





Knowledge exchange and research capacity building in urban Aboriginal health

Sherriff S, Kalucy D, Fernando P, Muthayya S, Nixon J, Burgess L, Wright D, Gordon R, Carr D, Eades SJ, Redman S, Craig JC and Banks E

ACKNOWLEDGEMENTS

This research is a project of the Australian Primary Health Care Research Institute, which is supported by a grant from the Australian Government Department of Health. The information and opinions contained in it do not necessarily reflect the views or policy of the Australian Primary Health Care Research Institute or the Australian Government Department of Health.

We thank the SEARCH participants, their communities and the staff at participating ACCHSs. This work was supported through grants to SEARCH from the Australian Primary Care Research Institute, the National Health and Medical Research Council of Australia (grant numbers 358457, 512685, 1023998 and 1035378), the NSW Ministry of Health, beyondblue and the Rio Tinto Aboriginal Fund. The CRE and SEARCH are conducted in partnership with the AH&MRC and four Aboriginal medical services across NSW: Awabakal Limited, Riverina Medical and Dental Aboriginal Corporation, Sydney West Aboriginal Health Service, and Tharawal Aboriginal Corporation.

CITATION

Sherriff S, Kalucy D, Fernando P, Muthayya S, Nixon J, Burgess L, Wright D, Gordon R, Carr D, Eades SJ, Redman S, Craig JC and Banks E. *Knowledge exchange and research capacity building in urban Aboriginal health. 2016.* Centre for Urban Aboriginal Child Health, the Australian National University. The Australian National University: Canberra

Professor Emily Banks
Research School of Population Health
62 Mills Rd
The Australian National University
Canberra Acton 2600

E: emily.banks@anu.edu.au

CONTENTS

Introduction	4
Project A – Knowledge Exchange	6
DESCRIPTION OF THE PROJECT	6
METHODS	8
OUTCOMES	9
Service focus and policies	9
Information for communities	9
Submissions for new resources	9
Influencing other agencies	9
SUMMARY	10
Project B – Research Capacity Building	11
DESCRIPTION OF THE PROJECT	11
METHODS	11
Formal education	11
SEARCH-led training	11
Training workshops	12
Research training for ACCHS staff	12
OUTCOMES	12
Formal training	12
SEARCH-led training	13
Training workshops	14
Research training for ACCHS staff	15
SUMMARY	15
Discussion	16
References	18

Introduction

Successive governments have committed to closing the gap between Aboriginal and non-Aboriginal life expectancy ⁽¹⁾, and recognised the potential value of research in informing policies, programs and service delivery to improve Aboriginal health. ⁽²⁾ However, in practice, research has not always yielded real benefits for Aboriginal people. ⁽³⁾

Aboriginal leaders have called for a different approach, in which communities are partners and leaders in research that contributes more directly to improving health ⁽⁴⁻⁶⁾. The National Health and Medical Research Council of Australia has echoed this in its *Roadmap for Indigenous health research*.⁽⁷⁾ Dr Pat Anderson, former Chair of the Lowitja Institute and an Alyawarre woman from the Northern Territory, stated that,

Decades of research carried out by non-Aboriginal researchers, based in non-Aboriginal institutions, had left many of us deeply suspicious of the 'r' word ... The research agenda was set in forums to which few of us had access. There were few Aboriginal researchers. And research methodology was still focused on Aboriginal people as subjects of research; research was something carried out 'on' us as Aboriginal people, not 'with' us and certainly not 'by' us. Worse still, despite the large volumes of research to which we were subjected, very little seemed to be translated into practice; the research projects came and went, but health service delivery and policy remained the same. ⁽⁸⁾

The Aboriginal Health & Medical Research Council of New South Wales (AH&MRC) has a long history of leading debate and reform about research in Indigenous communities and, in 2003, joined the Sax Institute to establish the Coalition for Research to Improve Aboriginal Health (CRIAH). (P) With inaugural Chair Frank Vincent, CRIAH's goal was to strengthen partnerships between researchers and Aboriginal Community Controlled Health Services (ACCHSs), and to develop research that improves health policy, programs and services. As one of its first initiatives, CRIAH brought together researchers and ACCHSs to consider priorities for research. At the suggestion of Pat Delaney, a leader in Aboriginal mental health, it was agreed that a long-term cohort study would be established to understand and act upon the causes of health and disease in Aboriginal children in New South Wales (NSW).

