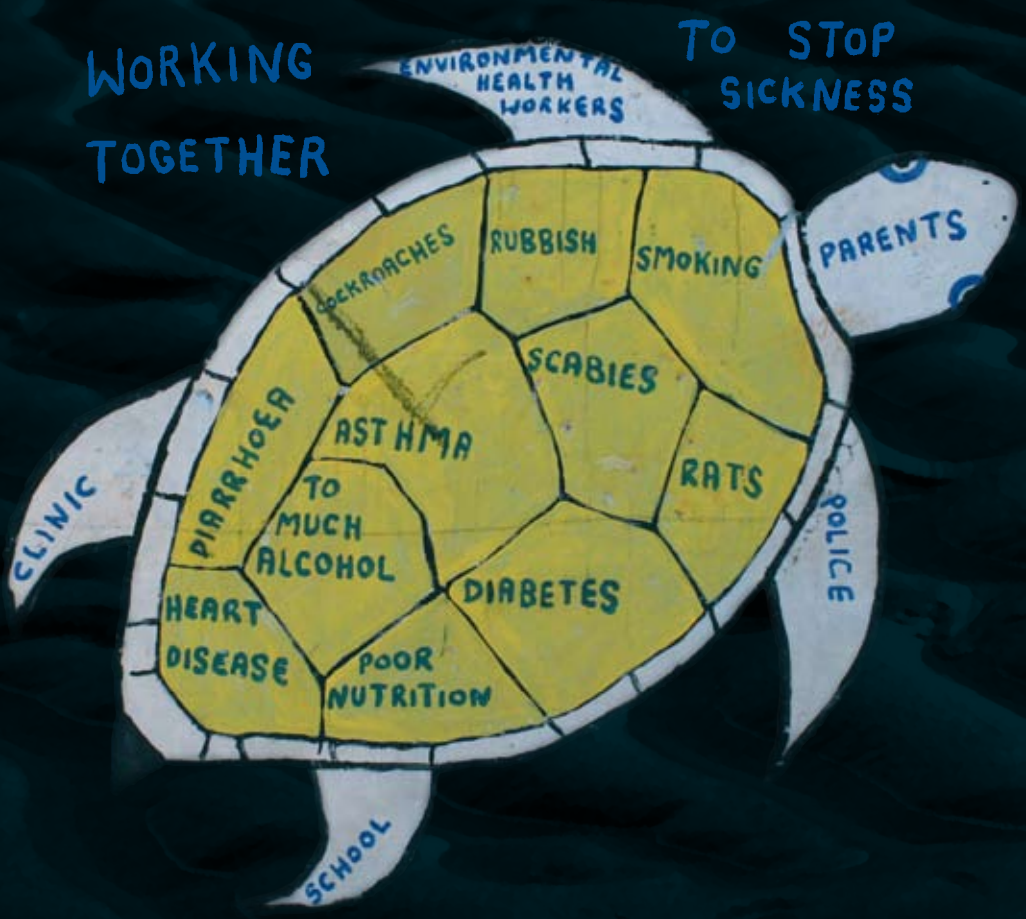

Making Research Relevant: Grant Assessment Processes in Indigenous Research

Jackie Street • Fran Baum • Ian Anderson

Cooperative Research Centre for Aboriginal Health

Discussion Paper Series: No. 3

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Jackie Street

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A joint project between the Department of Public Health at Flinders University and the Cooperative Research Centre for Aboriginal Health.

Cooperative Research Centre for Aboriginal Health

Onemda VicHealth Koori Health Unit

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Cooperative Research Centre for Aboriginal Health
PO Box 41096, Casuarina
NT 0811 AUSTRALIA
T: +61 8 8922 8396
F: +61 8 8922 7797
E: admin@crcah.org.au
W: www.crcah.org.au

Authors: Jackie Street, Fran Baum and Ian Anderson

CRCAH Program Manager and Editorial Consultant: Barbara Beacham

Copy Editor: Cathy Edmonds

Managing Editor: Jane Yule

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Cooperative Research Centre for Aboriginal Health: Discussion Paper Series

The Cooperative Research Centre for Aboriginal Health (CRCAH) has instituted this Discussion Paper Series as a forum for its researchers, students and associates. The purpose of the DPS is:

- To make informed and evidence-based contributions to critical policy debates affecting the health of Aboriginal people.
- To disseminate the research findings of CRCAH researchers, students and associates quickly, without the delays associated with publication in academic journals, in order to generate comment and suggestions for revision or improvement.
- To provide CRCAH researchers, students and associates with an avenue to present preliminary documents, circulated in a limited number of copies and posted on the CRCAH website, intended to stimulate discussion and critical comment on the broad range of issues associated with the CRCAH research agenda.
- To allow CRCAH researchers, students and associates to draw out the key issues in Aboriginal health research through literature reviews and critical analyses of the implications for policy and practice.

Submission criteria

Submission to the Discussion Paper Series is open to all CRCAH researchers, students and associates working on either funded or in-kind CRCAH projects. The research findings in discussion papers may already have been presented at conferences or workshops, but generally will not yet have been published in journals. Authors should try to ensure that the discussion paper will be sufficiently different from any future journal article that they plan to write so as not to create a redundant publication.

Review process

All discussion papers will be reviewed either by internal CRCAH reviewers or, where appropriate, external referees. The CRCAH's editorial committee will assess the suitability for publication of all submissions and select reviewers for successful papers. Reviewers will include relevant scientific expertise, and representatives of governments and the Aboriginal health sector.

Feedback

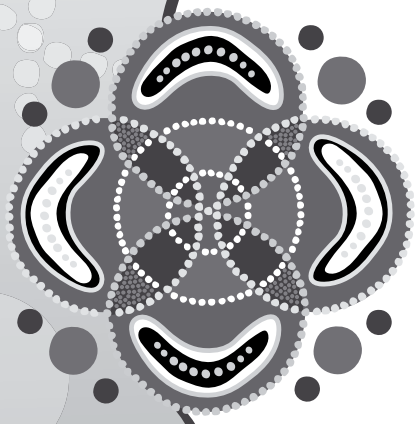
The Discussion Paper Series is intended to promote the rapid dissemination of research results prior to publication; comments submitted directly to the authors are therefore welcomed. However, as results are often provisional any citation should take account of this.

Publication details

Discussion papers will be published on an *ad hoc* basis throughout the year (3–4 p.a.). They will be available both in printed and electronic formats (as pdfs that can be downloaded from the CRCAH website: *www.crcah.org.au)*. The views and opinions expressed in the Series will not necessarily reflect those of the CRCAH.

Submission details

All submissions to the CRCAH Discussion Paper Series should be directed to the CRCAH Publications Manager, Jane Yule (janesy@unimelb.edu.au) with the relevant Program Manager copied into the email.



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Acknowledgments

This research was funded by the Cooperative Research Centre for Aboriginal Health, Darwin.

The researchers acknowledge the valuable input from the project steering group (see Appendix 1) in the development of this project and the writing of this document, and also the input of the individuals interviewed for this project and the organisations consulted throughout the process (see Appendix 1). We have attempted to present the perspectives of all these parties in this report, but the responsibility for the choice and synthesis of these perspectives in this report lies with us.

Some of these findings have been reported previously in Street, J., Baum, F. & Anderson, I. 2007, 'Developing a Collaborative Research System for Aboriginal Health', *Australian New Zealand Journal of Public Health*, vol. 31, no. 4, pp. 372–78.

Please note: 'Aboriginal' is used throughout this report to refer to Aboriginal and Torres Strait Islander peoples.

Dr Jackie Street (The University of Adelaide), Professor Fran Baum (Flinders University) and Professor Ian Anderson (The University of Melbourne)

Abbreviations

AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
AMS	Aboriginal Medical Service
AMSANT	Aboriginal Medical Services Alliance of the Northern Territory
CBPR	Community-Based Participatory Research
CIHR	Canadian Institutes of Health Research
CRCAH	Cooperative Research Centre for Aboriginal Health
CRCATH	Cooperative Research Centre for Aboriginal and Tropical Health
EOI	Expression of Interest
IHS	Indian Health Service
NHMRC	National Health and Medical Research Council
SME	Small to Medium Enterprise

Research Uptake: How the CRCAH Has Applied the Findings of this Report

When the CRCAH commissioned this research, it was in the midst of a crisis triggered largely by a clash of cultures and a struggle for power over research dollars. Part of the CRCAH's role is to fund research through its partner organisations, and it was endeavouring to shift its research grant processes to align with the principles of the Indigenous Research Reform Agenda articulated through its predecessor, the Cooperative Research Centre for Aboriginal and Tropical Health. The most important principle of that reform agenda was that Aboriginal people should control research about Aboriginal issues.

The grant round upon which this report reflects provoked dissatisfaction both from those with a traditional researcher-driven perspective, and from Aboriginal people who wanted research that specifically met their urgent and immediate needs to produce better health outcomes. The review process involved not only researchers, but also reviewers who brought the perspectives of Aboriginal communities, governments and service providers. It had set broad priorities against which research proposals could be framed, but the projects put forward from the research community still largely reflected the priorities of researchers, not Aboriginal people or other users.

It is unusual to be able to comment on the application of research findings at the time of publication, but this research project directly influenced the CRCAH's developing research assessment processes almost from the point at which it began. This was partly due to the involvement of CRCAH staff and management with the project's steering group, reflecting the principle that research uptake is encouraged by involving those who can apply the findings from a project in the conduct of a project itself. It also reflects the reality check that an assessment of the evidence can bring to contested arenas—the evidence showed that traditional peer review processes did not necessarily guarantee either quality or outcomes. In this sense, the project helped to validate the shifts away from traditional research grant processes that the CRCAH was hoping to make.

As a result, the CRCAH now has a unique approach to the development of research projects that reflects this project's emphasis on collaboration rather than competition, on the facilitated development of research proposals and programs of work, and on interactive assessment processes through which projects are scrutinised not only for scientific validity but feasibility and relevance in the Aboriginal context. Importantly, the entire process is driven by priorities set by the potential users of the research: Aboriginal people, government agencies and service providers. The CRCAH has named this process the Facilitated Development Approach, or FDA. (A complete description of this process is available in Brands, J. & Gooda, M. 2006, 'Putting the users of research in the driver's seat: The Cooperative Research Centre for Aboriginal Health's new approach to research development', Australian Aboriginal Studies, no. 2, pp. 27–35).

The research assessment part of the process, to which this report contributed most directly, is in some ways the most rewarding of the steps in the FDA. The quality assurance process that has been adopted by the CRCAH involves a group of reviewers for each project under development. These reviewers include relevant scientific expertise, along with potential end-users of the research from Aboriginal organisations and government agencies. They provide feedback on the project in terms of both technical and merit review, and meet face-to-face with the project team to ensure the strongest possible quality of the project protocol. It is anticipated the review team may maintain a watching brief throughout the life of the project, and in some cases even become part of the project team.

It is at the face-to-face workshops where reviewers and project teams come together that the strength of this quality assurance process is most evident. Many non-research reviewers—often holding quite senior positions within government or Aboriginal controlled organisations—come to the workshop feeling nervous about the contribution they might be able to make. Yet once discussion begins, they find that their views are valued and valuable, particularly in ensuring that the project will work in the real world. Project leaders coming to the

workshops often feel very vulnerable, that their project is going to be scrutinised in ways that are unfamiliar. However, the willingness of reviewers to contribute their views and their generous commitment to try to ensure the project is the best it can be usually leaves the researchers feeling that both the project proposal, and they as individuals, have benefited enormously from the process. As one researcher put it:

> *It's a great process. It's a bit harrowing, I think I'm getting used to feeling like an insect under a microscope, but it's been very valuable.*

If all this sounds rather warm and fuzzy, it is not. Tough issues are raised, often challenging some of the fundamentals of the proposal. But they are raised in an environment that is made safe for both researchers and reviewers by the CRCAH's facilitation processes. To date, a number of proposals developed through this process have later gone on to win National Health and Medical Research Council grants for the stages of the project that lay beyond the funding capacity of the CRCAH.

The work done by Jackie Street, Fran Baum, Ian Anderson and many others in contributing to *Making Research Relevant: Grant Assessment in Indigenous Research* directly informed the development of these processes, and provides an important validation of this alternative method of assessment. This has helped to make the CRCAH what it is today: a research organisation on the cutting edge of international efforts to make sure that research makes a difference.

Key Messages

Why peer review?

- Peer review forms part of research quality assurance (QA).
- Peer review helps to maintain academic standards or rigour and credibility, and can contribute to preserving competitiveness of research proposals (if this is necessary).
- Peer review supports transparency, which helps to protect organisations from accusations of bias and nepotism.
- Peer review can ensure legitimacy (appropriateness) of research in relation to stakeholder viewpoint.

What should QA processes try to achieve?

- Quality control from a scientific/academic standpoint (rigour and reduction of duplication).
- Engagement of stakeholders (e.g. Aboriginal communities).
- Ensure that proposals meet identified stakeholder needs and priorities (merit, usefulness, relevance, legitimacy and appropriateness).
- Support research transfer activity.
- Capacity development through constructive criticism and advice.
- Advice on what proposals will be 'best buy' (in competitive situations).

Types of assessment and which assessors should be involved?

- Technical review—use external assessors (scientific rigour and validity).
- Merit and technical review—use researchers to conduct technical review, use industry/community reviewers to review usefulness (merit) of proposals.
- Local review—use community groups to provide local critique of relevance/appropriateness (merit) of proposals.

Important qualities of a workable QA/review process

- Reviewers only to comment on strengths and weaknesses of proposals (not on whether they should be funded).
- Innovative techniques are used where needed to support engagement of all stakeholders in processes.
- Training or mentoring is provided to ensure stakeholders can engage as fully as possible in processes.
- Sufficient time is allowed to ensure real stakeholder involvement in processes.

Tips for successful QA/review processes

- Use a combination of types of reviewers in QA process.
- Ensure processes include both merit and technical assessment processes.
- Ensure transparency and openness.
- Include as many academic peers as possible.
- Ensure Aboriginal perspective is strongly heard in process.
- Involve policy advisors/makers in process.
- Include people from outside present network in process, e.g. other service providers/foundations.

