisation of an effective intervention (Bourke 1998). Ironically research projects of this type often fail to capture academic attention-and fail to reward their instigators academically-for the very reason that they are simple pragmatic initiatives which may have limited generalisability. By contrast, sophisticated research that earns academic credit for its instigator may not solve community problems.



Generalisability of research in relation to Aboriginal health

Aboriginal health research that aims to improve health outcomes mostly consists of relatively small-scale projects conducted on a local basis in discrete communities. Larger-scale projects, such as regional morbidity and mortality analyses, are usually undertaken to identify epidemiological trends and identify problem areas where research aimed at improving health should be directed. The applicability of the findings of small locally based projects to other communities or to wider Aboriginal populations may be constrained. This is reinforced by perceptions within Aboriginal communities that research done elsewhere (in other communities) is not transferable. These perceptions are rooted in the attachment of Aboriginal communities to self-determination within a local context. (Reath & Usherwood 1998) This cultural phenomenon may also help to explain the under-utilisation of non-Aboriginal research which is likely (on objective grounds) to be relevant and applicable to the problems of Aboriginal health.

Moreover, research reports on effective interventions in Aboriginal communities often contain insufficient detail on aspects of the interventions which were responsible for the successful outcome, and the interventions, therefore, cannot be reproduced elsewhere. Often the reports also contain few details of the context in which the interventions were conducted. As a consequence it can be difficult for a user of the research to determine the feasibility of carrying out the same interventions in a different setting. An example is the report on the interventions in Tiwi communities mentioned in section 4.2.4 above (Bourke 1998).

Another weakness confronting both researchers and decision-makers is the failure to learn from past mistakes and pass on knowledge so that future research efforts can be built upon accumulated findings rather than rediscovery (Kamien 1997; Ring & Elston 1999). This omission also limits the generalisability of findings about Aboriginal health specifically and about the delivery of rural and remote services generally. Neither accumulated knowledge nor context are routinely considered in the design and conduct of new research.





2.5. Lessons from the literature review

- 2.5.1. There are no existing models of Aboriginal health research, Indigenous health research from other parts of the world, or research on disadvantaged minority groups which demonstrate a strong connection with implementation and health improvement. That is, there are no existing models which directly help to answer the question, *'How should the CRCATH set research priorities which are likely to lead to improvements in Aboriginal health?'*
- 2.5.2. Much of the Aboriginal health research done (and published) to date has comprised small-scale local projects. While there are instances of health improvements in particular communities following on from these projects, there are few instances of the adoption of knowledge or interventions in other communities.
- 2.5.3. The selection of research priorities which are likely to lead to improvements in Aboriginal health involves the selection of research which is likely to be implemented. This in turn involves a deliberate organisational effort to link the processes of research with the processes of decision-making.
- 2.5.4. The establishment of links between the processes of research and the processes of decision-making in Aboriginal health is a particular challenge because:
 - the track record of improvements in Aboriginal health following from research is not strong;
 - there is a tendency in Aboriginal communities to value research which has an immediate local impact, to question the transferability of research done in other communities, and to be cynical about longer-term benefits of research; and
 - reports on successful local research initiatives tend to lack the detail that is needed to enhance their transferability.
- 2.5.5. The problems of research transfer in Aboriginal health are otherwise analogous to those described in the wider health and medical research literature and in the education and social sciences literature. The problems centre on the differing needs, aspirations, imperatives, expectations and modes of communication that exist between researchers and users of research, that is policy-makers, practitioners, communities and consumers.
- 2.5.6. Solutions to the problems of research transfer in Aboriginal health require an understanding of
 - the possible uses and types of use of research, and how they differ for the different user groups; and
 - the stages of research transfer (awareness, adoption and institutionalisation) and their relative importance for different user groups.
- 2.5.7. Improvements in Aboriginal health based on research will depend on the use of both Aboriginal health research and non-Aboriginal health research findings.
- 2.5.8. In general the research transfer literature does not distinguish between success as denoted by the uptake and utilisation of research findings and success as denoted by improvements in health as a result of that uptake.
- 2.5.9. Strategies to improve research transfer should be developed with regard to the history of Aboriginal people and the impact of socio-economic factors that contribute to the disadvantage faced by Aboriginal communities.



2.6. Practical implications for the CRCATH

From our review of the literature and our understanding of the CRCATH's mission, it seems clear that the CRCATH should develop a research policy including a program of research investment which generates research of a standard equivalent to the best health and medical research in Australia, and provides for tangible improvements in Aboriginal health.

The research policy should:

- state the objectives of the CRCATH's research investment strategy (these are suggested below);
- define how the CRCATH's investment in research is to be differentiated from research programs of other funding or commissioning agencies;
- state whether there is to be a balance between investigator-initiated and commissioned research; if so, describe how this balance might be struck, and define mechanisms that could be used to solicit and/or commission research;
- affirm the CRCATH's commitment to ethical standards of research, both generally and with respect to the requirements of Aboriginal communities;
- incorporate an intellectual property policy specifying the extent to which the CRCATH intends to retain ownership or control over the use of reports arising from the funded research versus the freedom of researchers to publish their work wherever and however they wish; and
- define criteria by which the success of the research investment strategy will be judged, including the time period over which the CRCATH expects the impact of its research investment to become manifest (see section 2.8.).

In line with this strategy, the CRCATH should (a) refine the objectives of its research investment strategy, and (b) partition its investment so that funds are available to fulfil each objective.