The Study of Environment on Aboriginal Resilience and Child Health (SEARCH) was the outcome and is a partnership between the AH&MRC, the Sax Institute, researchers and four ACCHSs. SEARCH focuses on Aboriginal children who live in urban areas, since little is known about their health (10) and 75% of NSW Aboriginal people live in urban centres. (11) About 1600 children and their caregivers have joined SEARCH from four ACCHSs in urban and large regional areas in NSW: Sydney West Aboriginal Health Service (Mount Druitt), Tharawal Aboriginal Corporation (Campbelltown in suburban Sydney), Riverina Medical and Dental Aboriginal Corporation (Wagga Wagga) and Awabakal Ltd (Newcastle). At Newcastle and Wagga Wagga, only families living in the urban and inner regional areas have been recruited. Self-report and clinical measures are collected from children and their caregivers (with details reported elsewhere). (12-14) The first wave of data collection was completed in 2012; the second is scheduled for completion in 2016.

The Centre for Research Excellence (CRE) on urban Aboriginal Child Health is linked to this unique base of information on 1600 children and their parents/ caregivers. The Centre is designed to: (a) increase the translation of knowledge arising from the SEARCH program and additional data collection undertaken as part of the CRE; (b) to enable ACCHSs to effectively use the information emerging from SEARCH to

improve the quality of primary care, and; (c) enhance research capacity in primary health care within ACCHSs by increasing their capacity to undertake multidisciplinary research and knowledge translation in primary care. This work will provide evidence to support sustainable and transferable improvements in Aboriginal primary health care and, ultimately, health outcomes.

This report will document the methods, outcomes and the key elements that made both the knowledge exchange and capacity building projects so successful. Each project is separately described.

Project A – Knowledge Exchange

DESCRIPTION OF THE PROJECT

Australian Aboriginal people are one of the most researched populations in the world. In the past, research has been conducted on Aboriginal people by external non-Aboriginal organisations with little or no partnership with the community. Often, the findings from research are not disseminated back to the participating Aboriginal community in a meaningful way that enables them to make proper use of the findings to bring about change for that community. The importance of bringing back SEARCH findings to the participating communities via the ACCHSs and the need for a structured knowledge exchange program was recognised by the SEARCH investigators early on as critical to meaningful and transferable improvements in Aboriginal primary health care.

Knowledge exchange (KE) in an Aboriginal context is a dynamic and iterative process which brings together academic staff, users of research and wider groups and the communities to exchange ideas, evidence and expertise. This allows researchers to learn from Aboriginal primary healthcare providers and vice versa, to together improve the research and inform health care provision. However, knowledge exchange cannot just start at the end of the project when the data collection is finished and analysis is complete. For it to be successful, early engagement between researchers and primary care providers at the beginning of the project is essential. Early engagement helps to ensure that the right questions are asked so that the research can inform practice when the results are ready. Regular ongoing input into the study by primary care providers along the way is also an important step which will produce in data that is useful and meaningful in practice. (15) This is particularly important in Aboriginal health research as the ACCHSs have the best knowledge of how to conduct the research within their community and can also help ensure that it is done in a culturally competent way. By maintaining strong relationships throughout the program, it is much more likely that the researchers and Aboriginal primary care providers will be able to work together once the results are ready to implement changes based on the data. Finally, it is critical that the results are presented in a way that is useful, understandable and meaningful.

The partnership between researchers and the ACCHSs lies at the heart of SEARCH and drives the identification of priorities, the collection and interpretation of data (see Figure 1). From its inception, the SEARCH Study, on which the CRE was built, was envisioned as a new kind of action partnership between researchers and the participating Aboriginal Community Controlled Health Services (ACCHSs) that was committed to using research evidence to drive health improvements. ⁽¹⁶⁾ The term 'action partnership' describes our focus on using research evidence to bring about health improvements through better services, policies and programs for the communities (see Figure 2). The ACCHSs, in particular, have ensured that the driving purpose of the research conducted is to stimulate action to improve health for urban Aboriginal children and their families.

The Centre for urban Aboriginal Child Health built on the earlier relationships and work conducted under the SEARCH program. The Centre shared findings from the SEARCH study with three ACCHS partners through a Knowledge Exchange program, led by an Aboriginal Knowledge Broker with experience in research and ACCHSs health service provision. The sharing process enabled the ACCHSs to provide feedback and to develop evidence- guided new or enhanced programs and services based on their extensive knowledge of their Communities. This report will outline the Knowledge Exchange Program that was run under the CRE and the outcomes it achieved.