Executive Summary

The Cooperative Research Centre for Aboriginal Health (CRCAH) is committed to influencing positive changes to the way research is undertaken in Aboriginal contexts. The CRCAH has made considerable steps towards developing a new approach to commissioning and applying research by adopting a facilitated process in which research priorities are identified in consultation with health service industry partners.

Early CRCAH research rounds in 2003/04 were competitive and used brief expressions of interest as a method of screening prospective projects. The proposals were assessed in a merit review process that included industry/community representatives and academics. The scheme met with considerable difficulties, which this research suggests may have been due, in part, to differences in interpretation by applicants, CRCAH staff and assessors of the application guidelines. More recently, the CRCAH moved towards a collaborative approach to developing and assessing research proposals, broadly within the original identified research priorities.

The CRCAH commissioned this work in 2004 to support critical examination of its research assessment processes and to provide advice about how these might be improved. The key findings, conclusions and main messages are based on an assessment of international literature on grant processes and peer review and on eighteen interviews with key informants from within and outside of the CRCAH.

Key findings for the CRCAH

Building a collaborative and inclusive research culture

- The shift from competition to meaningful collaboration in developing and assessing research requires increased involvement by decision makers in the research process—from the inception of the idea through to transfer of research findings into policy and practice.
- The CRCAH should play a major role in brokering collaborative links between community organisations/service practitioners and academic researchers.
- The CRCAH should continue to be formally involved in mentoring Aboriginal researchers in the grant application process, research practice and dissemination and in mentoring non-Aboriginal researchers in the appropriate conduct of research in Aboriginal communities and in research transfer.
- Collaboration may be improved through financial support for development activity, formal stakeholder feedback arrangements and clear guidelines on the process.

A program-building approach

- Programs of research should be developed using a small group of diverse experts including service providers and research transfer experts; with the support of a facilitator, (e.g. Program Manager).
- A collaborative organisational culture supports capacity to influence the formation of such groups and contribute to their maintenance.
- Peer review and merit review should occur throughout program building and throughout the research development process.

The assessment process

- The research assessment process should be part of a collaborative and supportive research development process.
- Critical assessment should be obtained from a range of 'friendly' critics—academic, community members, service providers and policy makers.
- Strong Aboriginal representation on review and/or program panels is essential. This may be sourced within and outside the CRCAH partners, for example, in government health departments.
- Review by academic experts (peer review) will provide credibility and rigour and may reduce duplication.
- Wider 'merit' review will provide robustness, sustainability and effectiveness and support appropriate engagement of communities.
- Merit review should occur through innovative means such as informal site visits, or face to face meetings.

Conclusions for the CRCAH

- The CRCAH research assessment process should be part of a collaborative and supportive research development process with clearly defined criteria for assessing both technical aspects and merit.
- Critical assessment should be obtained from a range of 'friendly' critics—academic, community members, service providers and policy makers—with adequate avenues to ensure clear communication between these groups. This assessment should be as transparent as possible.
- Greater Aboriginal representation on review and/or program panels is essential.
- Peer review by academic experts is essential for credibility and rigour and the elimination of duplication.
- Wider merit review by stakeholders (policy decision makers, community) is necessary for robustness, sustainability and effectiveness, as well as to ensure the appropriate engagement of communities.

Introduction

This work investigated methods for the appraisal of grant proposals submitted to the CRCAH, including peer review practice (see Appendix 2 for research aims). The CRCAH was inaugurated in 2003; its predecessor, the Cooperative Research Centre for Aboriginal and Tropical Health (CRCATH), functioned from 1997–2003. One of the key interests of both organisations has been the development of a robust system of research commissioning and review that facilitates meaningful research which directly informs practices and policies likely to improve Aboriginal health status.

Aboriginal people have been critical of the research carried out in their communities for a long period of time. Anger at invasive, exploitative, insensitive, destructive or unproductive research has lead to a deep distrust of researchers and research, which resonates still. Emerging Aboriginal activism in the 1970s saw research as a problem that needed to be addressed (Humphery 2001). This translated into 'articulation of Indigenous concerns' and advocacy for 'extensive Aboriginal involvement in and control of research and for the research undertaken to be relevant and beneficial for communities' (Humphery 2001). The National Workshop of Aboriginal People, convened in 1988, looked at research in Aboriginal health and concluded that:

> it is likely that the research worker would find that the relative merits of basic and applied research as they are perceived by scientists in general would differ from the merits perceived from the Aboriginal point of view (Medical Research Ethics Committee [NHMRC] 1988).

A letter to the Aboriginal and Torres Strait Islander Women's Task Force on Violence (1999) summarises the feelings of many Aboriginal people: 'As you know we have been researched to death—now, we need action.' The findings of the Indigenous Research Reform Agenda in the Links Monograph Series echoes this in calling for a fundamental shift in the way research is conducted: 'a shift away from non-Indigenous individualistic investigator-driven research to some "new way"'(CRCATH 2002:3).

Until recent years, research proposals in health and medical science have been almost completely 'researcher driven' and, given the low numbers of Aboriginal people involved in research, this has meant that Indigenous research has been driven by non-Indigenous people. It is only in the past fifteen or so years that this situation has changed, and bodies such as the National Health and Medical Research Council (NHMRC) have moved to commission research defined as being of national priority and developed clear guidelines for the need for full involvement of Indigenous people in the research process (Humphery 2002; NHMRC 2003).

The CRCATH and the CRCAH have already done much to change the dynamics of Aboriginal health research. In doing this they have contributed significantly to dispelling long-standing dissatisfaction with the way in which research is conducted in Aboriginal contexts. The CRCAH has made considerable steps towards developing a new approach to commissioning and applying research by adopting a commissioning process in which research priorities are identified in consultation with health service industry partners. Early CRCAH research rounds in 2003/04 were competitive and used brief expressions of interest as a method of screening prospective projects. The proposals were assessed in a merit review process that included industry/community representatives and academics. The scheme met with considerable difficulties, which this research suggests may have been due, in part, to differences in interpretation by applicants, CRCAH staff and assessors of the application guidelines. More recently, the CRCAH has moved towards a collaborative program approach to commissioning and developing research proposals, broadly within the original identified research priorities.

Learning from the experience of this first research round and an extensive consultation with key stakeholders, the Research Development Group and the board of the CRCAH have defined five program areas within which to develop the CRCAH work. A research program is defined by the CRCAH as comprising

> a number of related research projects, research transfer and capacity development activities, that together form a coherent approach to addressing areas in which improvements in knowledge or its uptake may lead to health gains (CRCAH 2004b:4).

The five programs areas subsequently identified were:

- Healthy Skin (scabies and skin diseases)
- Chronic Conditions
- Comprehensive Primary Health Care, Systems and Workforce
- Social Determinants of Health
- Social and Emotional Well-Being (CRCAH 2005).

These programs are supported by a program statement that details the rationale, focus and approach of the program and provides guidance for researchers, policy makers, practitioners and others who want to engage with the CRCAH. A stated intention of the Research Development Group and the board in developing these programs and processes to support them is to develop a system of review of research proposals that is less competitive and more supportive and collegial.

During the period that this work was undertaken, the CRCAH made significant changes to its system of commissioning and assessing research. The interviews and discussions associated with this work provided key people associated with the CRCAH with an opportunity to reflect on the research process, and thereby played a role in shaping the decision-making processes. This report provides further material to inform the ongoing process of developing a meaningful Aboriginal research agenda.

Methods

This research was carried out as a collaborative project between the CRCAH and the Department of Public Health, Flinders University. Research design was by Dr Jackie Street and Professor Fran Baum (Department of Public Health), with input from Professor Tony Barnes and Professor Ian Anderson (CRCAH). Further development of the project was carried out in conjunction with the board of the CRCAH, a project steering group of interested parties (see Appendix 1) and CRCAH staff, including Dr Danielle Campbell, Ms Jenny Brands and Ms Nea Harrison. Dr Jackie Street and Dr Danielle Campbell, under the guidance of Professor Fran Baum, undertook both an extensive literature search and the interviews.

Aim

To strengthen the quality of Aboriginal health research, through the development of a robust system of research commissioning and review that facilitates meaningful research which directly informs practices and policies likely to improve Aboriginal health status.

Objectives

1. To review the evidence on quality assessment in public health and health services research, particularly with respect to the use of peer review and with specific emphasis on Indigenous health research.
2. To identify practical, effective, alternative structures for use in the initiation, conduct, assessment and long-term evaluation of research grant proposals and publications within the CRCAH and elsewhere. In this it will draw on previous research carried out in the Indigenous Research Reform Agenda (CRCATH 2002).
3. To identify the most suitable format for the use of peer review in Indigenous research assuming peer review is a part of this alternative structure.

Although the emphasis of this work was towards the development of alternative structures for quality assessment of grant proposals and publications, we believe that quality assessment cannot be completely separated from the processes of research commissioning and research outcome evaluation and, therefore, review of these other components as a part of the whole process was incorporated into the early stages of the research study and continued to arise in later interviews.

Approaches

This work draws on an extensive literature review (see Box 1, p.37) and eighteen in-depth interviews. Interviewees were provided with a discussion document drawn from analysis of material presented by the literature review prior to the interview. This document provided analysis of peer review with respect to historical background, purpose, alternate systems, effectiveness, choice of peers, the conflicting views on quality assessment processes and particular challenges in Indigenous health research. 'Questions for reflection' were posed throughout.

Semi-structured in-depth interviews were conducted either by telephone or face-to-face. Interviewees were asked to reflect on the discussion paper and about their experiences with the CRCAH funding and peer review process (see Box 2, p.38). (This experience might include as an applicant, a reviewer, a program leader, a member of a review panel, a board member with final approval power, or as a member of a community group involved in priority setting.)

This research was an iterative process in which the discussion document and interview schedule were updated as the research findings and feedback from the project steering group informed the project. At the close of the data collection process, an interim report was sent to the project steering group, all participants and the community organisations. Feedback was incorporated into the final report. A schematic of the research process is shown in Figure 1 (see p.39).

Selection of participants

Thirty-one individuals were selected for interview using stratified purposive sampling within a sampling frame of organizations associated with the CRCAH: participants were categorised by disciplinary/work focus (social scientist, biomedical scientist, academia, service provision) and cross-categorised by their relationship to CRCAH. The latter category included board members, CRCAH staff, research theme leaders, research development group members and applicants for research funding (successful, unsuccessful and potential future applicants). All interviewees had many years' experience in Aboriginal research or were directly involved with either CRCAH or service provision to Aboriginal communities.

Selection criteria included:

- involvement in the development of policy and/or practice in the CRCATH or CRCAH;
- an interest in the area of research policy;
- random selection of successful and unsuccessful grant applicants; and
- random selection of potential applicants who were research officers in organisations involved in Aboriginal research.

Eighteen individuals were interviewed, evenly divided between academic and industry/community stakeholders. Particular efforts were made to include Aboriginal participants in the study and one-third of the interviewees are of Aboriginal descent. Thirteen individuals were approached who were not interviewed. Of these five had significant input through other channels and two were on leave. The remaining six did not reply to a letter or the follow up email. Since the eighteen interviewees met the criteria set out in the sampling framework. Although our data analysis suggested we were approaching theoretical saturation there was some residual diversity of opinion among the stakeholders.

Interviewees came from a range of organisations: Aboriginal Health Council of South Australia; Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS); Aboriginal Medical Services Alliance of the Northern Territory (AMSANT); CRCAH; Curtin University; Danila Dilba; Flinders University; La Trobe University; Menzies School of Health Research; The University of Melbourne; a remote-area Aboriginal-controlled organisation; an urban alcohol and drug centre.[1]

Format of participant tags

The participants in the research process were individually coded to allow cross comparison of their contributions to the document. They were coded as Academic (A) if their principal association was with an academic institution, and Industry/Community (IC) if their principal association was with an Aboriginal service organisation or community group. The latter group included CRCAH staff. It is recognised that this is a somewhat artificial division but serves to show that many views are shared by both academic and industry participants. In addition, each participant was given an individual identifying number. Direct quotes from interviews are shown in italics.

Data analysis

Interviews were recorded and the transcripts thematically coded, initially using the framework of the interview schedule (see Box 2, p. 38)—codes such as 'EOI' for 'experience with expression of interest round' were used. Subsequent recoding led to new themes, which cut across the original codes. Some themes, such as 'the desired qualities of assessors', persisted throughout the research process; others, such as 'transparency', arose during the interview cycles; still others, such as 'tensions in the review process', emerged from recoding. The major theme that emerged from recoding was the need for a system that better supported collaboration. The emerging themes were more generic and less focused on past CRCAH process and structure.

Community consultation

Danila Dilba Biluru Butji Binnilutlum Medical Service Aboriginal Corporation, the Aboriginal Health Council of South Australia and the Central Australian Aboriginal Congress were consulted with respect to the project at various stages in the research process through representatives on the project steering group or through interviews of representatives and feedback on the interim report.

Project steering group

The project steering group, which provided oversight of the research process, included representatives of organisations and government departments engaged in Aboriginal research (see Appendix 1). The group met by teleconference four times over the course of a year and provided input on the development of research questions, scope and focus of the literature review, development of a discussion document, selection of participants, interview questions, community consultation process and feedback on the report arising from the findings. Throughout the research process, members of the project steering group were encouraged to raise any issues that they believed might impact on the credibility and rigour of the project. Several members of the project steering group provided extensive comment on the discussion document and final report, and their feedback was invaluable in formulating and refining the research.

Ethics

This research project was approved by the Flinders University Social and Behavioural Research Ethics Committee and the Aboriginal Health Research and Ethics Committee of the Aboriginal Health Council of South Australia.

[1]These organisations are not identified in order to protect the identity of the participant.

Peer Review: Its Strengths and Shortcomings

What is peer review?

Peer review describes a system whereby appropriate academic experts are asked to determine *pro bono* the quality of a research proposal or academic paper. Such review of research grant proposals by other researchers ('peers') has been the standard method of judging the quality of research proposals internationally for some fifty years. In the past this has often been without guiding criteria for assessment. The CRCAH and its predecessor the CRCATH also adopted this system. In the early stages of this project, a short discussion paper was written, which summarised the evidence available on quality assessment in health research and, in particular, the use of peer review. From this it became apparent that peer review emerged as the 'gold standard' for quality assessment in the post-World War II era when systems for government support of scientific research were organised and formalised (Wood 1997). Since this time, the structure of peer review has endured virtually unaltered despite enormous changes in the pressures on, expectations of and size of the health research community.