2.6.1. Suggested objectives

The objectives of the research investment should include:

- Development of positive perceptions of Aboriginal health research among Aboriginal peoples, the Australian health and medical research community, and the Australian population. This will require an active demonstration of the benefits of Aboriginal health research, both for communities and populations. Both the short- and the longer-term benefits should be highlighted.
- The support of research. This is discussed further below.
- Development and support of models of research organisation designed to promote the implementation of research findings which are likely to lead to improvements in Aboriginal health. These models should provide for:
 - the development of investigative experience in Aboriginal health research for Aboriginal health personnel and for non-Aboriginal researchers;
 - a capacity for active research transfer, including the development and support of a brokerage capacity to link researchers with users of research, a capacity to advocate for the incorporation of research findings in policy where appropriate, and the utilisation of non-Aboriginal research which (on objective criteria) is applicable to Aboriginal health;
 - enhancement of research reporting so that reports contain sufficient detail on interventions to enable their adaptation and adoption on a wide scale; and

- ethical assessment of research proposals, taking account of their scientific validity, their acceptability to Aboriginal communities, and their compliance with general ethical standards of research.

2.6.2. Research to be supported

The CRCATH could support a portfolio of research with different types of application:

- Research that is likely to benefit the health of communities directly, aiming to develop and evaluate interventions which concentrate on local factors and the behaviour of individuals and particular communities.
- Research that may directly benefit Aboriginal populations on a wider scale. This might encompass:
 - the creation of knowledge on specific health problems;
 - the development and evaluation of interventions which are generalisable to many communities; and
 - the production of information to influence government resource allocation.
- Research that extends knowledge and understanding of Aboriginal health, indirectly leading to benefits for Aboriginal populations and communities.
- Implementation research on methods of enhancing the adoption and institutionalisation of research-based knowledge in Aboriginal populations and communities, including the development and evaluation of processes and systems, such as systems to enhance the delivery of evidence-based practice or decision-support systems for key preventive issues.

2.6.3. Selection of research

Research transfer depends upon a choice of research themes and topics that have significant implications for Aboriginal health. It depends upon the acceptability of the research to individuals and communities, and upon professional and community recognition of the competence of the research process.

Choice of research topics

If the research is to have an impact, perceptions of its value may be just as important as the objective significance of the research problem. The following questions provide a basis for considering the choice of research topics.

- What are the potential implications of the research for Aboriginal health (at an individual or community level, and on a local or wide scale)?
- Do members of Aboriginal communities recognise and value these implications? If not, can the researchers or the CRCATH promote an understanding of the significance of the implications?
- Is the importance of the research recognised by policy-makers and practitioners who influence Aboriginal health? If not, can the researchers or the CRCATH promote an understanding of its significance?
- Do the researchers appreciate the need to convey an understanding of the significance of the research to communities, practitioners and policy-makers, or to participate in such a process of translation?



Competence of the research

There is no point in selecting a priority area in which high-quality research cannot be done. In the end, the design, methods and execution must be sufficiently strong for the research results to be valid. If the CRCATH fixes on a priority area, there are two possible approaches to the question of quality. (1) The CRCATH could focus on high-quality projects undertaken by researchers with a reliable track record. However, in many areas of likely importance to Aboriginal health, opportunities to invest in such research will not be available. Thus, (2) the CRCATH may need (and may be in a position) to invest in building structures and establishing processes for particular types of research, and in enhancing the skills and experience of potential researchers. This approach is incorporated in the objectives listed above.

It should be noted that 'high quality' refers not only to research design, methods and execution, but also to ethical considerations and the acceptability of the research to communities that might be affected.





2.7. A schema for considering research priorities

2.7.1. Preamble

The following points could be used as a checklist for considering research priorities or proposals for research. They apply to both investigator-initiated and commissioned research. The points do not suggest actual priorities, and they are based on the assumption that the CRCATH will be in a position of choosing among too many options rather than seeking researchable ideas. They are also based on the assumption that the CRCATH is aware of (or has an intelligence-gathering capacity to detect) the major health problems currently confronting Aboriginal peoples, emerging and future problems, and current, emerging and future opportunities to improve Aboriginal health and health services.

The points repeat some of the concepts described in previous sections of this paper.

2.7.2. Criteria for setting priorities

Policy principles

The proposed research should comply with the CRCATH's mission and research policy (as outlined in section 6 above). Those responsible for setting priorities should consider the role of the CRCATH in relation to a particular priority or proposal. For example, could the CRCATH take on a brokerage role to enhance the implementation of the findings?

The severity of the problem

If the research addresses a health problem, what is the burden imposed by that problem? Consider:

- the actual burden, that is morbidity (illness, disability) and mortality, as measured and recorded;
- the potential burden; and/or
- the burden perceived by the community.

The literature notes that policy-makers and practitioners often differ from communities in their perceptions of the magnitude of burden in relation to particular disease problems, and disagree on where there is the greatest need for action or change (Newbold 1998).

If the research addresses a health system problem (such as a policy question or the organisation and delivery of services), how significant is the problem? Consider:

- the extent of the actual current difficulties which the research might help to overcome; and/or
- the extent of difficulties perceived by the community.

The potential for improvement

What is the potential for improvement and/or alleviation of particular health or health service problems? Consider:

- policy issues;
- clinical and public health problems;
- problems of access to services;
- relevance of the research outcomes to specific levels of service, for example the primary health care level, which can institute both population-based and individual-centred control measures;
- inappropriate use of services; and
- use of inappropriate or ineffective treatments or procedures.

Identification of priority target groups

Does the proposed research focus on particular populations in particular parts of Australia (for example, Aboriginal populations in large urban areas, or those in remote areas) or on particular communities? If so, do these target groups:

- experience the health problem in question more intensively than others; and/or
- wish to be researched; and/or
- seem likely to benefit from the research; and/or
- have characteristics that facilitate the research uniquely or to an unusual extent?