Figure 1: The SEARCH partnership

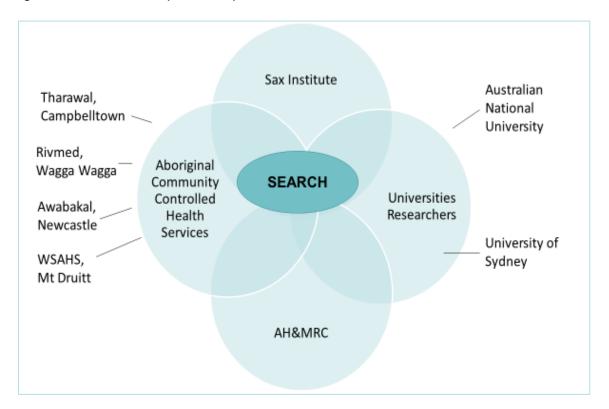
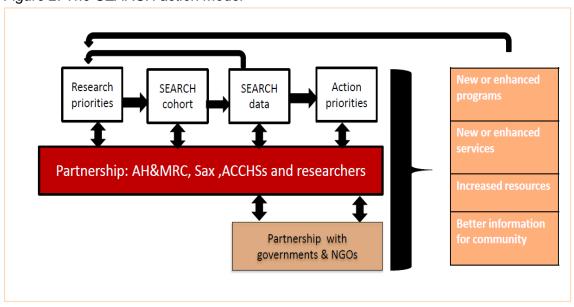


Figure 2: The SEARCH action model



ACCHS = Aboriginal Community Controlled Health Service; AH&MRC = Aboriginal Health and Medical Research Council; NGO = nongovernment organisation; Sax = The Sax Institute

METHODS

The knowledge exchange program implemented by the Centre was multi-faceted to ensure that knowledge sharing was conducted with all relevant parties, including ACCHS management, staff, the Community and the Boards that govern the ACCHSs. To begin with, a qualitative study was conducted to understand the best way in which to feedback the data to the ACCHSs and to determine the main priority areas for each partner ACCHS. The qualitative interviews were conducted with a range of ACCHS staff from senior management, medical staff and Aboriginal Health Workers (AHWs) to explore their use and understanding of data. The study identified what areas ACCHS staff members were most interested in and where they felt there was a current gap in data. It also told us that the staff overwhelmingly preferred visual presentations of the data as opposed to written. Based on the study findings, the knowledge exchange sessions for each ACCHS partner was planned.

To ensure that the data collected from SEARCH was fed back to the participating ACCHSs in the most meaningful way, a knowledge hub was established that would provide analytic, methodological, capacity building and material resources to assist the ACCHSs. The hub consisted of an experienced Aboriginal knowledge broker who has strong links with the ACCHSs, and has the skills and capacity to bring key people together to share research findings in an easily understood format, a full-time statistician to analyse data for the KE sessions and to undertake special-purpose analyses, as required, and a project officer to coordinate the KE program. The Aboriginal knowledge broker, who is very familiar with the SEARCH data and with the ACCHS sector, helped identify the key issues for each of the services and what might be the implications for action. Local feedback was provided by the ACCHS staff to the Aboriginal knowledge broker who they would then work with to determine how to use the data and to develop options for program development and service improvement. The ACCHS could also request data at any time for any reason they might need it (funding proposals, policy discussions, Board meetings) and they could also request further analyses of the data presented.

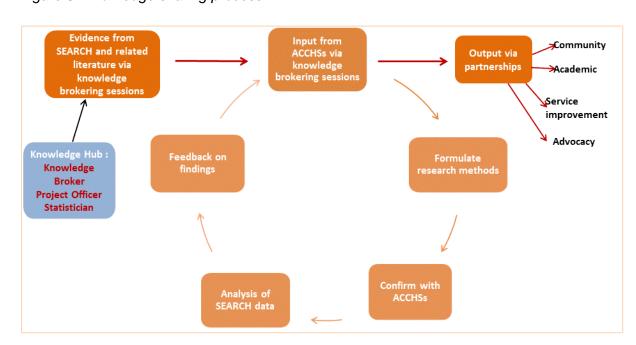


Figure 3: Knowledge sharing process

OUTCOMES

Five knowledge exchange meetings took place in 2015-2016 with presentations on the key topic areas staff identified in the qualitative interviews. The knowledge broker facilitated discussions with key ACCHS staff and Board members on how the SEARCH data could be used to complement their current medical data and identifying ways in which the data could be used for service improvement and areas where further programs are needed.