Underlying peer review are many of the concepts familiar to 'Western' societies: democracy, competition, free enterprise, volunteerism and the idea that we can test for competence and ability. Similarly, it is part of a system that embraces the underlying beliefs of the scientific culture in scientific method, the value of 'expert' academic opinion, and the integrity, uniqueness, separateness, objectivity and autonomy of academic research. These cultural beliefs are the product of a particular Western, enlightenment worldview and may not be universally shared. In addition, the culture extols the unfettered sharing of information within the culture in juxtaposition with intense competition fuelled by the increasing need for academics to raise money to fund their research, including their own salaries and those of their co-workers.

Criticism of effectiveness of peer review

Supporters of the present structure of scientific research have tended to place much store on the impartiality of science and scientific research. However, as early as 1964, Jacob Bronowski, in his book *Science and Human Values*, suggested, 'Those who think that science is ethically neutral confuse the findings of science, which are, with the activity of science, which is not' (Bronowski 1964:63). Fiona Godlee (2000:61), in quoting Bronowski, comments, 'If this is true we should not expect peer review to be ethically neutral either since it is part of the activity of science.' These views refute the notion that an entirely objective review is possible and suggest that peer review, as with other activities within research, must, in part, reflect the worldview of the researcher providing the review.

Peer review by its very nature tends to reinforce the existing power structures and research priorities. In particular, it can be argued that traditional peer-review processes support the dominance of the biomedical model in the power structure of health research: participation by community non-peers, social scientists and primary health care practitioners in research-funding decision making is minimal. Inherent conflicts of interests occur: the peer often competes for the same funding as the research applicant and the expert academic peer has a vested interest (even if it is not explicitly acted on) in propagating a system in which academia and the researcher's own research area and methodologies flourish. This is particularly problematic in Indigenous research, where the existing power balance, focus of the research and control of the research process continues to be questioned.

Reflection: Issues for the CRCAH

The belief that Aboriginal people should have increased participation in their own research is central to the work of the CRCAH and its predecessor, the CRCATH (see Appendix 2) (CRCATH 2002). There is tension within the CRCAH and the Aboriginal research arena, generally, between those who advocate for complete Aboriginal control of the research, either under the aegis of Aboriginal researchers or by communities/community organisations, and those who support increased community consultation within a more traditional researcher-controlled research system, where the researchers may be non-Aboriginal.

In recent years, systems incorporating peer review on its own or in combination with editorial review have been criticised in mainstream health research on many counts, including perceptions of bias in the process, the power of elite researchers, problems defining excellence, problems defining peers, lack of transparency, conflicts of interest, misuse of confidential information, cost, inability to detect fraud, suggestions that they stifle innovation, issues of power balance, and the lack of evidence to support their efficacy (Forsdyke 1993; Rennie 2003; Wood & Wessely 2003). On the last point, it is now apparent that the evidence for the efficacy of peer review is slight. A recent systematic review looked at the effectiveness of the grant-giving, peer-review process on importance, relevance, usefulness, soundness of methods, soundness of ethics, completeness and accuracy of funded research (Demicheli & Di Pietrantonj 2003). The review concluded that there was little empirical evidence for its efficacy. Two studies have shown that the success of a grant application can be attributed to chance in a significant proportion of cases (Hodgson 1997; Cole 1998), and that this error margin may be more marked in health service and public health research compared with medical research (Thorngate, Faregh & Young 2002).

The fallibility of peer review has been illustrated in a spectacular fashion on a number of occasions by its inability to detect fraud (Lock 1993; Whiteley, Rennie & Hafner 1994; LaFollette 2000 and numerous others), in its initial rejection of manuscripts that went on to be highly cited (Dixon 1993; Lock 1993; Rennie 2003), its failure to recognise outstanding grant proposals (Prescott 1992 cited in Forsdyke 1993; Glantz & Bero 1994) and even, as one critic suggested, in its inability to foresee the 'predictable failure' of a research project in Indigenous research (Sibthorpe *et al*. 2002). Of course, 'predictability' may be easier to spot when viewed in hindsight.

Perhaps even more problematic is the pressure of large numbers of excellent grant proposals under conditions of extremely limited resources. This condition, which is increasingly common in grant review systems everywhere, results in a system where minor errors in the application mean the difference between funding and rejection. In the Canadian Institutes of Health Research, differences as small as 5/100 of a rating scale point can decide the fate of a funding application (Thorngate, Faregh & Young 2002). In the same study clear differences were found between average rates given by medical committee reviewers and health committee reviewers. The ratings of pairs of health committee reviewers were lower and more diverse at a statistically significant level than the ratings of pairs of medical committee reviewers. Interestingly, unlike medical committee reviewers, health committee reviewers were 'almost as likely to disagree on very good proposals as they were to disagree on lesser ones' (Thorngate, Faregh & Young 2002).

Finally, the integrity of peer review is underpinned by the assumption of honesty and a degree of reflective thought on the part of the grant applicant and reviewer. Peer review demands not only truthfulness and ethical behaviour, but also scrupulous impartiality and evaluation. This can be undermined by competition, plagiarism and fraud (Judson 1994), but also is threatened by some of the traditionally accepted behaviours in research that blur the lines between honesty and deceit. These include researchers claiming undeserved authorship on papers to which they have made insufficient contribution, researchers applying for funds for work that is largely completed, exaggeration of potential outcomes and continuing a research project that is obviously failing to attain its objectives.

Reflection: Issues for the CRCAH

Peer review continues to enjoy widespread support partly because of the absence of a viable alternative. In the absence of real evidence, supporters of peer review argue that its value is reflected in the enormous gains in health (ostensibly supported by peer-reviewed research) made over the past fifty years. Importantly, given the current health status of the Australian Aboriginal community and the lack of progress through traditional research channels, the same argument cannot be used to support the use of peer review in Aboriginal health research.

Purpose of peer review

One of the principal questions in this project was, 'What should peer review assess in an Indigenous health research process?' Smith, in his essay on 'How to set up a peer review process', argues that 'the key to setting up any peer review system is knowing what you want your peer reviewers to do and why' (Smith 2003:151). The purpose of peer review has been the subject of much debate in recent years (Horton 1996; Wood 1997) and there is 'no consensus on its primary aim' in publication review (Overbeke & Wager 2003) or grant review (Wood & Wessely 2003). Wood and Wessely listed seven key aspects that peer review is supposed to meet (efficiency, effectiveness, accountability, responsiveness, rationality, fairness and validity (2003:15), but suggested that the realisation of one of the objectives of peer review may be at odds with the realisation of another. In their words, 'the challenge for research funding bodies [is] to determine what constitutes a defensible/appropriate and workable balance' (Wood & Wessely 2003:16). Certainly, recently there has been a shift in the expectations placed on peer review systems by governments and non-governmental organisations, from the narrow expectation that peer review would deliver research of superior quality to a far more complex set of parameters. Many researchers would argue that the expectations placed on the peer review process are frequently too high and that academic peer review, at least, should be confined to assessment of innovation, technical merit, retrospective academic track record and budget justification.

Reflection: Issues for the CRCAH

It is certainly possible that adherence to all the objectives listed by Wood and Wessely may yet fail to meet the CRCAH's primary objectives of improving Aboriginal health and building Aboriginal capacity in health research.

The CRCAH criteria for assessing grant proposals include:

- potential outcomes: applications, impact, utility, capacity building;
- robustness: quality in terms of soundness of methodology and approach, feasibility and timeframe;
- research connectivity: meaningful community/industry collaboration and potential for research transfer into practice and policy, fosters collaboration between multiple CRCAH partners, addresses CRCAH research priorities;
- value/cost: including how much in-kind or external funding it incorporates; and
- CRCAH business plan: whether the program/project is in scope (CRCAH 2004c).

The range and complexity of the CRCAH criteria, together with their application by multidisciplinary panels where participants may have differing views and priorities, must make quality assessment challenging.

Process of defining peers

Wood and Wessely (2003:20) highlight a fundamental dilemma in peer review as 'the trade-off between choosing reviewers who are indeed peers and resulting increased chance of a conflict of interest'. Selection of peers may be a problem in an emerging field or innovative research, where there may be few or even only one 'expert' and, also, in multidisciplinary and complex research proposals, where multiple peers may be required. Peer review can be problematic in participatory action research, where it undermines the recognition of consumers and local participants as equal partners in the research process (Calabrese Barton *et al*. 2002).

Reflection: Issues for the CRCAH

The process of defining 'peers' may also be an issue in a programmatic collaborative approach, such as that presently being pursued within the CRCAH.

Merit review calls for different criteria in the selection of reviewers. Sheila Jasanoff, Pforzheimer Professor of Science and Technology Studies at Harvard University, has called for 'extended peer review', which would include stakeholder participation in grant review (Jasanoff 2003:7).

Reflection: Issues for the CRCAH

This call for 'extended peer review' echoes that of the Indigenous Research Reform Agenda and numerous others in the Aboriginal sphere for increased participation by Aboriginal communities in the design, execution and evaluation of research (Humphery 2000; CRCATH 2001, 2002; Dunbar *et al*. 2003).

Stakeholder review may itself present troubling issues. In the same way that researcher peer review may represent a particular school of thought or cognitive cronyism (Wood 1997:29), limited stakeholder review may also bias the process in favour of a particular faction within the broad canvas of opinion in a 'community'.

Reflection: Issues for the CRCAH

Given the relatively small number of Aboriginal researchers and health workers, it is not clear from where the stakeholders might be recruited. It is possible that an emphasis on stakeholder review in an organisation such as the CRCAH may require capacity building for peer review in the stakeholder community. Some capacity building in this area has already occurred. In addition, each of the new program statements for the CRCAH has been finalised by an industry roundtable that brings together a 'small, well-targeted group of industry partners and potential research collaborators' (CRCAH 2004a). Each group has established a 'network of interest', which is designed to link researchers to users of research and implementers of research findings (CRCAH 2004a). In doing so, it is hoped that many of the issues surrounding representation of stakeholder interests will be mitigated.

An unusual but well-documented system, which found some favour with the participants in this research study, was that used by the Dutch Technology Foundation (Wood 1997). This accepts only twenty proposals in each funding round. Each proposal is subjected to peer review by up to six peer reviewers, experts in the field chosen from a broad base including new and young peer reviewers. A program officer synthesises the strengths and weaknesses of the proposal into a protocol document, which is then forwarded to the second stage of the process, a merit review process by a jury of twelve non-peers. The non-peers, who do not have specialist expertise in the area of the grant proposals, are drawn from universities, government laboratories and private industry. They rate the proposal relative to the other nineteen proposals in the funding round. The members of this jury serve only once and communication is by mail: the jury does not meet or have contact. The top eight proposals are funded. The new program being developed by the CRCAH similarly broadens the basis of review but also tries to remove much of the competitive element still evident in the Dutch Technology Foundation system.

Both the NHMRC and the Dutch Technology Foundation will tend to reject proposals that are inadequate in design and planning. In contrast, the Research and Development Grants Advisory Committee established by the Australian federal agency responsible for health, as described by Neville Hicks, relied 'heavily on committee discussion to determine whether a project or researcher merits support even if the immediate application is deficient' (Hicks 1985). Therefore, on occasion, the committee awarded seed grants and provided critical advice from small informal steering committees to improve and hone projects to the point where they could successfully apply for substantial funding support. This permitted the development of novel and complex projects, often from applicants without an established track record, which otherwise may not have moved to fruition. Such a system has the advantage of short-circuiting the need for a 'nominal chief investigator', who may be too busy to pay much attention to the project but who is required in order to obtain funding (Hicks 1985).

Judging track records

Most grant funding bodies place considerable emphasis on track record; for example, it is accorded a 40 per cent weighting in the NHMRC guidelines for reviewers (NHMRC 2004). There are several potential problems with this. First, as described above, increasingly the senior researchers, on whose track record the application hinges, do little of the actual work. Backett-Milburn, Platt and Watson, in their 1998 paper that analyses the commissioning process, argue this may affect quality (Backett-Milburn, Platt & Watson 1998). This issue must increase in importance as funding bodies encourage development of large research projects steered by 'star' researchers. Second, heavy emphasis on track record may shut out community-initiated research and new Indigenous researchers unless there is a brokering process that links 'proven' researchers with these two groups.

Reflection: Issues for the CRCAH

Within the CRCAH, track record is judged not only in terms of publication output but also in terms of 'research outcomes' and 'collaborative work with Aboriginal peoples' (CRCAH 2004c). The vision of the CRCAH has been to support community initiatives and Indigenous researchers through 'mentoring or consultancy services' such that an 'experienced researcher may be assigned to support the development of the full proposal' (CRCAH 2004c).

Assessing different disciplines and methodologies

There has been considerable interest recently in the differences between peer review of quantitative and qualitative grant research. Current thinking is moving towards the recognition of differences in the criteria for evaluating different research methods and between disciplines. This is a relatively new and contentious concept—the different criteria are still being defined. In some disciplines this makes 'acceptable' peer review even more difficult.

Differences will also exist in the appropriate criteria for applied and pure research. Nicholas Birkett (1994), in a review published by the *Canadian Medical Association Journal*, outlined a number of problems associated with reviewing applied research proposals. These included 'imposing standards of perfection' that cannot be met by research proposals working in the complex area of health research with individuals and communities across cultural boundaries. Birkett suggested that much good research is not funded because a competitive system starts from a position of needing to reject a good proportion of the grant proposals and therefore looks for minor flaws in a proposal as reasons for rejection. Simple mainstream quantitative research fares better under the standards of rigour imposed in these circumstances. Backett-Milburn, Platt and Watson (1998) also expressed concerns that a simple, inexpensive grant proposal may win funding over an expensive and complex response even if the complex response has a greater potential for health outcomes. Kavanagh, Daly and Jolley (2002) also point out that the current system of research assessment contains a number of filters, including peer review, the end result of which is that research based on straightforward design (such as a cross-sectional risk behaviour prevalence study) will stand a much greater chance of being funded than a complex project (such as one studying community development processes).