Feasibility of the research

What is the practical feasibility of conducting the research and implementing its findings?

- Can the research question be answered at all?
- Can the research question be answered in such a way as to provide useful and potentially applicable information, particularly in relation to the prevention and alleviation of health problems?

Research personnel

- Are competent researchers available to carry out the research?
- Is there a need to develop investigator skills in order to carry out the research?
- Will the research enhance the research skills and experience of Aboriginal health personnel, or enhance the Aboriginal health research skills and experience of Aboriginal and non-Aboriginal researchers?

Linkage of research to decision-making

Does the proposed research contain elements which are likely to facilitate research transfer? Have potential users of the research (including subjects) been involved in developing the proposal? Will they be involved in all other stages of the proposed research, including dissemination, publication and implementation of the findings? If there is a need for some brokerage between the researchers and the users, is such brokerage feasible?

Quality of the research

In principle, all research strategies should aim to support only the highest quality research and provide the best empirical evidence of solutions to particular health problems, or benefits of particular health treatments or procedures. In practice, however, the needs of the communities concerned and the resources available, together with political, ethical and other imperatives will influence the type of research to be conducted, the methods to be used, and ultimately the quality of the research. Perhaps more importantly, the limitations and problems associated with

particular research methods should be acknowledged openly. While all research should withstand the scrutiny of informed critics, it is impractical to impose stringent theoretical standards of research design and conduct where pragmatic considerations dictate the need for some compromise.



Costs

What is the likely cost of the research? Is the budget adequately justified, and does it provide evidence that the project will be conducted without waste and extravagance? What indirect or intangible costs does the research impose? Is the cost justifiable in relation to the likely benefits of the research? Is there a favourable balance between the cost of doing the research and the risks from not doing it?

Ethics

All research priorities should be considered in terms of the balance between the good that may result to individuals, communities or society, and their potential for harm. In the case of disadvantaged groups, it is also pertinent to consider whether the measures of good and harm used by researchers equate with the perceptions of such costs and benefits held by the groups participating in or affected by the research.





2.8. Criteria for judging the success of the CRCATH'S research investment

It is important at the outset to specify criteria by which the CRCATH's investment in research will be judged.

Success should be judged at three levels: first, whether or not the investment strategy has improved the utilisation of research findings; second, whether or not health benefits have resulted from the research; and third, whether or not research priorities have been influenced by decision-makers, communities and consumers.

We suggest that the support of research projects *per se* should not be a criterion of success. We suggest that the CRCATH should distinguish itself from other research-funding agencies by concentrating its investment on the development of a capacity for Aboriginal health research and the implementation of research-based knowledge to improve Aboriginal health.

We suggest that the criteria for success could be grouped under four headings:

- Process
- Products
- People
- Potential

Process

The CRCATH should be able to show evidence that its investment in research has started to:

- modify the way in which Aboriginal health research is planned, conducted, and evaluated to take into account the special needs and cultural requirements of Aboriginal peoples, and accommodate appropriate community participation in research;
- stimulate the use of research-based knowledge in improving Aboriginal health, including knowledge derived from non-Aboriginal health research;
- strengthen the reporting of local research efforts to improve their generalisability; and
- promote communication of priorities by decision-makers, communities and consumers to researchers.

Products

Products of the research investment might include:

- Funded research projects which reflect the processes listed above.
- Measured improvements in the health of Aboriginal communities or populations. Empirical evidence of health effects may not be manifest for several years.
- Evidence of the influence of Aboriginal health research on decision-making by policy-makers, practitioners, communities and individuals.
- Documented improvements in the quality of research and its relevance to the particular circumstances and needs of Aboriginal communities.
- Evidence of positive perceptions of Aboriginal health research within Aboriginal communities and the health and medical research community generally, and in the Australian community at large.



People

Major criteria for success under this heading are:

- Evidence of the development of investigative skill and experience among Aboriginal health personnel.
- Evidence of Aboriginal health research experience among health and medical researchers generally.

A further criterion is evidence of an increased awareness of Aboriginal health research among decision-makers.

Potential

The CRCATH's investment in research is an investment in the future. The investment itself should produce change, but it should not be conceived as having a fixed endpoint. Rather, it should support a dynamic strategy which continually brings to light new opportunities that will lead to improvements in Aboriginal health. These opportunities might encompass processes, products and people.



3. CRCATH's efforts to strengthen the links between Aboriginal health research and health outcomes

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2000



3.1. Introduction

The commissioned 'Report on links between Aboriginal health research, policy and practice' (Part 2 of this paper), also known as the Frommer report, provided a valuable framework for thinking through some of the *practicalities* of translating the strategic intent of facilitating improved health outcomes through research into reality.

The purpose of part 3 is to outline how the CRCATH has responded to the recommendations and issues raised in the Frommer report, and to describe other health-outcomes-oriented initiatives which the CRCATH has undertaken in the period from its establishment in June 1997 to July 2000. This section concludes with some personal observations on the processes that the CRCATH has been undertaking.

3.2. Exploring models of research organisation

Over the longer term, one of the most important recommendations in the Frommer report may prove to be

[t]hat the CRCATH should divide its investment in research between:

- research projects and programs; and
- the development and support of models of research organisation designed to promote the implementation of research findings which are likely to lead to improvements in Aboriginal health.

In June 2000 the CRCATH Board approved a three-year action-research project entitled 'Action research into managing, undertaking and disseminating Aboriginal health research for improved health outcomes'. The project will commence in July 2000; it is a key response to the growing realisation within the CRCATH community that translation of research into improved health outcomes may involve paradigm shifts in many current and accepted attitudes, values, approaches and methodologies in the academic and research world. Indeed, the project was approved by the Board on the stated understanding that it would facilitate a continuous reflection, learning and improvement process to support such paradigm shifts, and in doing so, prevent the repetition of past mistakes.