Through the knowledge exchange sessions led by the SEARCH Aboriginal Knowledge Broker, the partner ACCHSs have used the data to stimulate dialogue at management and team levels, and to develop targeted improvements in service delivery. Four examples of how the data was used are provided below. (16)

Service focus and policies

All of the ACCHSs have used the data to stimulate dialogue at the management and team levels and to develop targeted improvements in service delivery. For example, in one ACCHS, SEARCH data contributed to an increased focus on asthma and a review of its existing plans and targets for improved mental health in response to SEARCH data showing that around one third of the children attending the ACCHS were at risk of emotional and behavioural problems. Similarly, SEARCH data on the rates of overweight and obesity among both Aboriginal children and adults helped highlight the need for a review of current food policies in one of the ACCHSs and measures were put in place at one service to facilitate healthy eating by staff and pre-school children attending childcare within the service.

Information for communities

The ACCHs used the data from SEARCH to inform their community about health. For example, the high rates of recurrent ear infections documented by SEARCH was useful to one service in strengthening its existing work in ear health by developing online and print resources based on a cartoon character called L'il Mike to engage children and their parents in ear health. (17) SEARCH data including the finding that only around half of the children were breast fed at all, half of their parents or caregivers were smokers and that overweight and obesity was highly prevalent among both children (34% in < 5 year olds and 40% in 5-17 year olds) and their parents and caregivers (70%). These data resulted in another service designing a program to empower women, particularly the Elders, to provide leadership to children and young girls in their communities in health, including discussions about breast feeding, eating healthily, exercise and smoking reduction. The ACCHS initially organised a consultation with older women in their community to address poor lifestyle choices and habits that are adversely affecting the health of the women and their children. This was followed by regular health promotion training workshops for women targeting key areas where change is needed.

Submissions for new resources

Data from SEARCH on smoking and obesity rates in adults (as previously mentioned), and speech and language impairment in the children (40% in those aged 1-7 years), have been used to demonstrate the need for improved services in funding submissions. For example, in one ACCHS, the submission resulted in a grant of \$1M for quit smoking programs and in two other services the SEARCH data were instrumental in attracting funds for a dedicated speech pathologist.

Influencing other agencies

The ACCHSs have also used the data to help other agencies provide better care for their children; for example, one ACCHS has used the data in discussions with the

Aboriginal Education Consultative Group and the Department of Education to highlight challenges faced by Aboriginal children and to help teachers consider how to assist help Aboriginal children do their best at school. Using the SEARCH data showing high rates of skin infections, one ACCHS successfully advocated for a skin check to be included in the primary school health check for Aboriginal children in its region.

In order to disseminate the baseline findings back to the Aboriginal communities in a way that is accessible and culturally appropriate, we held SEARCH stalls at NAIDOC events and other community events and distributed information via newsletters and flyers. A promotional video featuring the ACCHS CEO's and local SEARCH families has been developed and will be ready for use in ACCHS waiting rooms in early 2017. Below are two quotes from partner ACCHS CEOs on what they have been able to achieve from the data that was shared:

As a result of the Study data we have redesigned the whole model of care in our mums and bubs program. We have moved from a midwifeled model to one where GPs and Aboriginal health workers are working together to focus on the main health issues highlighted amongst the kids – overweight and obesity, ear health and asthma. [ACCHS CEO]

We are also using the hard facts we have found to talk to local schools and the Education Department so we can give teachers a better understanding about where these kids are coming from. Without that data we would not have had the movement we've had around these issues. [ACCHS CEO]

SUMMARY

Overall, SEARCH and the Centre have successfully shown that evidence-based change can occur at the service and local levels. These changes have been made possible through the following factors and actions: engaging in a knowledge exchange process which utilises ACCHSs expertise, long-term relationships between researchers and primary care providers, and a commitment to using research to drive change. These elements have ensured that the implications of the data are understood, thus allowing the data to be utilised in a meaningful way.

Project B – Research Capacity Building

DESCRIPTION OF THE PROJECT

Research capacity building is defined as a planned, structured approach to increasing health workers' knowledge and skills about research so that they can assess and contribute to research and program activities within their communities. To achieve maximum benefit, this should take place with active community consultation which builds processes and strategies that are both relevant and culturally appropriate for the community involved.