Managing competing interests

Peer review has been criticised on the basis that it fails to recognise the political context within which the peer review system and the organisation must function (Backett-Milburn, Platt & Watson 1998; Conway & Casswell 2003). Tony Barnes, as Chief Executive Officer of the CRCAH, in a 2003 address to the Australian Institute of Aboriginal and Torres Strait Islander Studies, talked about the critical importance of 'collaboration and negotiation working well within your CRC'. In this he included not only the formal core partners but also the 'broader stakeholder group', but he also suggested that the CRCAH cannot simply operate by saying 'we will define the pinnacle of a research agenda and just go for it' (Barnes 2003). The ongoing funding of the CRCAH depends on core partners meeting their 'in-kind' targets. Partners may be less willing to provide in-kind support if they are unsuccessful in obtaining grant funding from the CRCAH. Academic researchers are under considerable pressure by their institutions to develop research proposals and secure funding, independent of the needs of the Aboriginal community. The importance of transparency, together with the need to maintain the commitment of core partners to the CRCAH, must put significant pressure on a traditional peer review process.

One means of increasing transparency in peer review is to make the identity of the peer reviewers known to those whose work is being reviewed. This practice is being adopted by some public health journals, including the high-impact *Journal of Epidemiology and Community Health*, and means that reviewers are likely to take more care with their reviews and be more 'gentle' in their comments.

Peer review and Indigenous-initiated research

Full implementation of the Indigenous Research Reform Agenda would require community involvement in forming the research questions, planning and conducting the research, and disseminating the findings. This is consistent with community-based participatory research (CBPR). CBPR is an evolving research form that faces all the obstacles that a new and complex system will inevitably face. The greatest of these may be antipathy to the concept, both in communities and academia, and the lack of successful systems for engaging communities in research. There are strong proponents of CBPR who suggest that this is the most effective way of transferring research into practice, particularly in Indigenous populations (Conway & Casswell 2003). CRCAH/National Institute of Clinical Studies research findings, described in a CRCAH document on research processes, showed that research transfer is more likely to occur where the 'research is designed to meet an expressed need or solve a particular problem' and where collaboration is a 'genuine partnership' between researchers and stakeholders (CRCAH 2004a).

A conference by the American Agency for Healthcare Research and Quality in 2002 asked participants to identify the barriers to CBPR and recommendations for improving capacity to do CBPR. It is beyond the scope of this document to discuss all the recommendations, but guidelines for assessing CBPR contained a recommendation for some funding through communities rather than solely through the researchers (Agency for Healthcare Research and Quality 2002). It is possible that processes used in CBPR could be applied to more traditional research projects, such as a program evaluation or a local epidemiological study, in order to increase community involvement.

Bias

Researchers who know how the system works can best manipulate their work so that it fits both the criteria demanded by, and the idiosyncrasies of, review boards. This benefits those who are 'insiders', particularly those who have worked on grant review groups, since they have a clearer idea of those factors that will cause a grant proposal to be rejected. Conversely, a community-based research group, unless it is extensively mentored, will invariably struggle to meet the rigorous demands of the peer review process. Lack of communication between the reviewers or review board and the applicant means that less-experienced applicants are often unaware of crucial gaps in their methodology or other aspects of their application until they are rejected. This lack of awareness may continue if feedback from the review is inadequate. It is rare for a peer review process to have a method of dialogue with potential applicants. Success at peer review may therefore not be based on the absolute merits of the application but on how well the applicant understands the requirements of the system.

More direct sources of bias in the peer review process have been documented. For example, a study in South Korea, which is, like Australia, a small-pool research community, found evidence of bias in grant review. In particular, comparison of sighted versus blinded approaches suggested that reviewers were affected by rank of the school the applicant studied at, the applicant's professional age and academic recognition of applicant (Lee, Om & Koh 2000). Interestingly, they were not affected by gender and publication record. Whether these biases (or others) exist in Indigenous research in Australia is not known.

Cost

The cost of peer review in a competitive system lies not only in administration of a review system and the time and effort of the reviewers, but also in the time and effort of the applicants. A high failure rate in a grant funding system is wasteful of both reviewers' and researchers' resources and may incur discontent and frustration and may act to discourage researchers from applying. Neither can be desirable in an organisation that purports to support researchers in Indigenous research. A traditional peer review system faces considerable problems in Australian Aboriginal research because of the small number of researchers with experience in the area. The Dutch Technology Foundation scheme, described earlier, overcomes this problem by batching grant proposals and funding a minimum of 40 per cent of the proposals. If insufficient funds are available for this level of support, the funding round is deferred until sufficient funds are available.

Reflection: Issues for the CRCAH

One of the aims of the CRCAH's programmatic approach to research is to encourage a greater degree of cooperation among researchers and so lessen competition. This is because of a desire to maintain good will in a system with a small number of players who need to have effective working relationships. The CRCAH's Research Development Group recognises that the process of competitive peer reviewing can be bruising to those subjected to criticism and that that this might not be the best environment in which to encourage and develop new Indigenous researchers.

Summary

Peer review remains the basis of grant assessment despite increasing recognition of its flaws by mainstream publications, including the *British Medical Journal* and *The Lancet*. This appears to be largely because there is not an obvious alternative. However, as the following section shows, it should be possible for the CRCAH to develop a system, based on peer review, that is more transparent and sensitive to the feelings of researchers, especially inexperienced ones, while still rigorous and capable of leading to the funding of research that will make a difference.

Interview Findings

In this section we present the findings from the eighteen in-depth interviews undertaken as part of this research. The participants covered a range of topics including their views on the purpose of the research funded by the CRCAH and what the process for decision making might look like. In addition, there was considerable discussion about the values that must underpin this process and the mechanisms which might be used to achieved to support these values.

Stages in developing a grant funding process

This section considers the detailed processes of developing a grant funding process. First, it is worth considering this process in light of the CRCAH's aims (see Appendix 2 for the objectives of the organisation and the paper by Jenny Brands (2005) for further detail). Most central to these is the desire to improve Aboriginal health status.

All participants agreed with this, but as one participant pointed out:

> *That's just so grand that it doesn't get us very far. (A9)*

Other important roles raised by the participants included a broad range of areas that emphasised the unique nature of the CRCAH in funding initiatives in Aboriginal health. Several participants indicated there was a need for the CRCAH to fund types of research that have direct and immediate application for Aboriginal communities and which might not be funded elsewhere.

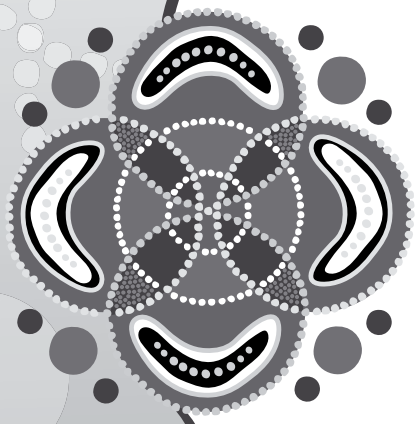
> *Most of what we're dealing with is hard to fund through conventional bodies which are set up to fund experiments. (A5)*

> *Some of these things that are in the CRC can be done in other places ... like it is competitive, it is scientific. This other stuff is social, but it is the social stuff that never gets done and it is the social stuff that needs to be done. So I think we should be focusing more on the social and less on the scientific. (IC5)*

Funding research that *'fits with community priorities'* (A5) and building capacity in Aboriginal communities, particularly amongst community service providers and community service organisations to allow engagement with research and to increase the numbers of Aboriginal researchers, were also thought to be important. This might be achieved by building links between community service provision and research throughout the research funding process, including priority setting and commissioning of research and quality assessment. Financial support for this process is essential.

So, it is evident that, for the CRCAH, research is a means to the end of improving Indigenous health status. The detailed process of developing a grant funding process is considered in the following five sections:

1. 'Walking the distance'—Barriers to achieving effective research process and issues in moving away from an investigator-driven research culture.
2. 'Gathering the mob'—Fostering an organisational culture that encourages effective research.
3. 'Harvesting the ideas'—Defining and commissioning research that will make a difference.
4. 'Weaving the strands'—Developing effective research proposals.
5. 'Telling the story'—Effectively transferring research to communities and encouraging uptake of findings.



'Walking the distance'—Barriers to achieving effective research process and issues in moving away from an investigator-driven research culture

The findings of this work overwhelmingly point to the need for a more collaborative culture to improve the efficacy of the research process. It was recognised, however, that there was a diverse range of barriers to building a collaborative culture. In particular, participants identified the problem of conflicting messages from different sectors of the CRCAH.

> *There seems to be this tension continuous between the board and the [Research Development Group] because they are not being clear or not understanding what is going on, so people really need ... clear direction in terms of what we're here for so that we can all start to really work together. (IC6)*

Many of the participants share the perception that academic interests and the interests of long-established partners predominate and that these interests did not necessarily encourage effective research in Aboriginal health.

> *It is built for the core partners to succeed. (IC7)*
>
> *I think academic interests are predominating. (IC3)*
>
> *Some players and institutions ... are in a better position than some of the other members of the CRC because they've been involved for a longer time. (A6)*

Participants identified conflicts between the agenda and priorities of academic institutions versus those of importance to the CRCAH. The CRCAH is fundamentally partner-driven and there is considerable tension between the competing interests of the CRCAH agenda to improve Aboriginal health by funnelling money into building collaboration with service providers and the agenda of academic institutions to maintain funding levels and achieve a return on money invested in the CRCAH.

> *From the university, the bottom line is always 'what is in it for us?' (A8)*

There are also differences in what is considered a useful outcome to research. Present research funding structures in Australia encourage academic institutes to invest considerable time and resources in producing peer-reviewed publications.

> *It's about them being able to use that document to go to the university and say, our unit has published this, this, this and this, and that gives us X amount of money from the university coffers to help run our unit next year. (IC9)*

One of the issues emerging from the interviews is that the transition to a nationally based organisation in the CRCAH, from the more locally based CRCATH, is still occurring, with considerable tension for resources including tensions between the Northern Territory health and research community and the Aboriginal health research community in the rest of Australia. These tensions detract from the primary focus of the CRCAH.

> *I think the priority area is the Northern Territory, given that the two core partners ... there in terms of the AMSs are within the territory. Not taking away from the southern states, I know they have their own issues in terms of Indigenous health down there, but it was initiated here and it was initiated for a purpose and I think that it should stay within that purpose. (IC2)*

Others felt that the CRCAH, as a national organisation, should act on a national scale, including taking on more industry partners.

> *So, if you want to go nationally, yes, you need to engage far more industry groups in what you are doing. (IC6)*

There was obvious disagreement within the CRCAH about the value of local versus national research. On the one hand there were those who felt that 'local' projects might be useful:

I don't know if they should just fund local projects in Darwin because local people think it's a good idea but if there's a project that is out of an AMS that would have relevance to other AMSs or Aboriginal health issues around Australia, that could be portable, then I'm willing to look at it. I mean, we represent ourselves as being a national body, and why is 'local' Darwin? I mean, 'local' could be anywhere within a national organisation. (IC3)

While others believed that their work had been rejected because it was not of a regional or national nature:

Our work was not big enough. It was not providing comparative analysis between regionally or nationally of similar situations. (IC7)

These tensions are also apparent in the priority-setting process in which one participant suggested that representation from rural New South Wales and Victoria was poor. In all this, there are obvious implications for building a collaborative culture but there will also be an impact on any review process. Reviewers and program developers from the south may well see different priorities than reviewers from the north and judge applications accordingly. It is possible that with competition for resources moving to a national level, community/industry representatives may be less willing to be involved or resistant to the transfer of resources to new areas.

Within the infrastructure of the CRCAH, the demands on individuals may be excessive compared with available time. A 'pressure cooker' atmosphere may be detrimental to building effective collaborations and partnerships and encouraging research that will translate into improved health outcomes.

A lot of stuff comes in with very short deadlines. (A7)

A personal observation is everyone's so busy that they can't, it's all too big. They're doing the big things and they forget there are small things and from little things, big things grow. (IC7)

The provision of program managers in the new programmatic approach and the removal of much of the work of a competitive research funding process may relieve some of this pressure. However, difficulties in identifying and engaging good coordinators to manage programs and the limited pool of researchers involved in Aboriginal research were also identified as problem areas.

A recurring theme was the limited capacity in the Indigenous community to engage in research. Issues identified included the small number of Indigenous people within the community who understand research, inadequate numbers of Indigenous researchers and, consequent to both of these considerations, the small number of Indigenous people who can engage in the assessment process. Participants suggested the ability of Indigenous people to engage in the research process is hampered by a lack of skills in writing research proposals and a lack of academic track record. Most individuals in the Indigenous community, including most service providers in Indigenous health, do not know anything about the CRCAH and, despite the best efforts of the CRCAH, there persists a distrust of research within Indigenous communities.

Where community-based organisations do manage to engage in research, Aboriginal control is seen as very important.

[Some organisations] would politically find it very difficult to engage in a research project that was being run by, say, Menzies and/or Flinders. They want to do it themselves. (IC4)

Partly because of the level of distrust and because of fluid community membership, considerable time is required to build robust collaborations. This hampers engagement with community-based research.

[It is] more difficult for community-based projects to arise in response to a timeline. (IC4)

Difficulties in assessing collaboration have been encountered.

Because it's just so hard to know if a proposal really is coming from a grass roots community initiative or that the researchers are just saying that it is or have just attached themselves to something like that and co-opting a community initiative or whether an industry partner is really interested or, you know, oh yeah, we'll go with it and get it through ... (IC4)

Finally, the disjointed nature of research information and the existing barriers to sharing that information can hamper collaboration and prevent effective research transfer. Some of these barriers have been articulated elsewhere (Brands 2005). One participant described her frustration with the problem.

> *There are so many pockets of groups that have information. It's almost like they want to own that knowledge and that information and not necessarily share it with other groups. (IC6)*

'Gathering the mob'—Fostering an organisational culture that encourages effective research

A change in culture?

In support of the distinctive role of the CRCAH working closely with Aboriginal communities and organisations, most of the participants in the research project saw a need for a change of culture within the research process in the CRCAH. The present environment of competition was seen as divisive and a move to a collaborative system was seen as desirable. Some industry partners, in particular, saw the universities as being more competitive than other partners. However, as one member of the project steering group commented, simply removing the competitive process will not necessarily result in a collaborative culture. Neither should collaboration be seen as an end in itself but as a process that permits the kind of research that is most effective.