The project will commence with several data collection and analysis activities to provide a basis for reflecting on past approaches to research and research dissemination. Included in this phase of the project will be the identification of significant Aboriginal health research projects undertaken by core partners in the last five years, and a systematic examination of:

- the origin of the research;
- the assumptions underpinning the research process;
- the degree to which the research is perceived to have resulted in changes to policy, practice and health outcomes; and
- the perceptions of factors which impeded or supported the translation of the research into health outcomes.

The action research is a direct response to the Frommer report's recommendation of exploring models of research organisation designed to promote the implementation of research findings likely to result in improvements to Aboriginal health. It is likely that the project will be instrumental in the development of new and creative approaches to research in the Aboriginal health arena.

3.3. Criteria for setting research priorities

The second major recommendation in the Frommer report was that

. . . the CRCATH should agree on criteria for setting priorities within its overall research program, and on policies and processes for the application of these criteria.

The establishment of criteria for setting priorities, and on policies and processes for application of these criteria, has been a major issue for the CRCATH since its establishment. The criteria and associated policies and processes have evolved over time, and represent much spirited discussion, debate and input from the CRCATH community.

Early CRCATH debate and activity relevant to this recommendation were stimulated by the findings of the Commonwealth's Health and Medical Research Review, first released as an interim discussion paper in December 1998, and then published in May 1999 (Wills 1999). The Wills report, as the final publication of the review's findings is known, emphasises 'priority-driven research' as a means of ensuring that scarce research funds are applied where they have the greatest impact on health and health care. This had a profound impact on CRCATH thinking about priority setting. In particular, the report's warning that priority-driven research requires an effective priority-setting process, and that '[r]esearchers, health-care providers and consumers should all play a role in developing these priorities' (Wills 1999, p. 90), reinforced the CRCATH's efforts to establish widely understood and agreed upon priorities for research.

The CSIRO's research priority assessment criteria were also influential on the development of criteria for establishing CRCATH research priorities.

The development of the 1999-2004 CRCATH Strategic Plan was a major exercise aimed at achieving broad consensus amongst core partners on priorities for research. The strategic plan now provides a broad framework for setting research priorities, and also provides a clear statement on general approaches to research and change supported by the CRCATH.

The 'research focus areas' in the plan resulted from wide-ranging discussion and debate. The agreed areas were arrived at through consideration of possible research around three major priority-setting criteria:

- potential health benefits to be derived from focusing on the health issue or problem
- potential ability to translate research outcomes into changes to health policy and service delivery
- feasibility of the CRCATH achieving identifiable research and health outcomes in the area within the time frame of the centre

The research focus areas and associated criteria have now been supplemented by a research priority checklist (see appendix). This checklist includes some of the criteria recommended by the Frommer report, along with criteria relevant to the CRCATH's directions and philosophy. The checklist is now available to the Executive Committee when it considers whether a project should be forwarded to the Board for decision-making.

The research priority checklist has also been summarised and promoted in the *Question and Answer Guide to the CRCATH*. It is hoped that this promotion will encourage project proponents to consider the health-outcomes-oriented criteria in developing proposed approaches, methodological and dissemination strategies.





3.4. Evaluating the success of research investment

The final major recommendation of the Frommer report is that

[t]he CRCATH should agree on criteria by which the success of its research investment will be judged.

Like all other Cooperative Research Centres, the CRCATH is subject to agreements with the Commonwealth Government and with its core partners for the achievement of documented research outcomes.

During the evolution of the CRCATH's health-outcomes-oriented focus, it became evident that performance indicators in this agreement required further work. As an initial step, the performance indicators were reviewed for inclusion in the strategic plan. Under the general performance area of Application of Research, the following indicators were listed:

- mechanisms in place to facilitate transfer of research to health outcomes
- level of involvement with community and external agencies
- successful research transfer towards health outcomes
- resources allocated to research transfer towards health outcomes

While these performance criteria go some way towards addressing the shortcomings in the 1997 Commonwealth Agreement, the Frommer report makes it clear that substantially more thinking needs to go into this area.

CRCATH management is currently examining literature on so-called 'goal attainment indicators' (Kiresuk 1994) for possible future development. Clearly, the approach to performance assessment which is ultimately taken will need to facilitate and stimulate thinking about new approaches to research transfer, dissemination and health outcomes. Carefully managed, the processes around evaluating the success of CRCATH research investment could constitute a valuable driving force towards a health-outcomes-oriented approach to research.






3.5. Other CRCATH activities aimed at strengthening the links between research and health outcomes

3.5.1. Articulating and describing the desired health-outcomes-oriented research culture

Organisational culture can be described as the commonly accepted norms, beliefs, values, behaviours and work practices in a particular workplace or organisation. Such culture has an enormous, frequently unrecognised, impact on how individuals go about their work, and how such work is rewarded or seen by others.

In June 1999 a meeting was held with the aim of describing both the broad features of traditional research culture and the desired features of a culture necessary to improve Aboriginal health outcomes. The table following, although simplistic, represents the CRCATH's attempts to articulate the features of a health-outcomes-oriented research culture.