There is an increasing recognition of the need for Indigenous participation in health research, and the need for Indigenous autonomy and self-sufficiency in relation to health research. Over the past 2 decades, capacity building and community empowerment have emerged as key strategies for reducing health disparities and promoting public health.

Capacity building for many Aboriginal people and communities is often a one-way process that involves non-Aboriginal people developing training programs for Aboriginal people but without any consultation with Aboriginal people. The involvement of Aboriginal people in decision-making about their own development is critical and it is important that capacity building is planned around Aboriginal Community priorities. For capacity building to be successful there needs to be a model that allows for two-way learning that assists in building partnerships to facilitate the sharing of skills and knowledge of both Aboriginal and non-Aboriginal people. The Aboriginal Community has a vast amount of existing community capacity and this should be learnt from and built upon in any capacity building program (18).

The CRE and SEARCH have a core commitment to supporting the development of research capacity among Aboriginal staff employed at the ACCHSs and in the SEARCH study. The CRE program was designed to build a group of Aboriginal researchers who can lead Aboriginal health research in the years to come. A range of both on-the-job, short and formal opportunities for research skills development were provided in key areas desired by the staff Aboriginal staff members and ACCHSs. Earlier qualitative work with ACCHS staff members provided key areas of focus for the program.

This report will detail the methods employed and the outcomes that were achieved.

MFTHODS

Formal education

The Centre provided mentoring and support for any Aboriginal colleagues seeking to do higher education either through the Aboriginal Health College or University Departments. This included regular consultations with Aboriginal colleagues to identify potential courses staff would like to enroll in and how the SEARCH program could support them to undertake tertiary study.

SEARCH-led training

Training in research methods was provided to each of the Aboriginal Research Officers (AROs) and other staff at the ACCHSs. The training included data collection, administering questionnaires, and taking clinical and chronic disease measures. SEARCH highly values ACCHS staff members being involved in the write-up of papers on the data of their community. This ensures that the community context has been properly captured and gives the staff members a chance to learn how the write

up procedure is done. The AROs are asked to be involved in the write up of papers in areas they are interested in and this is a great way for them to see how the data that they are collecting on a day to day basis is being used. The AROs were also supported to present SEARCH baseline findings at a number of national conferences (13, 19). In terms of cultural competency skills for non-Aboriginal team members this learning was done on the job. Non-Aboriginal staff members regularly consulted Aboriginal staff members on appropriate methods for collecting data and working with ACCHSs.

Training workshops

The SEARCH partnerships links with Universities and other training institutions allowed the SEARCH team to offer relevant training workshops to the Aboriginal Research Officers. SEARCH also held an Aboriginal Cohort Data Collection Methods for the AROs and others working in Aboriginal health research to come together and share knowledge.

Research training for ACCHS staff

An early qualitative study identified areas staff felt they would like to build further research capacity. There were four main areas for further capacity building identified; understanding the research cycle, conducting literature reviews, program evaluation and qualitative research. Based on these responses the SEARCH team worked in partnership with colleagues at ANU and the University of Sydney to develop one-day training sessions to be run at partner ACCHSs. The SEARCH team also consulted with ACCHS management to determine the most appropriate format and delivery style for the workshops.

OUTCOMES

The Centre sought to build capacity using a combination of formal training and other mechanisms conducted by SEARCH, based on areas of interest highlighted by staff in earlier qualitative work.

Formal training

Of the 11 staff supported to pursue higher education, six Aboriginal staff are enrolled and currently completing or have completed a range of degrees from a diploma to a post-doctoral fellowship as shown in Table 1. A further five non-Aboriginal staff were supported by SEARCH to undertake PhDs and a biostatistics placement.

Another two Aboriginal Research Officers were supported to complete the Poche Centre for Indigenous Health research scholarship course to gain further skills and knowledge in Aboriginal health research and to enable them to network with others in the field.

Table 1: Staff supported to pursue higher education

Number of staff	Higher education degree
1 *	Post-doctoral fellowship
5	PhD
1	Biostatistics trainee placement
1 *	Masters
3 *	Graduate Diploma
1 *	Diploma

* Aboriginal staff

SEARCH-led training

The CRE has provided extensive training in research methods and techniques to 15 Aboriginal research officers with six of them supported to present research findings at national conferences ^{9,10} (Table 2). All the Aboriginal research officers and other ACCHS staff were invited to be a part of the different theme groups within the program to contribute to papers for peer-reviewed journals and gain skills in paper writing. ACCHS staff have been actively involved in the drafting of study papers, increasing the likelihood that the data will be owned, understood and used locally; this approach has also enriched the wider study team's understanding of the data and its implications. Across the CRE, 38 presentations were made by Aboriginal researchers.