Some participants saw the development of a more collaborative culture as part of the 'Indigenising' of research. There was a strong belief that the CRCAH needed to be involved in the development of proposals in order to make the change in culture occur, to make the research more relevant and to improve research transfer. Some participants commented that a change in the culture may mean a redistribution of resources away from recipients who have benefited in the past, which may not be welcomed by all, but also that this was a culture shift for researchers and might be difficult for them to get used to. On the positive side, at least one participant suggested that this movement reflected the increased call for community participation in all aspects of health management and that *'Aboriginal people are trail blazers'* in *'demanding a role or a say in the sorts of things that ultimately will impact on them'* (A8).

One participant felt that the gulf between academia and industry was due to the ideology and culture of research, which prevented researchers from connecting with industry effectively.

> *I know researchers are stuck in a paradigm in terms of how they conduct research and it's often frustrating for them because they're trying to do research, how they know how to do research—but there hasn't been a paradigm shift to actually do research in a way that industry sees or perceives research, in how industry understands research and how industry would actually know where it benefits within that, within service delivery for instance. (IC6)*

One dissenting participant, defending a competitive funding structure, said, *'I don't think we've got a big money tree, have we?'*, but then went on to qualify it by saying it depended if the work was commissioned or non-commissioned research: *'if it's work we've commissioned, then we have to follow through'* (IC3). Another said that, *'one assumes, in a sense. that the demand from applications is greater that the sum of money available and I think that will continue. There has to be some rationing process.'* (A9)

One participant pointed out the value of building a new way of doing things and commented on the need to build processes that continue to influence research after the lifetime of the CRCAH.

> *The CRC is not going to be around forever. We all know that, but we would like to know whether there are processes that are going to be in place, that will stand, that are going to be there as a result of the CRC and that these collaborations will remain and that this will then change policy, this will change practice. (IC6)*

Another saw a change to a collaborative culture as a way of working together effectively as an organisation, bringing together the myriad of skills of the individuals within it, without the divisiveness of competition.

I think it's like a, you know, a selective tender process. It's not out there for everybody, because, you know, most people, a big percentage of the research community, are involved in the CRC, if they are not partners, they're supporting partners, or, you know, supporting institutions, but, I think, that's why I think that agenda is—hopefully discourages, not that there's anything wrong with competition, but I'm saying I think this is a better process, rather than everybody competing. (IC1)

Building a collaborative culture within the CRCAH in order to encourage effective research

The CRCAH is a multi-sector organisation in that it relies on the cooperation of individuals from a variety of groups including universities, research foundations, AMSs, Aboriginal communities, government departments and non-government organisations. Building a collaborative culture within such an organisation is not an easy task. Levesque and Chopyak (2001, p8), in discussing collaboration in a multi-sector research project, point out that 'collaboration has at least two definitions: to co-labour or share the effort of a difficult task and to work with the enemy as a collaborator'. Successful collaboration in such a setting may be more about conflict resolution for the selection of mutually beneficial outcomes than any other factor. Levesque and Chopyak (2001:23) describe a model of 'kinetic research management' for achieving successful collaborative multi-sector research projects. This document and future evaluations within the CRCAH, which examine the successes and pitfalls in the building of a collaborative culture, will contribute enormously to our understanding of this area.

Several participants in this research project suggested that it was important to recognise the barriers to collaboration and work through them, and that it was essential that the board provide a clear leadership role in this respect. There has been much confusion about the conflict between the idea that the CRCAH wanted to be a collaborative, supportive organisation and administrative structures that did not support or even encourage this ethos. Many of the suggestions below have already been partially implemented in the CRCAH. What may have been lacking is formalisation of process.

Most of the participants saw the involvement of the CRCAH in the mentoring and development of proposals as an essential element for cultural change and changing practice. Although there has been some support for development of proposals, implementation has been patchy. Participants generally described the need for a change in the underlying ethos from a competitive, confrontational, 'need to prove yourself' arena to an ethos committed to building the best research. This included a role for the CRCAH as a broker, building collaborative links between Aboriginal communities, service organisations and academic researchers and in requiring development of proposals.

We can't and shouldn't have to compete with university departments. (IC7)

I think there needs to be a lot more participation in terms of consultation with community groups and that's active collaboration, and that's right from when the idea about the research has been conceived right through to conducting the research ... and right though to assisting, once the research comes out, in getting information back to the community and then ... how can we further assist you in looking at how to get funding, how to actually set up programs. (IC6)

It also included the mentoring of Aboriginal researchers in grant application process, research conduct and research dissemination, either directly or by brokering mentoring relationships. Further, it included the mentoring of non-Aboriginal researchers in the conduct of appropriate research in Aboriginal communities, community participation and research transfer, and brokered relationships between Aboriginal communities and AMSs and academic researchers. Unfortunately, it is apparent that, although some people involved in the research assessment process saw this as their role, this was not defined well and it is probable that the applicants did not see this as an essential part of the process.

My understanding of the process was that people considering putting an EOI forward should contact their relevant theme leader to talk about it before they put it in and then receive whatever appropriate advice and then further development after, and I think that's perfectly legitimate. I think that's good. I think that's a valid way of proceeding because we are not like the NHMRC and we're not looking for excuses to not fund projects, we want to develop projects that will have relevant outcomes ... it hasn't happened, well, in my experience it hasn't happened. (A5)

Several of the participants described a new role for constructive critical advice or a 'critical friend'.

> *If the board and the CRC has some trust and confidence in that person and it is a good relationship, it's within that climate that that friend can be a critical friend and be able to tell us very clearly that we're losing our way, that perhaps a direction that we've consciously chosen, in his or her view, is not necessarily going to take us where we want to take it, so within that friendly relationship, I think there is still scope for that person to be critical and in a way that the board are more likely or, any board, really, to listen. (IC1)*

Key factors that could improve collaboration

Participants underlined the ***value of the CRCAH staff*** in building a collaborative culture and the damage caused by poor procedures, including perceived poor selection of peer reviewers. Dissatisfaction with this process was strongly expressed by one participant. It should be noted that dissatisfaction on the part of unsuccessful applicants is frequently the outcome of peer review. The generation of such feelings does not encourage a collaborative process and so gives a clear message about the need to ensure the peer review processes used are both constructive and perceived as being fair.

Good administrative procedures were also seen as important, including appropriate timelines with provision of sufficient lead-in time for project development and sufficient time on the part of staff or mentoring academics to help develop the projects.

> *The proponents were invited to talk to the theme leaders and in a few cases they did. Theme leaders are busy people and it's not, you know, I'm not sure how valuable my feedback was to those who did make contact with me. I did my best in the time available. (A4)*

> *We have to. It is not in the normal way of doing things, but we have to help them. But we need to have enough staff who understand it fully to be able to help. I think we should be helping because otherwise some people have been helped and some people have not. So those, the haves and have-nots, so those that have failed in their research projects, have been some of them who have not spelled it out clear enough for those on the research ... well, the [research advisory panels]. (IC5)*

Financial support for development and ***tight feedback arrangements*** were seen as important key factors in improving collaboration. In the context of the new program structure, the use of paid program managers to oversee the programs and provide administrative support may be very effective, in addition to the program leaders. One participant saw the choice of coordinators or managers as crucial for success:

> *I think the coordinator position is actually a very difficult one, so selecting the people to coordinate that, I think they need to be full-time and that's—I think that's a major employment role for the CRC, is for each of the five programs, if they employ a full-time coordinator, the choice of those individuals is absolutely crucial. (A6)*

Program managers will have the time to talk with researchers and industry and community representatives and help broker collaborative research partnerships.

It was apparent that ***adherence to the guidelines*** for the expression of interest rounds held early in 2004 actually handicapped applicants. Several of the participants were disturbed by this possibly reflecting anxiety in the broader community.

> *There was a very high probability that those people that did what they were told not to do and wrote effectively research proposals ... actually were more likely to be the ones that got the funding because we haven't actually got any funding yet but they're the only ones who got the opportunity to go and write a full one. (A7)*

Therefore, tight adherence to guidelines may be important in nurturing a sense of trust within the broad umbrella of the organisation. Communication and openness were also seen to be key components, including clarity of values, process and criteria.

Factors in good communication included clear guidance on the role of the CRCAH in the development of research proposals, the underlying ethos of the CRCAH (for example, collaborative or competitive), what constitutes 'Indigenous-driven' research, and where the CRCAH stands in the divide between traditional research and intervention research. One participant asked:

> *What's the CRCs context ... whether it is producing good research or whether it is supporting cutting-edge programs in Aboriginal health? (IC7)*

Transparency was a key issued identified by several of the participants, particularly transparency about the amount of money researchers are competing for and about funding decisions.

> *If we were caught up in 24 million bucks worth of submissions when there was only $1 million, that's a foolish lottery to enter. (IC7)*

> *I think for goodwill within the CRC we need to make it really clear why things happen, so if some projects got cut or absorbed into others, you know, there should be some explanation [so as] not to get people off-side. (IC5)*

Transparency encourages the growth of trust within an organisation, whereas secrecy or uncertainty may have the opposite effect.

> *If there's anything that people are unsure about, then it has a poisoning effect, far, far greater that what it cost to have it, so I think within the organisation or at least within the decision-making bodies of the organisation, there has to be, to the maximum extent possible, transparency. (A7)*

Although the CRCAH is perhaps more progressive than many other research funding agencies in Australia with respect to equity within the organisational hierarchy, participants identified the need for even greater equity between the different sectors and organisations that make up the CRCAH. This included more equitable access to funding within the CRCAH and improved involvement of industry representatives and the community as participants in the review and development process.

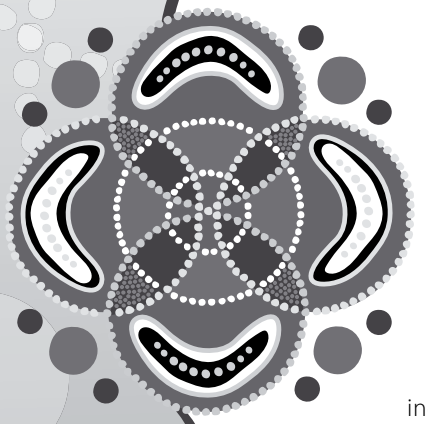
> *The question of gearing up a cadre for community people who don't have professional training, who can contribute to research evaluation, I think calls for a completely different approach to the processing of the proposals than we've done so far. I think it might well be that the new direction that we are talking about, more developmental process, more iterative process, might find greater scope for more community members to be trained, resourced, to participate in the process. (A4)*

This might involve ***more Indigenous representation on review panels***, the Research Development Group or the new groups assembled to build research programs. One participant suggested these could be drawn from the Department of Health and Community Services, Menzies School of Health Research, and other organisations involved in Aboriginal research and service delivery.

> *Probably a few more representatives from the Department of Health and Community Services. In terms of service delivery there needs to be the people involved in the development side there, not just in research but in the development as well, because, as we know, the Department of Health and Community Services is still the major body that delivers health services to Aboriginal people in the Northern Territory. (IC6)*

> *You could even have people who are guest speakers that are not member institutes on the CRC, that are actually being proactive about Indigenising research and one of them is, well, actually, is Yungorrendi, that's part of Flinders. (IC6)*

Similarly, despite the already substantial networks within the CRCAH, some participants suggested even ***more links*** were possible and desirable. Many recognised that there was a problem in that there were only small numbers of Aboriginal people with the training to engage with research. Some participants commented that the CRCAH was not utilising the capacity that was there and recommended building more links with Aboriginal people working in government departments, with Aboriginal groups working within the institutions in the framework of the CRCAH (for example, Yungorrendi at Flinders University) and with Aboriginal researchers working outside the existing framework of the CRCAH. Some participants recognised that the focus on the medicalisation of the research agenda was a problem and recommended building more links with Aboriginal services working outside the AMSs. One participant commented:



AMSs only deal with a certain population, for instance, and they only actually provide a limited service ... there are so many other services that are out there for Indigenous people that AMSs can't deliver and that either comes from government departments or [non-government organisations] especially. (IC6)

Finally, as one member of the project steering group suggested, it is important to point out that collaboration does not mean 'open slather' in that it is not necessary to have every expert in an area included in a program of research. A cost- and time-effective approach probably includes the selection of a small but diverse group of experts from a range of backgrounds, including service providers and academics. The importance of building a collaborative culture in the CRCAH lies in improving its ability to select and maintain such groups in order that the gaps in knowledge critical to policy and practice can be effectively identified and filled so as to achieve health gains.

'Harvesting the ideas'—Defining and commissioning research that will make a difference

Defining the research

The CRCAH has adopted a commissioning process whereby research priorities are identified in collaboration with industry partners. A crucial annual event in this process has been the Convocation, now renamed the Symposium, which brings together representatives from each of the core partners for two days of intensive discussions about what the CRCAH research priorities should be. The day before the Symposium, a Small to Medium Enterprise (SME) roundtable was held at which industry and community representatives had an opportunity to make a direct input to discussions about priorities. An extensive priority-setting process identified a broad range of priorities. Several of the participants had concerns with the Symposiums as conduits for priority setting. There was considerable disquiet about the true degree of industry and community involvement in decision making.

[It] was just not clear how much industry and community input there was [on the priorities]. I mean, they seem to be largely structured around the existing capacity of the academic partners.

However, the participant added the codicil that, 'Given the way we apply for funding for these things, that is the way it has to be, I think, to get funding in the first place' (A5).

Who was there on the day influenced what was said. (IC4)

Not enough grassroots involvement: there perhaps wasn't as much involvement of Aboriginal community, particularly at grass roots involvement, as perhaps there might have been, but I think was, would have been, very difficult to recognise that going into it. I mean, there has been input from the health support industry, people like Danila Dilba and Central Australian Aboriginal Congress in particular, the core partners who were there, plus other service providers, but in terms of the, well, core grassroots Aboriginal community involvement, I'm not conscious that there was a big input directly from them. (A7)

The processes used by the CRCAH do try to be inclusive, but this may mean that they become somewhat complicated. As a result it may be hard for newcomers to come to grips with how the CRCAH works and what its aims are. One industry representative noted about the 2003 Symposium that *'a lot of managers walked away confused, not knowing really what the CRC's about'* (D5), and another that large, important areas were not discussed.

Either chronic disease or infectious disease got left out [at the first Symposium] because they didn't have enough time to discuss them in their theme group. (IC4)

The resulting priorities *'were still fairly loose'* (IC4) and there was concern about *'spreading ourselves too thin'* (A4). The looseness of the priorities set may have been due to a desire to encourage good ideas and a reluctance to limit people too much to narrow research questions.