<p>"Traditional" research culture</p>	<p>"Health-outcomes-oriented" research culture</p>
<ul style="list-style-type: none"> Central focus on outputs such as reports, publications and papers. 	<ul style="list-style-type: none"> Central focus on improved and measurable <i>health outcomes</i> through evidence-based changes to health policy and service delivery.
<ul style="list-style-type: none"> Major 'audiences' for research: scientific and academic communities. 	<ul style="list-style-type: none"> Various 'audiences' for research considered important: communities, individual health consumers, health policy personnel, health administrators, health practitioners, politicians, media, research and academic communities.
<ul style="list-style-type: none"> Research findings and conclusions largely distributed through rigorously edited and traditionally structured academic journals. 	<ul style="list-style-type: none"> Research findings and conclusions widely distributed in appropriate format for various target audiences, including academic journals, audiovisual presentations, press releases and briefings, posters, brochures, workshops, training courses, conference presentations, working party and policy group presentations. The strategy for distribution of research findings and conclusions is built into the research proposal.
<ul style="list-style-type: none"> Researcher credibility and status largely dependent on number of reports and publications, size of budget and research group. 	<ul style="list-style-type: none"> Researcher credibility and status largely dependent on: <ul style="list-style-type: none"> ability to demonstrate changes in policy, practice or health outcomes arising from research the willingness of research users to seek advice and assistance from the researcher
<ul style="list-style-type: none"> Researcher primarily concerned with developing and protecting own specialist knowledge and expertise. 	<ul style="list-style-type: none"> Researcher primarily concerned with developing the capacity of Aboriginal people to conduct and manage research. Researcher committed to sharing specialist knowledge and expertise, and to empowering research assistants and participants.
<ul style="list-style-type: none"> A major focus on the management of disease, often through discipline-specific research. 	<ul style="list-style-type: none"> Multidisciplinary, integrated approaches to disease prevention and achieving health.
<ul style="list-style-type: none"> Peer assessment processes from within the academic community. 	<ul style="list-style-type: none"> Assessment sought from academic community, users of research and community.
<ul style="list-style-type: none"> Intellectual property and commercial benefit held within research group. 	<ul style="list-style-type: none"> Intellectual, cultural and commercial benefit held in defined partnership with community groups/representatives.
<ul style="list-style-type: none"> Research often discipline-specific. 	<ul style="list-style-type: none"> Various disciplines valued; multidisciplinary and cross-cultural roles and perspectives built into the design and management of the research.
<ul style="list-style-type: none"> Strong competition for research dollars based on the relative merit of individual researchers, and quality of proposed research. 	<ul style="list-style-type: none"> Research dollars allocated around agreed priorities. Collaboration between organisations with acknowledged expertise is encouraged.
<ul style="list-style-type: none"> Researcher/s accountable to research organisation and funding body. 	<ul style="list-style-type: none"> Researcher/s accountable to community, research participants, research organisation and funding body.
<ul style="list-style-type: none"> Embedded in Western scientific rationalist views of health and health issues. 	<ul style="list-style-type: none"> Actively seeks to reconcile Aboriginal and Western views and understanding of health issues.
<ul style="list-style-type: none"> Conceptualisation and planning of research largely undertaken by researcher or researcher group. 	<ul style="list-style-type: none"> Relevant health decision makers and community representatives involved in planning of research.



In seeking to embed a health-outcomes-oriented research culture, the CRCATH, therefore, particularly values and promotes research which:

- involves collaboration in the design, management, evaluation and dissemination of the research
- includes a strong focus on communicating research findings and conclusions in non-academic and cross-cultural contexts
- strengthens Aboriginal research capacity
- encourages multidisciplinary and cross-cultural skills and perspectives
- seeks to address problems through evaluation of health interventions and practices rather than further demonstrating the nature and scale of existing problems

By defining and promoting the desired research culture and the types of research the CRCATH values and promotes, it is hoped that researchers will be prompted to critically analyse their own attitudes, values, beliefs and behaviours as researchers, resulting in an increased effort to facilitate change from their research.

3.5.2. Re-design of the research project application form

From 1997 to 1999 the CRCATH utilised a fairly standard research project application form. As the CRCATH's philosophies, approaches and directions assumed greater clarity and focus, it was decided that this form could become a valuable tool to assist in supporting desired health-outcomes-oriented changes to research culture.

The development of the new form, once again, involved spirited debate, and discussion and analysis of the issues considered important in supporting health outcomes through research.

The new application form⁵ now includes several sections requiring proponents to think carefully about areas of particular interest to the CRCATH in achieving their goal of health-outcomes-oriented focus:

- relevance of the proposed project to the priority areas, philosophy and directions outlined in the 1999-2004 CRCATH Strategic Plan
- identification and prioritisation of the proposed target audiences for the research, and development of appropriate communication and dissemination strategies for each target audience
- details of how Aboriginal people have been consulted or involved in the development of the proposal
- details of how Aboriginal research capacity will be strengthened through the research
- details of both academic/research and service delivery/research transfer experience of proposed researchers

In July 2000 the new form was complemented by the development of a statement of research responsibility, to be signed by the Director of the CRCATH and the project leader of newly approved projects. This memorandum reinforces the project leader's role in all areas of research management, and includes the requirement to fully review the project's dissemination and communication strategy in the last six months of the project. It is expected that this requirement will assist in refining and targeting approaches to ensure that the various potential users of research will be most appropriately informed of the findings and conclusions of the research.

5. Available on CRCATH website: www.ath.crc.org.au/forms

3.5.3. Refocussing of the CRCATH's Research Transfer and Communication Function

From 1997 to late 1999 the Research Transfer and Communication Function of the CRCATH was loosely held within one of the research program areas. With the developing health-outcomes orientation of the CRCATH it was decided that responsibility for this be centralised and coordinated by the Deputy Director.