Table 2: Dissemination of CRE/SEARCH findings

Conference	Year	Number of presentations
SEARCH Annual Forum, Sydney	2012, 2013, 2014, 2015 and 2016	24 *
PHCRIS National Primary Health Care Research Conference	2013	1
Strategic Policy Network, Department of Health and Ageing	2013	1
Social Determinants of Health Alliance forum: Racism and culture as determinants of health	2013	1
Indigenous Health Interest Group Research Showcase	2013	1
Policy round table, Department of Health, Canberra	2014	1 *
Australian Otitis Media Conference, Newcastle	2014	1
Emerging Health Policy Research Conference, Menzies Centre for Health Policy, Sydney	2014	2 *
NSW Kids and Families, North Sydney	2015	2 *
Primary Health Care Research Conference, PHCRIS, Adelaide	2015	3 *
RACP Congress	2015	1
Indigenous statistical capacity building	2015	1 *
Population Health Congress	2015	1
Australian Housing and Urban Research Institute (AHURI) postgraduate student symposium	2015	1

Conference	Year	Number of presentations
Australasian Housing	2015	1
Researchers Conference		
Sax Institute Board, Sydney	2015	1
Awabakal Ltd, Newcastle	2015	1 *
Tharawal Aboriginal	2015	2 *
Corporation, Campbelltown		
Riverina Medical and	2016	2 *
Dental Aboriginal		
Corporation, Wagga Wagga		
Centre for Kidney	2016	1 *
Research, Westmead		
Children's Hospital, Sydney		
Poche Centre for	2016	1 *
Indigenous Health, Sydney		
ANROWS Inaugural	2016	1 *
National Research		
Conference on Violence		
against Women and their		
Children	2010	4 *
Presentation to Family and	2016	1 *
Community Services NSW		
(FACS)	0010	
International Speech	2016	1
Pathology Conference	2010	0.*
Australian Otitis Media	2016	2 *
Conference, Newcastle	2010	4
Lowitja Institute	2016	1
International Indigenous		
Health and Wellbeing Conference		
PHAA National Primary	2016	1
Health Care Conference	2010	'
NHMRC Symposium on	2016	1
Research Translation	2010	'
Nesearch Hallstallon		

^{*} presentation by an Aboriginal researcher

Training workshops

To further build the knowledge and skills of the Aboriginal Research Officers, SEARCH ran a workshop on Aboriginal cohort data collection methods with 30 attendees from a range of affiliated institutes (Table 3). The workshop provided a good way for the Aboriginal Research Officers to network and brain storm ideas for collecting Aboriginal cohort data and share ideas to overcome some of the challenges that arise.

Table 3: Training workshops

Name of workshop	Number of staff
SEARCH Aboriginal Research Officer Training workshops	15*
Poche Aboriginal Research Scholarship course	2*
Aboriginal Cohort Data Collection Methods	30*
Program Evaluation workshop	10*

^{*} All of these workshops were attended mainly by ACCHS staff

Research training for ACCHS staff

One workshop on program evaluation was delivered in November 2016 at one of the partner ACCHS sites. The SEARCH project team worked with researchers at the Australian National University (ANU) to develop and deliver an evaluation training workshop to ACCHS staff. The SEARCH project team identified that ACCHS staff wanted to learn: 1) better understand the processes and uses of health services evaluation; 2) do their own evaluations; and 3) better direct external evaluation. ANU researchers with expertise in program evaluation delivered training to ACCHS staff involved in the SEARCH program. The training was delivered as a full-day workshop and covered a range of different aspects of evaluation. In the session ACCHS staff gained new skills around understanding evaluation, when to conduct an evaluation internally vs externally, how to develop an evaluation plan using existing ACCHS data, communicating evaluation needs and how to identify research questions, outcome measures, and whether there is a need for additional data collection.

The workshop was held on site to enable a larger number of staff to benefit from the training. There was good participation with 10 staff members attending the day. SEARCH drew on the strong partnership we have with a number of Universities to utilise the skills and expertise within this to deliver the workshop.