Several participants suggested the dialogue process just wasn't working.

> *We are not bringing people together, we are not getting the kind of traction that we would get by having the SMEs—and the Indigenous communities they represent—in contact with the researchers and then have a dialogue. Not one side dictating the other either way, but having a dialogue, with the researchers having a real understanding of what the problems are, and to some extent the communities and SMEs having a real understanding of what research can do to help them. (A2)*

> *I think there is a lot of room for rethinking the way that we do priority setting. (IC4)*

Some of these difficulties may be due to the size of the Symposium.

> *It's a very large group and the people involved at the [Symposiums] are at varying degrees and levels of involvement in the CRC and sometimes people think [that] people there may not fully understand what it's about. (IC6)*

Suggestions for improvements to the Symposium process included:

- using *'small workshops'* with lots of *'lead-up time'* (IC4)
- using a project officer to develop preparatory papers (IC4)
- focusing on a small number of areas (IC4)
- more representation of consumers, with more involvement of AMSs and the Department of Health and Community Services (IC5, IC6, A5)
- including SMEs in priority-setting symposiums (IC5)
- negotiating advocates for stakeholders (IC5)
- building the capacity of Aboriginal stakeholders/service providers to engage (IC5, IC6)
- more grassroots Aboriginal community involvement (A7).

The Symposium held in April 2005 appears to have addressed many of these concerns. The new programs enabled a greater degree of focus in discussions. The structure of the Symposium itself around the new program areas also seems to have been well received and enabled discussion to move to a new level of sophistication about research priorities and strategies. Program statements helped shape the discussions, industry and community were better represented, and the outcome was clear guidance about research collaborations. The forum for industry representatives (SME Forum) in April 2005 was far more successful in engaging industry in a manner that those representatives reported as meaningful and helpful to them.

Possible strengths and weaknesses of a program approach

There was broad, although not universal, support for a program approach albeit with reservations. One participant compared the efforts of the CRCAH to include community in the research process with those of his or her own Indigenous organisation, where similar efforts were being made.

> *[In our organisation] we're trying to change the emphasis where researchers get money then try to find a community to do the research in, while what we're trying to do is find the topics and match up a researcher that can get the money or has already got the money to come out and do the research.*

When asked if this was what the CRCAH should do, the participant replied, *'I think they should be doing something on a larger scale'* (IC9).

One research participant who worked for a smaller community organisation warmly supported a collaborative approach because it provides a broader consultative network, a facet that is missing in the normal approach to research.

> *The process of applying and getting funding can be such private business. You might consult a few people who will support the application but you do not consult the whole community, the whole research community on that topic, because they will be your competitors. That is a big tension. (IC8)*

Talking about her own experiences in a particular project, she said:

> *It has become clear that what is needed is everyone who has an interest in making [the project] better, if everybody who has an interest in that gets together and talks to each other but because of competition it does not happen as well as it could and that does not lead to better health outcomes for people. (IC8)*

However, one participant warned that a program approach that built research programs by invitation may well concentrate the control of research through the CRCAH into the hands of a small inner pool of researchers and shut out outside talent. Similarly, a program approach may shut out useful research that falls outside the program areas, as one participant pointed out:

> *If there is the opportunity to fund a good idea with a high potential of success, then we should take it and not say, oh, well, we're not going to worry about that this year, wait until three years down the track when we are calling for proposals in that area. (A5).*

One problem that does arise from the priority area approach, although not necessarily a program approach, is where research falls between two priority areas or integrates parts of two or more priority areas. It would seem to be a waste of both researchers' and reviewers' time to have research projects reapply to a second priority area if they have failed at the first, particularly when the area chosen was on the advice of CRCAH staff. Such misadventure must create tension and disturb the collaborative nature of the CRCAH. It would be useful if channels from one area to another could be provided and probably, as one participant suggested, it would be good to have someone *'step back a bit and have someone maybe cross all programs'* (A6). These people (or a group of people) could be across all programs in the areas of cost-effectiveness, capacity building and research transfer.

Criteria for research proposals

The criteria for research proposals can help mould the focus of the research funded. In discussing the early 2004 round of proposals, one participant commented:

> *By the very fact of asking, that making criteria about outcomes and partnerships and things like that, I think it has influenced the sorts of projects that we get. (A5)*

Another participant suggested that there was potential to go beyond that and describe clear values, which would underpin the funded research. These values could be given a 'weighting', which would provide a rough 'score' for submitted research proposals. This scheme is discussed further in the building blocks of assessment later in this document.

Clear, comprehensive criteria can also guide applicants as to their chances of success in funding and avoid futile work on applications. Being very clear about what will be considered for funding and what will not be funded could avoid many of the issues seen in previous rounds. For example, one participant whose application was rejected stated:

> *We thought that we must be a priority, because we were trying to articulate an Indigenous community response which had been described by people ... over a number of years. (IC7)*

Similarly, researchers and reviewers alike were confused over what was meant by 'Indigenous research projects'. Indigenous community-driven research projects with non-Indigenous researchers of long-standing in the community were not considered 'Indigenous research' by the reviewers. These issues may be resolved by full and thorough criteria, an explanation of the philosophical basis for their inclusion and clear direction from the board of underlying values and priorities.

One participant argued for simple criteria:

> *I just think it's terribly important that we don't make too many hurdles for people to have to jump over because that's an absolute nightmare. So, I mean, I think the three most important things to me are science, research transfer and Indigenous capacity building. Those would be my three if I had to have three. (A3)*

'Weaving the strands'—Developing effective research proposals

If the system is collaborative, is a quality assessment process necessary?

In a system that builds research from the ground up, some participants suggested that there may be no need for a peer review system and that a move should be made towards a system that incorporated constructive criticism from individuals and groups within a framework of research building. However, several respondents argued that a peer review system was still essential because it provides credibility for the research in terms of leverage for funds.

> *We ought to be doing research that's going to ... leverage as much funding as possible from a broad range of sources and so if we were to restrict ourselves to research that doesn't have a peer review process, but was research that the community really thought was a good thing and that was the only criterion, then I think we would cut ourselves out from a whole lot of other sources of support. (A2)*

Such respondents also said the peer review system supports the ability to send certain types of research for funding elsewhere.

> *If you've got an Aboriginal health research project that's come forward to the CRC that's excellent research and has got good peer review, why would you not put it in as an NH&MRC proposal? ... if our processes aren't peer review type processes, then our researchers won't be competitive in that environment. (A2)*

Peer review may protect the CRCAH from accusations of *'bias and nepotism'* (A8) and help to establish credibility within the service delivery community. This would particularly be the case if the peer review came from more sources than just academic review.

> *It comes back to this legitimacy and credibility. Some of the stuff about the CRC that it was offering us, we felt, was not a rubber stamp, but if you said, this is a CRC hurdle and we jump through it, or this is an academic hurdle and we jump over it, not through it, under it, whatever, that would give us credibility, when we come to the more serious business of negotiating with people who deliver services, because that's ultimately what we're about. So, peer review is important. I wouldn't like to have had our project peer reviewed simply by academic people. (IC7)*

What should a quality assessment process try to achieve?

Traditionally, an important part of peer review has been quality control. In the broader context of quality assessment, academic peer review is just one small part. A broad review system might also want to address whether research proposals include *'appropriate engagement with the Aboriginal communities'* (A2) and should be *'making sure that what is funded, and what is supported fits with community priorities'* (A5). One of the members of the project steering group commented that there is really a need for someone directly from the community to review any program or project developed, but that this involved a direct conflict of interest. A solution to this impasse might be in having community representatives involved from the beginning of the project.

Research transfer with useful and sustainable outcomes is seen as a major priority of a review system.

> *What we are trying to do, is not just do good research that will get published, we are trying to do good research that's going to lead to good outcomes. That the things that you work out in terms of health improvements are actually going to stick and they are going to have some impact. (A2)*

Peer review should ensure rigour in design and eliminate duplication of effort.

> *Allows us to maintain standards, academic standards, in terms of the excellence of the work. (IC3)*

> *That the research that is being proposed is not a waste of time because it's already been done somewhere else. (A2)*

Peer review can provide a developmental role including constructive criticism in the development of proposals.

> *We'd want the peer review to be, you know, constructively critical and maybe we could even have a process which I would—would appeal to me where (which NIH [National Institutes of Health] has), where you get the peer review and then you can resubmit or you can go along—or you can take on board some of the criticisms and then it's a bit like, you know, if you write a journal article and then you come back with a better protocol and that would be good. (A3)*

This point is crucial in developing a process that is more collaborative. If a grant application was only submitted following a process of development and peer review and reflection, then the chances of it being funded would be much higher. The challenge for the CRCAH is to develop collaborative processes of proposal development. This might include input on building a successful program.

> *A continuing of the constructive suggestion process and so at a particular point your panel of constructive suggestions say, look, I can't think of anything else to say. (A4)*

Peer review can also provide assistance in decisions on which programs will give the best value: the *'best bang for your buck'* or the *'value added in terms of what good are we trying to achieve'* (A9). It is also seen as essential for leverage for funding and outside 'policing'.

> *I think you've got to have some external cop. (A5)*

Overall, the respondents do think peer review is a useful process to improve the quality of research so long as the form that is used encourages collaboration and does not underpin an unduly competitive process that leaves applicants feeling angry and/or wounded. In this it may be useful to distinguish between merit review from a variety of reviewers as an ongoing process throughout the program development and peer review for academic quality and rigour by an external reviewer towards the end of the process. However, members of the project steering group also felt that it may be useful to include both merit and peer review at the end of the process to ensure that the wider concept of usefulness of the research is robust at the end of the program-building process. Merit might be accessed by an external reviewer 'visiting' the program, rather than through a conventional paper review.

Building blocks for the grant-funding process

The following suggested building blocks have emerged from the data collected for this project. Some of the blocks are stand-alone proposals that may not fit with the more recent redirection of the CRCAH but are included because they may inform future or present process.

One participant has indicated that *'you can bolt things together in a number of ways and it will still work'* [A5]. The blocks are intended as units that may be selected and bolted as required.

One of the participants encapsulates the views of many of the participants that the process should be underpinned by clearly defined values:

> *We need values to drive this; the issue of what is good, what is worthwhile is value-driven. (A9)*

1. Application process

- **Provide more clarity on the priorities underpinning funding decisions of the CRCAH.** At present there appears to be some confusion on the priorities within the topic areas. EOIs were rejected in the recent rounds because they did not fall within the ethos of the research that the CRCAH wishes to propagate, despite the fact that they were driven by Indigenous organisations. Others, which some participants did not feel fell within this ethos, were funded.[2] Our data certainly suggests that ill-defined priorities confuse applicants and create discord. There are clear signs that programs with detailed program statements will go some way to improving these definitions.

[2]One participant commenting on the 'Building the Indigenous workforce' round said, *'My idea of workforce was building the Indigenous workforce not building on non-Indigenous doctors'.* The participant noted that all of the projects funded in this round built non-Aboriginal capacity in the Indigenous health arena.

- **Have frameworks that are more directive in the application process.** For example, forms that are more directive so that applicants provide the information required by the assessment panel. If the CRCAH requires that the applicant engages with CRCAH personnel before submitting an application, they should be directed to do so on the application form.
- **Adhere closely to procedures defined in the application process.** For example, if an applicant is directed to confine the application to two pages, any part of the application beyond two pages should be removed before the application goes for appraisal, but the application form should CLEARLY explain this as standard procedure.

2. Development of proposals

- **It is essential for the CRCAH to be involved in the development process.**

A more developmental process, more iterative process, might find greater scope for more community members to be trained, resourced, to participate in the process. (A4)

This needs to be balanced with the perception of some of the participants:

So, at some point we had to say, 'well, this group of proposals will need so much work to get up to the standard of the other ones that are already here, we can't really justify it'. You know, that was the other thing to consider. (A5)

It is obvious that for a developmental process to work, the process must value innovation, the ability to increase Aboriginal research capacity, proposals that are Aboriginal-community driven or proposals that bring new players on board. If these factors are not valued sufficiently, a poorly developed proposal will lose to a well-developed (probably academic-based) proposal every time.

The program leaders and managers should be able to play a key role in the development of proposals by bringing together university-based researchers with communities and forging collaborative partnerships that can meet the various agendas. It is envisaged that this process will be assisted by the formation of networks of interest, which will be a focus for information and exchange about programs and their development.

Who should be involved with research development?

In any quality assessment scheme there will be a need for critical assessment and, therefore, for critical assessors. In a collaborative approach, the critical assessors would be involved in the development of research proposals.

- **Technical review.** Use technical reviewers external to the organisation and, where appropriate, international reviewers.
- **Separate merit and technical review.** Review by researchers could be confined to technical merit, whereas industry/community representatives could review the usefulness of the research. Grants would have to score well on both technical and usefulness review, but these would be distinct processes and not conflated.
- **Simplify merit review.** Develop a schema for industry/community reviewers to use in assessing grant proposals so that review is simplified.
- **Local review.** In research involving community groups, where possible, local critique of relevance should be provided by the AMS or local umbrella organisation. Alternatively, it may be necessary to pay Aboriginal stakeholder groups to participate in the review process.
- **Range of peers.** All of the participants advocated the use of a range of 'peers' in the review of grant proposals and in research development.

I think it does not have to necessarily be our people in academia that can make these sort of decisions. I think people in the workforce ... that are working in industry can make those sorts of decisions. (IC5)

Another suggested that having a *'research heavy group* [on the Research Development Group] *would only reflect what research wants to do'* and that the CRCAH needed *'more expertise in terms of service delivery'* (IC6).