The restructuring has allowed for systematic consideration of a range of research transfer and communication strategies. The approaches undertaken within the function have been heavily influenced by the work of Johnathon Lomas (1997) who contends that researchers and health decision-makers largely operate independently, with very limited understanding of each group's pressures, roles and potential contribution. In this seminal work, Lomas makes several suggestions to improve the dissemination and uptake of research including:

- identification of the potential users of research in order to tailor appropriate information needs and approaches to disseminating research findings and conclusions (rather than adopting a 'one size fits all' attitude)
- provision of training to researchers and to decision-makers on each other's perspectives with a view to more effective communication
- increasing the interaction between health care consumers, health organisations and researchers in determining research priorities and designing research processes
- establishing clear channels for communication between researchers and decision-makers


In the CRCATH's uniquely challenging cross-cultural and remote-area environment, Lomas's suggestions imply the need for a major paradigm shift in the way researchers approach research transfer and dissemination.

The standard approaches to research dissemination-publishing findings and conclusions in peer-reviewed academic journals and reports, and making presentations at conferences-remain important, but are clearly no longer enough.

In the longer term, the CRCATH is especially committed to identifying, showcasing and exploring more appropriate communication formats for Aboriginal people who speak languages other than English, or for whom English is a second or third language. The delivery of research findings and conclusions to these audiences in such a way as to be both understandable and relevant is an important means of strengthening individual and community capacity to make decisions and improve health outcomes.

In the shorter term, major strategies which have been pursued by the Research Transfer and Communication Function have included continued development of a highly interactive website, and the design and establishment of a plain-English occasional paper series. The function also provides assistance with conducting workshops for service delivery areas on the findings and conclusions of research.





3.6. Four observations on the CRCATH's efforts to strengthen the links between Aboriginal health research and health outcomes

Note: The following comments represent my personal observations, and are not necessarily shared by the CRCATH Board or other stakeholders. Indeed, some observations may be strongly disputed as they attempt to draw general conclusions about highly complex processes and issues on which there are a range of beliefs, practices and experiences. Such conclusions will, inevitably, not reflect individual perspectives of complex issues, but may provide a strategic analysis of some of the factors at play in the development of a health-outcomes orientation for the CRCATH.

These observations will be more thoroughly explored and developed through forthcoming action research into managing, undertaking and disseminating Aboriginal health research for improved health outcomes. I document them here in order to stimulate debate on the CRCATH's change agenda, and, possibly, to assist other research organisations attempting to bring a stronger outcomes orientation to their work in Aboriginal health.

Observation 1: Effective collaboration doesn't just happen: it must be carefully managed.

The bringing together of the *providers* of research and the *users* of research within the CRCATH was premised on the belief that this collaborative framework would result in the research most likely to be implemented in service-delivery environments.

The various core partners of the CRCATH had not always collaborated effectively in the past, and this history had led to levels of suspicion and mistrust strongly evident in the consultations and negotiations which led to the three unsuccessful funding submissions prior to the successful submission made in 1997.

Apart from differing organisational perspectives and allegiances, other factors impeding effective collaboration between the core partners included:

- competition between core partners for diminishing resources
- difficulty in agreeing on research priorities in the face of enormous need
- widespread hostility towards research on the part of many Aboriginal people who increasingly question the benefits of involvement in research
- increasing anecdotal reports of 'research burnout' in some Aboriginal communities

The CRCATH's experience has shown that the bringing together of such disparate core partners has required continued careful management. Activities and approaches which appear to have supported the development of effective collaborative partnerships within the CRCATH include:

- The appointment of a highly credible chairperson with an absolute commitment to constructive collaboration to achieve the CRCATH's mission.
- The appointment of a committed board with a broad range of skills, prepared to spend the time and effort necessary to harness the considerable good intent of all involved in the collaboration.
- The appointment of 'link people' in each core partner. The link people have become valuable 'champions' of the CRCATH within their respective organisations, and have contributed enormously to effective collaboration. Although the roles for link people vary between core partners, the major elements of link roles include:
 - provision of advice on CRCATH policies and activities to respective organisations
 - bringing each organisation's perspectives to CRCATH activities
 - acting as a focal point for two-way information flow between the CRCATH and individual organisations
 - assisting in the collaborative development of research proposals
 - promoting the implementation of CRCATH research findings and conclusions within each organisation
 - promoting a health-outcomes-oriented research culture in each organisation
- Careful attention to planning, conducting and minuting meetings in order to clarify issues and decisions. In the 'virtual' environment of the CRCATH, where most stakeholders hold demanding full-time positions in their respective organisations, and where the opportunities to meet face-to-face are limited, the management and recording of meetings becomes vital.
- A commitment to open and constructive communication between core partner representatives. In the early phases of the CRCATH's development, effective collaboration was constrained by a lack of feedback of board decisions and deliberations to core partner organisations and researchers. With the appointment of two additional full-time management positions, every effort was made to facilitate open and transparent communication at all levels. Although this communication takes time and effort on all parts, it has helped overcome many of the barriers to collaboration.


Observation 2: It remains to be proven whether collaboration will increase the implementation of research findings and conclusions in service delivery environments.

It is now widely accepted that CRCATH core partners are working more constructively and collaboratively than during the CRCATH's establishment phase.

In June 2000 the Board approved a total of nine research projects. Each project had been developed with wide-ranging consultation and negotiation at various levels within the core partners and, in some cases, Aboriginal communities. The new research projects will all involve considerable involvement by core partners, with the support of each relevant partner.

CRCATH management has actively encouraged the lengthy and, at times, seemingly never-ending consultations and negotiations leading to the development of research proposals. Some negotiations were undeniably expensive, involving workshops with representatives of the core partners and other organisations from across Australia. Other negotiations were extended when it became clear that the key players needed more input into the consideration of operational issues around each project.