Two additional program evaluation workshops are planned for early in 2017 at other partner ACCHS sites. A further three capacity building workshops on the research cycle, qualitative research and conducting literature reviews are planned to be ran at each partner ACCHS in 2017. SEARCH will once again draw on the active partnerships we have with a number of Universities to collaborate and utilise their skills in these areas. The preferred method of delivering these workshops identified through the qualitative interviews conducted with ACCHS staff, there was a desire to have all the capacity building workshops delivered on site as this enables a larger number of staff to benefit from these sessions.

SUMMARY

Under the Centre, 15 Aboriginal people have been employed on the CRE, six of whom have pursued formal higher education in research. All Aboriginal Research Officers have received training in research methods and paper writing and these staff have presented at conferences and contributed to journal articles. To successfully build research capacity among Aboriginal people, it was important to gain a better understanding current level of knowledge in research among Aboriginal staff and participating in discussion to identify the areas where they feel they would like further training and knowledge.

Discussion

The outcomes achieved through the KE and capacity building programs illustrate just some of the many changes to services and programs that have been stimulated through the CRE. One of the reasons for this has been an explicit focus on using the data to improve health. This principle has remained at the forefront of dialogue and strategies have been put in place to operationalise this commitment. A number of other strategies to support ACCHS use of data have been employed throughout the program: i) a major forum is held each year to consider the emerging analyses and potential future directions; ii) local feedback is provided on a regular basis as advised by the ACCHSs; iii) ACCHS staff have been part of drafting the study papers, increasing the likelihood that the data will be owned, understood and used locally; this approach has also enriched the wider study team's understanding of the data and its implications.

A key component of the knowledge exchange program was the Aboriginal Knowledge Broker who has strong links with the Aboriginal community and many years of experience working with ACCHSs, with the skills to bring key people together to share research findings. Another important factor was the qualitative research conducted which showed the CRE team which data to present and the best way to present it to the ACCHS staff. The CRE team used its collective networks to ensure that organisations like the NSW Ministry of Health, Sydney Children's Hospital Network and beyondblue were engaged in helping to support improved services and programs. The leadership by the ACCHSs and AH&MRC in maintaining the focus on health benefits has been particularly important.

Two-way capacity building was a key strength of the CRE. This has resulted in considerable development of capacity in Aboriginal research amongst senior non-Aboriginal researchers. Through their regular engagement with the ACCHSs, these researchers have gained an increased understanding of Aboriginal health and of how to work in partnership with ACCHSs. The CRE also built the capacity of ACCHS staff in the use of research findings to inform the provision of effective health care services. Key to this was skills within the team and a commitment to supporting the development of research capacity among the Aboriginal Research Officers at each ACCHS and Aboriginal staff in the coordinating centre. Finally, the CRE has built capacity by developing and testing measures to ensure that they are appropriate in Aboriginal urban communities.

Along with the KE and capacity building programs, there were several important elements of the SEARCH program that existed since its inception which allowed the findings to be translated into change, including strong relationships, shared governance and early priority setting by those who need to use the data in the long-term. Aboriginal leadership through the Knowledge Broker and presentation of the data in an easily understood format was crucial to successfully feeding back research data in a meaningful way.

Several overarching factors and priorities embodied in the Centre enabled positive changes to be made at the primary care level based on SEARCH data. (16). This encompassed a strong framework for the governance of the CRE and SEARCH programs which included partnership approaches to decision making such as regular decision making forums with ACCHS CEOs including agreement of any new directions, Aboriginal control of data and its use, participation of Aboriginal research in research meetings and presentation at national conferences and a focus on achieving health outcomes for children and their families.

It would not have been possible to undertake SEARCH without strong leadership from the ACCHSs. The ACCHSs have directed the priorities and advised on the way

in which data could be appropriately collected within their communities. Their ownership of, and advocacy for, SEARCH has been critical to the capacity to recruit families to a long term research program and has enabled SEARCH to be known and valued by communities; in the follow up phase, local community knowledge has enabled the location of children for invitation to follow up. Critically, the expertise of the ACCHSs is now ensuring that the implications of the data are understood and that change occurs at the service and local levels.

Not only has the CRE built capacity amongst Aboriginal staff members in SEARCH and partner ACCHSs, it has over the long term employed a number Aboriginal staff with extensive knowledge of the community and the ACCHS health sector. The Aboriginal staff in SEARCH have increased cultural competency amongst non-Aboriginal staff through on-the-job learning, increasing the ability of those non-Aboriginal staff to work competently in partnership with Aboriginal communities into the future. The research skills developed by these staff under the Centre will have lifelong benefits for their own careers, but will also play an important role in ensuring a move towards Aboriginal leadership of Aboriginal health research which is critical to ensuring culturally appropriate research that will translate in health gains for Aboriginal people in the future.