- **Four or more academic peers.** Given the evidence from the CIHR (Thorngate, Faregh & Young 2002) and elsewhere (Hodgson 1997; Cole 1998) on the fickle nature of peer review, it is important to include as many academic peers as possible. Four academic peer reviewers per project should be feasible in a program approach where the burden of peer review is considerably less than in a competitive approach.
- **Greater Aboriginal involvement.** Several participants called for greater Aboriginal involvement in review; one addressed the issue of who could be considered a community stakeholder:

That is what I mean by a stakeholder: someone who has a reputation for understanding the communities and who would not be afraid to talk. (IC5)

- **Involve policy makers in research development and planning.** One participant indicated the need for the involvement of policy makers, particularly Indigenous people in the Department of Health and Community Services, because they would be helpful in assisting the transfer of research into policy.
- **Involve people outside the present network in research development.**

  These people might include charitable organisations such as the Heart Foundation, service providers outside the AMSs, organisations providing services other than 'health' to Aboriginal communities and Aboriginal groups within the partner institutions, such as Yungorrendi at Flinders University.
- **External final review.** It is important that the final review is external and includes both merit and conventional peer review. Merit review would include an assessment of the acceptability to the communities involved and the usefulness of the project in terms of long-term health outcomes and in increasing capacity in the community on a variety of levels. External final review is important because it tends to be less divisive, minimises conflict of interest and provides an assurance of external checks, rigour and transparency.

A workable quality assessment process

- Reviewers should comment only on the strengths and weaknesses of the proposals and not on whether they should be funded or not.
- Innovative review techniques may be needed to meet the conditions of assessment of community-based research, including interviews and site visits.
- Stakeholders and researchers who are involved in the program building process should be supported by training or mentoring to engage as fully as possible in the process.
- It is important for academic researchers to make difficult technical issues such as statistical analyses very clear to the committee driving the research so that informed decisions can be made by the entire group. The CRCAH has a role to play in brokering understanding in this area.
- It is essential to provide sufficient time to ensure real stakeholder involvement in the research process. This may be considerably longer than that needed for simple academic peer review.

Anonymity and transparency in the review process

Processes need to be as transparent as possible.

You ought to have openness about the processes by which you determine who's going to referee things, and how papers or proposals are allocated to particular referees. (A2)

Let's say we have a community consultation process and it involves a group of community stakeholders in Aboriginal communities. I think there is no reason why you can't know who's on that group. You shouldn't get access to minutes of who said what about that project. I think it's unnecessary, but I don't foresee any problem with people who agree to do that kind of thing being prepared to have their name known that they're involved in that process. I would be worried if they didn't. (A2)

There is still a requirement to protect reviewers and committee members from possible harassment, so that reviewers feel free to say what they wish:

In relation to peer review, there has to be anonymity, I think, in certain areas in relation to, you know, the assessors, clearly, so they can feel absolutely free to say what they like. (A6)

So, if you want honesty, you have to maintain individual anonymity ... the sort of one-on-one stuff again is inappropriate; I think that otherwise you discourage people from being honest, given how you can get harangued by somebody afterwards. (A2)

3. Management of disagreement in the quality assessment process

Few of the participants examined the problem of disagreement in the review process. This area is important since it is almost inevitable that disagreement will occur, particularly when the reviewers may be coming from very divergent backgrounds, for example an international academic and a hands-on remote area service provider. How will conflicts of response to grant proposals be managed? One participant saw this as an opportunity to improve the proposal.

I think that's a really good—we then need to examine the tension between the two different points of view... It could be and it might be that we ask the wrong question, and then it wasn't, you know, it wasn't thought through well enough in the beginning, or we might decide that the international peer reviewer perhaps doesn't know enough about [the Australian]context and that would be clear, you know, and we say, oh look, thank you very much, it was really—but we would engage that person nevertheless. (IC1)

4. Responsibility for funding decision

Although the final funding decision presently rests with the board, the perception exists that the primary decision is made at the level of the Research Development Group and is heavily weighted towards technical merit. To change this there needs to be a change in the decision-making structure:

- **Stronger Aboriginal control of decision making. Include industry and community more actively and have a stronger focus on merit review in the final funding decision.** The committee primarily involved in making the funding decisions could be drawn from a broad mixture of backgrounds, which would include significant representation from service providers and community representatives. This committee could be the board with increased industry/community representation or could be a committee appointed by the board. This committee could include a wide range of experts: specialists on research transfer and capacity building, service providers including those from non-health backgrounds and Department of Health and Community Services representatives. If academics were included in such a committee, they would not come from the specific area under consideration but would be academics with broad experience. If academics are not included, there must be a process of technical review and clear communication of this to the committee.
- **Members of the committee making the funding recommendation to the board should at least partly be drawn from individuals with standing in the Aboriginal community but external to the CRCAH. Equally, the inclusion of some academics external to the CRCAH would fulfil a similar role.**

  This step would improve credibility, minimise allegations of corruption and possibly reduce internal tensions.

- **Set up a framework of weighted values** that could be used to provide a rough guide as to how well the proposal meets the values decided on by the board. The committee that provides the final fund/don't fund decision could use the sums of the weighted values for comparing the merit of multiple proposals. This process also provides a framework for defining the elements of a proposal that the CRCAH as an organisation has decided is important. Such a process has already been used within the CRCAH at the board level.

  It can be taken quite far in a sense of getting relative weightings attached to different aspects. For example, it might be that the board takes a view that something that has an impact on the health of Aboriginal people living in rural or remote parts of the country would attach a weighting of 1.2, whereas for people living in the cities it might be 0.8 or 0.9... There are all sorts of different ways of doing that. They might want to argue that they would want a weight attached to improving cultural security as something in its own right and not only the impact that that has on the health of Aboriginal people. They might want to say that where there are defined communities involved that there should be an attempt made to use community values and not individual values...

[In assessing a proposal you could then] *say, well, which criteria are relevant to these sort of things, what sort of weights are we attaching to these and then you add them up and then you say—and this is one of the crucial things—for a fixed amount of $100,000, because it has got to be constrained in terms of resources, because the budget is constrained—for a fixed amount of 100,000 you can actually do this amount of good, so to speak, which amounts to, say, 7.4 and on this other one it is 9.2, so, well, it looks as if this is better, now, are we really sayin ... because again you have really got to watch that in using the value judgments derived from the numbers here, which is what one is doing, that you are not actually doing something sort of loopy and there may be all sorts of reasons why, that you haven't identified. (A9)*

Language is important

Participants indicated there was a need to be clear about what the language means. In particular, there was confusion over the use of the terms 'industry/community' and the term 'peer review', which may be inappropriate.

- The term 'industry':

  conflates the difference between government and community control. We are quite happy to accept it because it means we have fewer—we don't have quite so many people—but I don't think that government is the same as community control. So I think that's a bit of nonsense. (A4)

  It is a confusing term. I have come to the view that it is quite useful to talk about... research providers and research users, so the researchers themselves and the communities can be both providers and users, it is more a functional term rather than describing a population of people. (A8)

  When I think of industry, I think the industry's actually people that were supposed to be, you know, assisting in terms of the population and I think the health service delivery point is actually the medium through that point... the consumer is the industry. (IC6)

- The term 'Indigenous workforce':

  My idea of workforce was building the Indigenous workforce, not building on non-Indigenous doctors. (IC5)

- The terms 'peer' and 'review': a more inclusive and better descriptive term might be that of 'critical advisor' or 'critical friend':

  I think we should move away from the words 'peer review' because I think that creates half of the problem. I think it colours everyone's perception, so even if you try to have something that does it differently and use the same terms you still get stuck in the mould... I think the problem is also with the word 'review' because the way review gets used even in the colloquial... I mean, when people talk about courses being under review, programs being under review, what it sets up is actually, how can I be nastier than the next guy. (A1)

I think that the name 'peer review' does tend to connote various things, because the people in the Aboriginal communities assume that the peers you are talking about are academic peers and I think that probably there might be some people in the research community who assume you're talking about Aboriginal people. (A2)

'Telling the story'—Effectively transferring research to communities and encouraging uptake of findings

This project is not looking at the final outcomes of research, although the assessment of a research proposal or proposed program of research is intrinsically entwined with the final outcomes. We cannot evaluate the value of a system for commissioning and funding research without looking at the outcomes from that research. It is important that short- and long-term evaluation be incorporated into any such system. Unfortunately, in the context of the CRCAH, which lives within a limited funding cycle, long-term evaluation may not be possible. However, it is possible to look at short- and possible medium-term transfer of research findings and perhaps estimate the long-term potential for benefit.

It is of interest that in most cases the participants did not identify research transfer as a problem. This may reflect the strong emphasis placed on this issue at present by the CRCAH and in the past by the CRCATH. The CRCAH approach to research transfer draws on international best practice and the lessons learned, particularly from the Canadian Health Services Research Foundation working with Canadian First Nations communities and health organisations.

One participant did suggest there was a need to look nationally at research transfer. The participant felt there had been very little analysis of how long-term projects, supported in the past by the CRCATH and now supported by the CRCAH, could move beyond the local to the national. Commenting on the Healthy Skin project, the participant said:

Does it affect our Victorian core partners or our Queensland, you know, like this is NT-specific or Queensland-specific, like, how many core partners does it affect... no-one is thinking outside the circle. (IC5)

Long-term evaluation of any program that is implemented is obviously important and provision should be made for such evaluation. Efforts should also be made to transfer the findings of this experiment in research funding structure to other research funding organisations in Australia, including the NHMRC, the Australian Research Council and also smaller non-government research funding organisations, in order to encourage them to direct their efforts to address the considerable health inequities within Australia.

Our feeling as researchers is that the very funding of this piece of research is an indication of the seriousness with which the CRCAH takes the task of improving its research quality assessment processes. This research has described the constructive critical reflection that is encouraged within the CRCAH. The findings from this research have been disseminated as the research progressed and have played a role in the revision of the research focus and processes of the CRCAH. The CRCAH is clearly a learning organisation that has taken on board the concept that continual quality improvement will be important to evolving a research process that makes a very real contribution to improving Aboriginal health status in Australia.

Conclusions

This work highlights the considerable challenges of designing a system of research commissioning and assessment that satisfies the sometimes conflicting requirements of research rigour, the unquestionable requirement for genuine and effective Aboriginal, especially community, control of research processes, and the importance of funding research that is likely to lead to an improvement in Aboriginal health status.

The CRCAH has taken this task very seriously and, as a result, is progressing down a path that shows great promise of achieving such a system. However, it is worth noting that in changing the system some values may be lost, even as others are achieved. For example, in maximising transparency, some of the cutting edge of quality may be lost and, in increasing collaboration, it is possible that some of the focus of the research may be compromised.

Most significantly, our work shows that the CRCAH needs a collaborative and inclusive research culture. Increased involvement of decision makers and community representatives in the research process from the inception of the idea through to research transfer and the involvement of the CRCAH in developing grant proposals is essential for cultural change. The CRCAH has a major role to play in brokering collaborative links between community organisations/service practitioners and academic researchers The CRCAH should be formally involved in mentoring Aboriginal researchers in grant application process, research practice and dissemination *and* in the mentoring of non-Aboriginal researchers in the appropriate conduct of research in Aboriginal communities and research transfer.

Our findings suggest that collaboration can be improved through good administrative procedures, financial support for development, tight feedback arrangements, strict adherence to guidelines, clear guidance from the board on a number of contentious issues, and clear guidelines on the funding conditions.

As this work has progressed, the CRCAH has moved to design and implement an approach to research commissioning and assessment that is based around five programs (Healthy Skin; Chronic Conditions; Comprehensive Primary Health Care, Health Systems and Workforce; Social Determinants of Health; Social and Emotional Wellbeing). Our findings lead us to conclude that the most effective method of program building may be to employ a small group of diverse experts from a range of backgrounds, including service providers, research transfer experts and academics, to guide the program building under the aegis of a research leader and with the support of a program manager. The value of a collaborative organisational culture lies in its ability to improve the formation and maintenance of such groups. The present CRCAH Symposiums are helpful in gaining a broad sweep of opinions but, by their very size, tend to be unwieldy and may not be effective for precise program definition. Smaller, more focused, groups may be more valuable for this purpose but should be informed by the discussion at the Symposium.

Our work also highlighted that the assessment process should be part of a collaborative and supportive research development process with clearly defined criteria for assessing technical aspects and merit. Critical assessment should be obtained from a range of 'friendly' critics—academic, community members, service providers and policy makers—with adequate avenues to ensure clear communication between these groups. This assessment should be as transparent as possible. Within this process, greater Aboriginal representation on review and/or program panels is essential.

Review by academic experts (peer review) is essential for credibility and rigour and the elimination of duplication. Wider merit review is necessary for robustness, sustainability and effectiveness, as well as to ensure the appropriate engagement of communities.

This work leads us to be confident that the CRCAH is on the right track and is developing a robust research commissioning and assessment process that is more collaborative and more inclusive of a wider body of stakeholders. If this proves to be the case, the Cooperative Research Centre for Aboriginal Health will be an example of best practice that should be acknowledged internationally.

Box 1: Literature Review

Primary Sources

- Wood, F. Q. 1997, *The Peer Review Process: Commissioned Report No. 54*, Australian Research Council, pp. 1–37
- Godlee, F. & Jefferson, T. 2004, *Peer Review in the Health Sciences*, BMJ Publishing Group, London, pp. 14–44
- Australian Indigenous Health Infonet <www.healthinfonet.ecu.edu.au/>.
- Cooperative Research Centre for Aboriginal Health <www.crcah.org.au/>.
- Articles from International Congress on Peer Review II, III & IV <www.ama-assn.org/public/peer/peerhome.htm>.
- Cochrane Collaboration

Databases

Informit in the areas of 'Health' (1968–), 'Indigenous people' (1968–present), Public Affairs (1978–) and newspapers (1991–); Ovid; Cinahl (1982–); Medline (1990–).

Grey Literature

- Google <www.google.com.au/>. (first 30 references/web page updated in last year/English language)
- Reports available through Flinders University Library, University of Adelaide Library, SACHRU library and through the recommendation of the project steering group

Key Words

'participatory action research', 'community-based research', 'collaborative enquiry', 'multidisciplinary research', 'non-peer', 'peer review', 'qualitative research', 'quantitative research' and 'Indigenous OR Aboriginal', 'grant review', 'consumer participation', 'grant', 'Māori', 'health research'

Canada, Norway, Finland, New Zealand, American Indian, Inuit, Sami, First Nation

Box 2: Interview schedule

Interviewees were asked to reflect on their experience with one or more of the priority-setting symposiums, the expression of interest round or a previous grant review round, and discuss their reactions to the experience. For example: Did the process work well? What worked well? What didn't?