Management has four major beliefs underpinning its continued support for the resource-intensive collaborative negotiation processes leading to the development of proposals. Firstly, the bringing together of academic, service delivery and community expertise in the design and development of projects is more likely to result in relevant research that addresses pertinent service-delivery issues within a high quality theoretical and methodological framework.



Secondly, the discussion and information sharing that occurs during such exchanges inform both the researcher and the service delivery or Aboriginal community environment. This, in turn, facilitates mutual understanding. Such information sharing can become an important two-way educational process, and may ultimately help reduce the 'chasms' between the academic, service delivery and community worlds.

Thirdly, where people are involved in the planning and design of a project, they are more likely to be interested in the findings and conclusions, and hence more likely to assist in research transfer.

Fourthly, suspicion or concern about the possibility of research felt by anybody involved should be thoroughly aired and considered. This is particularly important where research is to be conducted in the Aboriginal health arena.

Ultimately, however, although it is considered *likely* that collaboration will result in increased implementation of findings and conclusions in health-service-delivery environments, this is *not yet demonstrable* at July 2000. It is envisaged that the action research project into managing, undertaking and disseminating Aboriginal health research for improved health outcomes, will allow full exploration of the outcomes of collaboration. Given the degree to which collaborative mechanisms and processes are alluded to in the Aboriginal health literature over the last few years, this will be an interesting and valuable issue to explore.

Observation 3: The traditional culture of research is generally characterised by reductionist rather than systems thinking; this may be a barrier to research translation.


Systems thinking has been described as 'a discipline for seeing wholes . . . a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static 'snapshots' (Senge 1990).

Recent years have seen countless commentators-Bohm, Capra, von Bertalanffy, Whitehead, t'Hooft, Barlow, Bateson, Salk, Ferguson and Thomas, among others-argue that systems thinking is a critical skill in an increasingly complex and fast moving world. For instance, Senge argues that

[t]oday, systems thinking is needed more than ever because we are being overwhelmed by complexity. Perhaps for the first time in history, humankind has the capacity to create far more information than anyone can absorb, to foster far greater interdependency than anyone can manage, and to accelerate change far faster than anyone's ability to keep pace. Certainly the scale of complexity is without precedent. All around us are examples of 'systemic breakdowns'-problems such as global warming . . . Complexity can easily undermine confidence and responsibility-as in the frequent refrain, 'It's all too complex for me.' Or 'There's nothing I can do. It's the system.' Systems thinking is the antidote for this sense of helplessness that many feel . . . Systems thinking is a discipline for seeing the 'structures' that underlie complex situations, and for discerning high from low for leverage change [Senge 1990].

The proponents of systems thinking contrast such models of thinking with reductionist models of thinking which have dominated Western thinking processes (in particular, scientific thinking) for centuries. The influential theoretical biologist Ludwig von Bertalanffy argued that

[o]ur civilization seems to be suffering a second curse of Babel: Just as the human race builds a tower of knowledge that reaches the heavens, we are stricken by a malady in which we find ourselves attempting to communicate with each other in countless tongues of scientific specialisation . . . the only goal of science appears to be analytical, i.e. the splitting up of reality into ever smaller units and the isolation of individual causal trains. We may state as characteristic of modern science that this scheme of isolatable units acting in one-way causality has proven to be insufficient. Hence the appearance in all fields of science, of notions like wholeness, holistic, organismic, gestalt, etc., which all signify that, in the last resort, we must think in terms of systems of elements in mutual interaction [Von Bertalanffy n.d.].



Attempts to develop a health-outcomes-oriented research centre must be based on systems thinking. The entire establishment of the CRCATH has been premised on the understanding that the sum of the whole is greater than that of the parts. Certainly, many of the health issues at the centre of the CRCATH's strategic plan require multilayered and multidimensional perspectives and skills, especially when attempting to address the socio-economic determinants of Aboriginal health. The CRCATH's Aboriginal stakeholders, in particular, have championed a more holistic approach to health research in order to address the underlying determinants of health problems.

Over time, it has been encouraging to see talented researchers, with high levels of scientific specialisation, taking the opportunity to engage in genuine debate and collaboration with specialists and practitioners from other disciplines and perspectives. For example, a recent paper presented to the CRCATH Board proposed a research project on scabies and suggested a range of integrated biomedical and molecular, and public health interventions which, together, could potentially contribute greatly to improve short- and long-term health outcomes. In writing the paper, particular effort had been made to use plain English so that non-scientists, or professionals from other disciplines, could better understand the rationale for the research and the particular issues being addressed.

In considering the paper, the Board initiated an even more integrated approach by suggesting that the proposed project address general skin health rather than scabies alone. The systems-oriented thinking underlying both the proposed research and the Board's response can be seen as a remarkable demonstration of the necessary paradigm shift towards the philosophies and directions documented in the CRCATH's strategic plan. This example is even more encouraging when one considers the original draft for the scabies research proposal which focused on highly specialised biomedical laboratory questions with only long-term potential benefits.

It's possible that the collaborative strategic planning process undertaken by the CRCATH has fostered an environment in which systems thinking (and associated collaborative negotiations and consultations) are more likely to flourish.

It is of note, however, that some researchers expressed skepticism about the value of such an exercise, and repeatedly requested that the CRCATH just 'choose some research topics' and 'get on with it!' For these researchers, the socio-political, cultural, economic and service-delivery contexts surrounding their proposed research topics appeared irrelevant. Such reductionist thinking could well, if the research had gone ahead, mitigate against research translation. It is precisely these 'grey contextual issues' which have repeatedly prevented the implementation of conclusive research in the past.


Observation 4: A health-outcomes-oriented research culture needs to differentiate between research 'outputs' and 'outcomes', and must proactively pursue the latter.