References

- 1. Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA). *Closing the gap: Prime Ministers report 2010*. Canberra: Australian Govternment: Canberra. 2010.
- 2. Australian Government. *National Aboriginal and Torres Strait Islander Health Plan 2013-2023*. Department of Health: Canberra. 2013.
- 3. Thomas D, Bainbridge R, Tsey K. Changing discourses in Aboriginal and Torres Strait Islander health research 1914–2014. *Med J Aust. 2014*;201(1):S15-S8.
- 4. Mundine K, Edwards L, Williams JDB. Why an Aboriginal Ethical Perspective in Necessary for Research into Aboriginal Health. In: AH&MRC, edited. From the Ground Up A Conference on Aboriginal Health in the 63rd Millennuim. Penrith, NSW. 2001.
- 5. Todd AL, Frommer MS, Bailey S, Daniels JL. Collecting and using Aboriginal health information in New South Wales. *Aust NZJ Pub Health*. 2000;24(4):378-81.
- 6. NSW Aboriginal Health Resource Co-Operative Ltd, NSW Department of Health. *NSW Aboriginal Health Information Guidelines*. AH&MRC. 1998.
- 7. The Aboriginal and Torres Strait Islander Research Agenda Working Group of the NHMRC. *The NHMRC Road Map: A Strategic Framework for Improving Aboriginal and Torres Strait Islander Health Through Research*. Canberra: Auatralian Government, 2002.
- 8. Anderson P. Keynote Address: Research for a better future. Coalition for Research to Improve Aboriginal Health 3rd Aboriginal Health Research Conference. Sydney. 2011.
- Sax Institute. CRIAH the Coalition for Research to Improve Aboriginal Health [cited 2016 05/02/2016]. Available from: https://www.saxinstitute.org.au/our-work/criah/.
- Eades S, Taylor B, Bailey S, Williamson A, Craig J, Redman S. The health of urban Aboriginal people: insufficient data to close the gap. *Med J Aust*. 2010;193(9):521-4.
- 11. Australian Institute of Health and Welfare (AIHW). *Healthy for Life Aboriginal Community Controlled Health Services Report Card.* Canberra: Author. 2013.
- 12. Investigators S. The Study of environment on Aboriginal resilience and child health (SEARCH): study protocol. *BMC Public Health*. 2010;10(1):287.
- 13. Reed R, WIlliams S. *The Study of Environment of Aboriginal Child Health* (SEARCH): Preliminary findings. In: PHCRIS, edited. PHC Research Conference Adelaide. 2015.
- Gunasekera H, Purcell A, Eades S, Banks E, Wutzke S, McIntyre P, et al. Healthy kids, health future: Ear health, speech and language among urban Aboriginal children (the SEARCH study) Oral Abstract. Journal of Paediatrics & Child Health. 2011:47:6.
- 15. Canadian Institutes of Health Research (CIHR). *Knowledge to action: A knowledge translation casebook*. Ottowa: Author. 2008.
- Wright D, Gordon R, Carr D, Craig J, Banks E, Muthayya S, et al. The Study of Environment on Aboriginal Resilience and Child Health (SEARCH): a long-term platform for closing the gap. *Public Health Research & Practice*. 2016;26(3):e2631635.
- 17. Awabakal. L'il Mike. *Healthy Ears* = *Deadly Kids!* http://www.awabakal.org/lil-mike Available from: http://www.awabakal.org/lil-mike
- 18. Tsey KM, J. Bainbridge, R. Brown, C. *Improving Indigenous community governance through strengthening Indigenous and government organisational capacity*. Canberra: Australian Government. 2012.
- 19. Sherriff S, King J. The perspectives of urban Aboriginal people on access to child ear health and speech services: Hearing, EAr health & Language Services

- (HEALS) project. In: PHCRIS, edited. PHC Research Conference; Adelaide. 2015
- 20. Young C, Tong A, Sherriff S, Kalucy D, Fernando P, Muthayya S, et al. Building better research partnerships by understanding how Aboriginal health communities perceive and use data: a semistructured interview study. *BMJ Open.* 2016;6(4):e010792.