If not covered in the ensuing discussion the following areas were addressed:

1. Assessment: Who should assess quality?

Prompts:

- Should academics reviewers be included? Do reviewers need to be experienced in research? Do reviewers need to have academic standing? Should service providers be reviewers?
- How should Aboriginal stakeholders be involved and at what level?
- If a range of peers are used what should the range include e.g. academic, service providers, research transfer experts, capacity building experts?
- Should international reviewers be included?
- Should review occur by individuals or by committee?
- Should review be external or internal with respect to the CRCAH?

Criteria: What criteria should underpin the assessment?

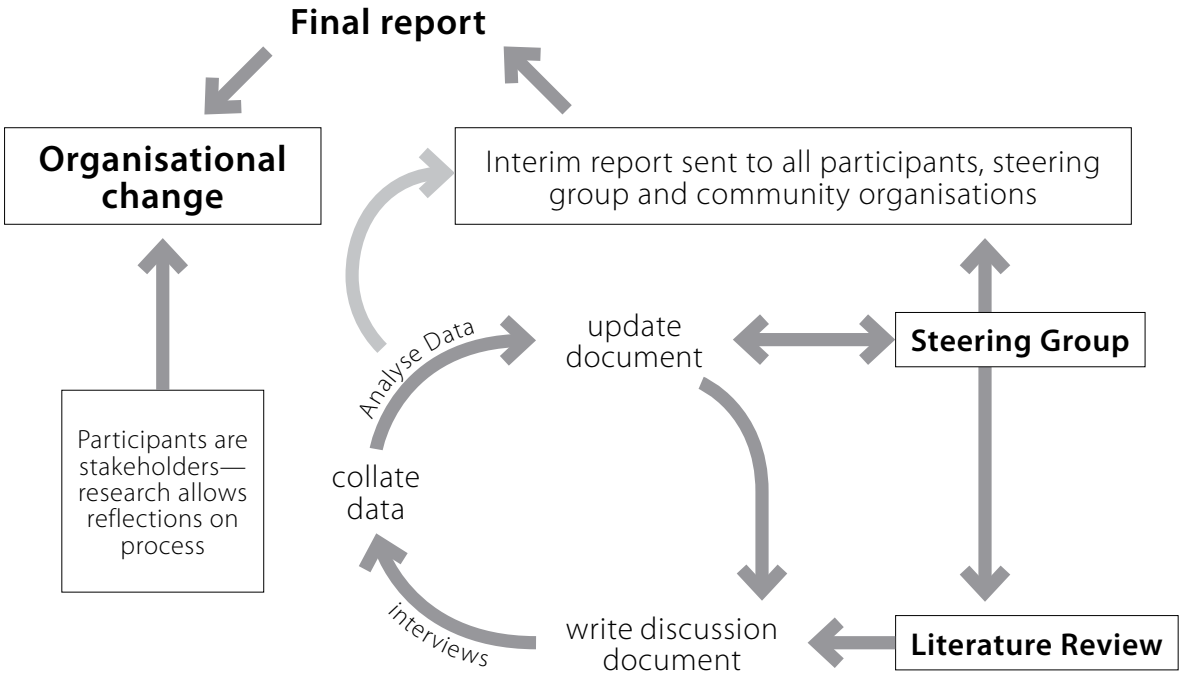
Prompts:

- Should different criteria be assessed by different people or should reviewers take a holistic approach?
- Can criteria such as collaboration be assessed? How?

2. Should the CRCAH be involved in the development of a proposal? To what extent?
3. How can conflicts of interest be managed given the small pool of 'expert peers'?
4. Should there be special Indigenous initiated research pathways? If yes should these proposals be assessed with the same criteria as other proposals?
5. How do we reconcile community-driven research with peer review?
6. How do we balance nationally focused research with local research?
7. *How can the desire for transparency be balanced with the conflicting agendas of the organisation's partners?
8. *What do you see as the role of peer review?
9. *How might a collaborative approach to research programs work?

*These questions were added to the schedule in response to the initial interviews.

Figure 1: The research design



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Appendix 1

Project Steering Group

- **Professor Ian Anderson**—Research Director, CRCAH
- **Associate Professor Ross Bailie** (resigned June 2004)—Menzies School of Health Research, Darwin
- **Mr Michael Bentley**—South Australian Community Health Research Unit
- **Mr Nigel Bennett**—Research Administration Officer, Australian Institute of Aboriginal and Torres Strait Islander Studies. Canberra, Australian Capital Territory
- **Ms Jenny Brands**—Research and Development Manager, CRCAH
- **Mr Alwin Chong**—Senior Research and Ethics Officer, Aboriginal Health Council of South Australia
- **Dr Shane Houston**—Assistant Secretary, Office of Aboriginal Health, Family and Social Policy, Northern Territory Department of Health and Community Services
- **Ms Carey Lonsdale**—Acting Director, Office for Aboriginal and Torres Strait Islander Health Services, Australian Government Department of Health and Ageing
- **Dr Priscilla Pyett**—Senior Research Fellow, Onemda VicHealth Koori Health Unit, The University of Melbourne
- **Mr Clive Rosewarne** (joined July 2004)—Central Australian Aboriginal Congress Inc.
- **Dr Kevin Rowley** (joined July 2004)—VicHealth Public Health Research Fellow, Onemda VicHealth Koori Health Unit, The University of Melbourne
- **Professor Tim Turpin**—University of Western Sydney

Organisations consulted during the research process

- Central Australian Aboriginal Congress
- Danila Dilba Biluru Butji Binnilutlum Medical Service Aboriginal Corporation
- Aboriginal Health Council of South Australia

Appendix 2

CRCAH organisational objectives

The Cooperative Research Centre for Aboriginal Health aims to:

- promote high-quality research through the development of research partnerships involving key stakeholders, through increased Aboriginal participation and control, and through better defined ethical practices;
- undertake strategic research to investigate health service delivery systems, the social determinants of health and health conditions;
- transfer research findings into policy and practice to improve primary health care practice, to build sustainable prevention and early intervention programs, and to reduce the burden of disease on Aboriginal communities and individuals; and
- increase formal research training opportunities for Aboriginal people.

(From CRCAH website accessed on 3 August 2005 at: <http://www.crcah.org.au/>)

Appendix 3

Global practice in Indigenous research in developed nations

This section reviews the experiences with Indigenous research in Canada, New Zealand and the United States of America (USA). In all of these countries, the health of Indigenous peoples is worse than the population as a whole. Australian Indigenous peoples were among the first to develop national ethical guidelines for the conduct of research in Indigenous communities, a long and at times traumatic process documented by Kim Humphery (2002). Yet, we note that Aboriginal people in Australia fare poorly in health terms compared with Indigenous peoples in other developed nations, notably Canada, New Zealand and the USA. Life expectancy for Aboriginal people is lower than that of Māori (ABS 2001), American Indian and Alaskan natives (IHS 1992), and Canadian First Nations peoples (Health Canada 2003).

Research organisations and funding agencies worldwide are increasingly recognising the need for change in the mode of engagement for Indigenous communities and individuals. Initially, organisations considered the ethical aspects of engaging in Indigenous research and this was instrumental in the formulation of comprehensive guidelines. More recently there have been changes in review processes, from the use of academic peer review to a wider merit review process. There have also been changes in the commissioning processes to include Indigenous peoples in the formulation of priorities for grant funding. However, complete or equal control of the research process by Indigenous peoples is rare.

Canada

The Canadian research establishment—including the Canadian Institutes of Health Research (CIHR), Social Sciences and Humanities Council, and the Natural Science and Engineering Council—has recently engaged in attempts to 'revise research guidelines and policies to reflect a greater sensitivity to Indigenous knowledge and the rights of Indigenous communities' (Ermine, Sinclair & Jeffery 2004). This is just one action in a series of actions to provide more ethical and participatory procedures in research involving not only Canadian First Nations peoples but also the wider Canadian community, particularly those involved in health policy and practice development. In particular the CIHR, which has developed from the original Medical Research Council, undertakes to 'add community members on peer review committees where additional perspectives add value to the evaluation of applications for funding' (CIHR 2003). The CIHR, through the 'Partnerships' program, encourages a 'multidisciplinary research environment [which] helps to bring together a wide variety of organizations' including government departments, industry and non-government organisations (CIHR 2004). Despite this, funded projects remain 70 per cent investigator-driven and overwhelmingly biomedical.

One of the institutes that makes up the CIHR is the Institute of Aboriginal People's Health. The institute includes an advisory board with members from Indigenous organisations, public service and academia. This board acts in an advisory capacity on the priorities of the organisation and strategies for 'engaging the broader research community' (IAPH 2005). However, members of the peer review committee are at present based entirely within the academic community.

The Canadian Health Services Research Foundation was formed in 1998 and mandated to 'promote and facilitate evidence based decision making' (CHSRF 2005). This move reflected the interests of the principal research funding body, the Medical Research Council, and the Canadian government in increasing 'applied research funding' and in using 'research to inform health service provision' (CHSRF 2005). This was a mainstream approach that attempted to improve the transfer of research findings into practice by engaging input from health practitioners and policy makers in defining priority areas and assessing the quality of research proposals in Indigenous and non-Indigenous health research. The Canadian Health Services Research Foundation uses a broad merit review process, and assessment criteria include the potential impact of the research, scientific merit and the experience and skills of the investigative team. Potential impact is judged by 'the involvement of decision makers as partners in the research' and 'the extent and appropriateness of the communication and dissemination plans' (CHSRF 2004). Peers are drawn from both research and 'decision-making communities'. (CHSRF 2006) Therefore, many of the facets of research transfer that have been identified as important by the Indigenous Research Reform Agenda (CRCATH 2002) are already in process in some mainstream health research areas in Canada.

New Zealand

The New Zealand Ministry of Research, Science and Technology has developed a document *Vision Matauranga*, which includes a commitment to 'Māori responsiveness', 'a policy designed to increase Māori participation within [the funding system] and ensure that it responds to Māori issues, needs and aspirations (outcomes for Māori)' (Ministry of Research Science and Technology: Te Manatu Putaiao 2005). The scope of this change includes health research under the Health Research Council, social research under the Foundation for Research Science and Technology, and a small number of projects looking at aspects related to the development of Māori research within the ministry. Within the Health Research Council itself, there is an emphasis on supporting Māori research, including funds for building research capacity by supporting Māori postgraduate students (Health Research Council of New Zealand 2004a). In addition, more than 20 per cent of total Health Research Council funding 'contributes to health outcomes for Māori' (Health Research Council of New Zealand 2004a). The funding is allocated through a 'contestable pool' and is investigator-driven, although allocation of funding is through the Māori Health Committee, which is committed to funding research that is 'relevant to and meets the real needs of Māori as identified by Māori themselves' (Milne 2004). Peer review is by 'national and international reviewers', presumably academic (Health Research Council of New Zealand 2004b), and the Māori Health Committee.

It is not clear how effective these measures are in involving Māori communities and individuals in decision making in research direction and priorities. However, it is apparent that there are attempts to incorporate Māori-directed research into the mainstream research funding schemes. It should also be noted that decisions within the New Zealand government bureaucracy may be influenced by the Treaty of Waitangi and that Māori citizens are a significant voting block in the New Zealand electorate, as 14.7 per cent of the New Zealand population is Indigenous (Statistics New Zealand 2001) compared with 2 per cent of the Australian population (ABS 2001).

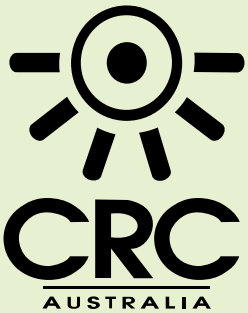
United States of America

The experience in the USA is with the Indian Health Service (IHS), a wide-ranging and long-established health service mandated to address the health and medical needs of Native Americans and Alaskan Native peoples principally living on reservations and in rural communities. The relationship of the USA federal government to the First Nations peoples is described as a 'government-to-government relationship' (IHS 2006) underpinned by Supreme Court decisions, treaties, legislative acts, and Executive Orders Research within the IHS is targeted towards health program evaluation, policy analysis and health services research, and has a small budget of ten projects of less than US$50,000 each (IHS 2005).

Although health research is a part of the core business of the IHS, research to meet the needs of American Indian or Alaskan Native communities has a low profile within the more mainstream National Institutes of Health, within which the principal funding for health research takes place. In 2004 the IHS, in conjunction with the National Institutes of Health and the Agency for Healthcare Research and Quality, announced the development of Native American Research Centers for Health to address this issue (IHS 2004). The first competitive grant funding round from this initiative took place in September 2005 and has continued into 2006. To be eligible for funding, applicants must be from a recognised Indian tribe(s) or non-profit tribal organisation(s). The initiative aims to increase the number of American native people involved in research, to encourage collaboration between American native groups and research-intensive (presumably academic) institutions, and to enable research that addresses the priorities of American Indian groups in order to reduce health disparities. The funding amounts are relatively small (US$2.2 million), with projected grant amounts ranging from US$250,000 to US$800,000 (IHS 2004).

Summary

Without inside knowledge of how well the rhetoric presented in organisational documents translates into action, it is difficult to judge the relative response of these countries to the call for increased participation of Indigenous people in research. However, the level and depth of the rhetoric may be an indication of commitment and these two factors are perhaps most striking in Canada, where community participation through partnerships is funded in a significant proportion of mainstream research. In particular, an emphasis on research transfer through increased community involvement and inclusion of 'decision makers' in mainstream (not just Aboriginal) research, as described in the Canadian Health Services Research Foundation model, may be an additional tool in making Aboriginal health research more effective, beyond the present system of targeted funding, which is often not sustained long-term. The breadth of the interpretation of who is included in the term 'decision maker' may be worthy of attention within the CRCAH, in particular the involvement of service delivery personnel outside the Aboriginal Medical Services (AMSs) and the health sector generally. However, targeted funding may be important in improving the numbers of Aboriginal people involved in research. The National Health and Medical Research Council, an Australian funding body, includes an Aboriginal and Torres Strait Islander health forum that acts in an advisory and monitoring capacity, and has adopted Indigenous health research as a strategic priority. However, in the NHMRC, as in all of its overseas counterparts, research remains predominantly researcher driven and biomedical.



Cooperative Research Centre for Aboriginal Health
PO Box 41096
Casuarina, NT 0811
AUSTRALIA
T: +61 8 8922 8396
F: +61 8 8922 7797
E: admin@crcah.org.au
W: www.crcah.org.au

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