In making the case for the recently approved action research proposal into managing, undertaking and disseminating Aboriginal health research to lead to improved health outcomes, the work of the American strategic planning expert Professor Roger Kaufman was extensively mentioned. Kaufman premises much of his work on what he calls the Organisational Elements Model (Kaufmann 1991).

This model proposes five key elements for any organisational activity: inputs, process, product, outputs and outcomes. Kaufman argues that the first four elements, inputs, processes, products and outputs are *internal* to the organisation. The final element, 'outcomes', are *external* to the organisation, and include all the effects of the organisation's activity on society and the community. Kaufman, therefore, clearly distinguishes between outputs and outcomes.

The following diagram explores the Organisational Elements Model as it may apply to the desired health-outcomes-oriented environment of the CRCATH:

INPUTS	PROCESSES	PRODUCTS	OUTPUTS	OUTCOMES
(\$\$\$\$, materials, expertise, experience)	<i>(how the organisation goes about managing and undertaking its work)</i>	(results produced along the way; en route results)	(the total products of the organisation which are available to be delivered to society)	(the effects of the outputs of the organisation's internal activities on society and the community)
Board and Executive Committee expertise researcher expertise infrastructure funding etc.	Board and Executive Committee management processes research project planning, implementation and dissemination processes etc.	notes from strategic and operational planning workshops research data and monitoring reports etc.	strategic and operational plans as set by the Board and Executive Committee research project level products such as academic papers, reports, audiovisual materials, posters, brochures etc.	improved health outcomes arising from the efforts of Board and Executive Committee and researchers, e.g. improved mental health outcomes arising from social and emotional well-being project new policies and strategies based on research changes to work practices and practitioner beliefs arising from research changes to people's behaviour arising from research
INTERNAL (organisational)				EXTERNAL (societal)
organisational efforts		organisational results		SOCIAL IMPACTS AND RESULTS



Kaufman argues that any organisation seeking to achieve outcomes in the broader society, must constantly, critically and stringently review the management of its internal processes, at strategic and management levels, and operational (project) levels.

It could be argued that the traditional culture of research has an undue emphasis on research outputs rather than outcomes. The central preoccupation with the preparation of academic papers for presentation to international journals, and with presentations to conferences (often consisting largely of an audience of academic peers) has now been reinforced by staff promotion criteria in many academic institutions. Traditionally, such products have been valued far more than any evidence that the research has been translated into policy, practice, service delivery and behavioural change.

The CRCATH is now actively seeking to recruit researchers and/or service providers who can demonstrate that they have worked effectively at the interface between research and policy and practice, but who may not have the highest level of formal academic credentials. In the health-outcomes-oriented environment of the CRCATH, it is believed that people with the drive and determination to participate in research and then to see it through to translation have more of the requisite knowledge and understandings to ‘make a difference’ in Aboriginal health than those who may have worked exclusively in academic worlds.

By differentiating between outputs and outcomes from research, the need for more targeted research transfer and dissemination practices is also highlighted. Clearly, if a researcher is seeking to change attitudes, policy and practice outside the academic community, there will need to be a range of communication and dissemination strategies available to effectively influence those who do not routinely read journals and attend conferences. Researchers, and research organisations, will need to become more adept in dealing with the media, conducting workshops, preparing and presenting briefings to policy development personnel and decision-makers, and in preparing plain-English audiovisual and written materials.





3.7. Concluding remarks

This paper constitutes a small part of an enormous and exciting ‘work in progress’ being undertaken by the CRCATH. The work is immensely challenging and rewarding as it brings together talented and dedicated people with considerable good intent, and provides a real opportunity to ‘make a difference’ in Aboriginal health. Since its establishment in July 1997, the CRCATH has come a long way towards genuinely orienting itself to health outcomes, and there is strong motivation to continue with this challenging work and to learn from our inevitable mistakes.





















Appendix

EXECUTIVE COMMITTEE RESEARCH ASSESSMENT SHEET

NAME OF

PROJECT:

CRITERION	RANKING Low  High	COMMENTS / SUGGESTIONS
RELEVANCE TO CRCATH STRATEGIC PRIORITIES Appropriateness of research issue or problem being addressed (CRC priorities, scale and severity of problem) Appropriateness of research focus (ie stage on research focus wheel, building on what we know) Potential for changes from research (ie degree of support from Core partners, policy, political and financial barriers or opportunities) Extent to which the proposed research addresses CRCATH priority health conditions and one or more of the critical enabling factors in the plan.	   	
RELEVANCE TO CRCATH PHILOSOPHY AND DIRECTIONS: Potential for research transfer (potential users appropriately involved, various audiences identified, information dissemination and communication strategy recognises various audiences, service delivery arms show support for research). Degree to which communication and information dissemination strategy takes account of various target audiences. Evidence of incorporation of findings / learning's from previous research in the area. Potential for increased Aboriginal research capacity arising from project. Relevance of training and development opportunities for researchers. Evidence of appropriate consultation during development of proposal.	     	


EVIDENCE OF ROBUST AND APPROPRIATE RESEARCH METHODOLOGY AND FUNDING		
Clarity of research aim / question		
Likelihood of answering research questions in such a way as to provide a useful applicable information.		
Appropriateness / Soundness of proposed research methodology.		
Capacity to undertake the project as detailed (availability of competent researchers, necessary Core Partner infrastructure availability).		
Achievability of research (time frames, appropriate and adequate supervision, adequate time and dollars for remote area travel).		
Degree of balance between cost of doing research and risks of not doing it.		
Potential benefits from collaborative framework of CRCATH inherent in design methodology and project staffing and infrastructure.		




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