

## **A partnership model in the development and implementation of a collaborative, cardiovascular education program for Aboriginal Health Workers**

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### ***Acknowledgements***

The Steering Committee would like to acknowledge the Aboriginal Health Workers for their enthusiastic participation and cooperation throughout the course and review process. We would like to acknowledge TAFE (New South Wales) for their collaboration in planning, implementing and evaluating the course. We would also like to acknowledge the National Heart Foundation funding of the review process and support for the dissemination of findings.

## **Abstract**

**Background:** Aboriginal Health Workers (AHWs) play a vital role in accessing communities and implementing culturally appropriate interventions to address cardiovascular risk factor modification.

**Aim:** To assess the feasibility and acceptability of a collaborative model of cardiovascular education for AHWs conducted within a partnership model.

**Method:** A steering committee was established using a partnership model between key education providers, policy makers, non-government organisations, the local area health service and Aboriginal community controlled organisations. This group negotiated a strategic implementation plan based on increasing collaboration, skill development, cultural competence and increasing access to mentorship and expertise for AHWs. A group of 21 AHWs, within two cohorts, undertook the program between October 2005 and June 2006. A mixed-method evaluation using quantitative and qualitative data collection methods was undertaken prospectively.

**Findings:** Knowledge and confidence scores significantly increased for all participants over the course duration. Student evaluation demonstrated a desire for group based activities and highly valued clinical visits. Feedback on both outcome and process measures will inform course delivery and design.

**Conclusion:** Improvements in cardiovascular knowledge scores and levels of confidence are indicative of the efficacy of the curriculum design and course delivery method. The partnerships forged in this collaborative model have significant and promising implications for improving the cardiovascular health of Aboriginal Australians.

## **A partnership model in the development and implementation of a collaborative, cardiovascular education program for Aboriginal Health Workers**

### **Objectives**

Cardiovascular disease (CVD), in particular coronary heart disease (CHD), is the leading cause of death in the Australian Indigenous population<sup>1</sup>. Walsh<sup>2</sup> has summarised some of the barriers and facilitators to improving the health of Indigenous Australians. Aboriginal people often feel more comfortable if Aboriginal people are involved in their care due to the level of cultural understanding<sup>2</sup>. A perception of prejudice, both tacit and overt, and a lack of cultural competence in interactions mean that many Indigenous Australians feel that the unique knowledge, values, and beliefs of their culture are ignored and as a consequence, they feel marginalised in interactions with mainstream health services<sup>3-4</sup>. Increasingly, there is recognition that mainstream health workers should be culturally competent, that is, that they should exhibit respectful and knowledgeable behaviours sustained by an enabling policy environment that supports cross-cultural interaction<sup>5</sup>. Culturally appropriate health care interventions occur as a result of culturally competent practitioners and an enabling policy and institutional environment.

Aboriginal Australians should lead, with support from the broader health community, on issues such as planning, implementation, and evaluation of health care services and health programs to ensure that they are culturally appropriate. Equally important is for non-Indigenous health professionals to strive to understand Indigenous peoples and to make services culturally appropriate<sup>6</sup>.

### *The role of Aboriginal Health Workers in service planning and delivery*

Aboriginal and Torres Strait Islander Health Workers are defined as Aboriginal or Torres Strait Islander people who work within a holistic primary health care framework as determined by the local Aboriginal or Torres Strait Islander community to achieve better health outcomes for Aboriginal and Torres Strait Islander individuals/families and their communities<sup>7</sup>. AHWs can play

an active role in the continuum of health care for local populations<sup>8</sup>. This is because of their appreciation of Indigenous issues, knowledge and skill base, and accessibility, as well as their standing within their communities. In order to support AHWs in these roles, it is important that AHWs are aware of local resources and health professionals to support them, but perhaps more importantly, feel comfortable in dealing with a range of service providers.

In order to address these issues, a number of organisations involved in the formulation of policy, service provision, and education came together in a partnership to facilitate and drive change in respect of the cardiovascular health of Aboriginal Australians. This partnership involved the National Heart Foundation of Australia, the Sydney West Area Health Service, the Department of Technical and Further Education (New South Wales), New South Wales Health, the University of Western Sydney and the Western Sydney Aboriginal Community Controlled Medical Service. A Steering Committee was established that was chaired by AHWs to address course design, implementation, and evaluation. The Steering Committee Terms of Reference included: (1) facilitating the implementation of the NSW Aboriginal Chronic Conditions Area Health Service Standards (ACCAHSS) in Sydney West Area Health Service (SWAHS) through the training and skill diversification of AHWs in cardiovascular health; (2) working collaboratively with non-government and community organisations (Aboriginal Health & Medical Research Council [AH&MRC], Aboriginal Medical Service [AMS], National Heart Foundation of Australia [NHFA]) and the State Government via the SWAHS and the NSW Health Aboriginal Vascular Health Program to deliver cardiovascular disease (CVD) education and training to AHWs; and (3) monitoring and evaluating the implementation of the Aboriginal Health Worker education and training program.

## **Course Curriculum**

The core course curriculum was based on the Aboriginal Health Workers Heart Health Manual, a resource for the Certificate in Cardiovascular Health for Aboriginal Health Workers developed by Derbal Yerrigan Health Services and the National Heart Foundation of Australia (WA Division)<sup>9</sup>. This program is a nationally accredited training course in cardiovascular health for AHWs with course content based on the national competency standards for AHWs. The course is comprised of the following modules: Aboriginal Health, Cardiovascular Health, Risk Factors, Individuals, Healthy Hearts in the Home, Schools, Organisations and Prisons, Community Action, Special Groups. Modules contain assessment criteria and worksheets, session plans, focus questions, suggested activities (including brainstorming, discussion topics, role plays and small group work) and a list of required resources. Central to the manual is the role of the health worker in preventing CVD and ways in which the health worker can initiate and support changes for individuals and the community that will reduce the risk of CVD<sup>9</sup>. The curriculum was modified for local purposes in cooperation with the Technical and Further Education (TAFE) NSW and National Heart Foundation (Illawarra). The Steering Committee received support and collaboration from the project team from South Eastern Sydney Illawarra who had recently paved the way for collaboration with TAFE in course design and implementation. Course content was delivered by Steering Committee members and local experts in the fields of CVD and Aboriginal health, among whom were eight Indigenous presenters who facilitated ten education and experiential sessions for each group.

## **Recruitment**

An Expression of Interest flyer was widely circulated throughout NSW via Area Health Service Networks, Aboriginal Medical Services and other non-government organisations to gauge interest in the course. The flyer stated that the course would be conducted one day per week for ten consecutive weeks (Group 1), as it was deemed more feasible for participants to be released from workplaces once a week for the duration of the course as opposed to several days at a time. Upon completion, participants would receive a TAFE Statement of Attainment. It was not a requirement

that participants had prior learning in cardiovascular health. It was assumed that participants would have at least basic literacy. Registration forms were sent to potential participants and once returned telephone contact was made by the course coordinator.

Interest in the program by both local and more remote-based AHWs exceeded expectation, however, the course format did not accommodate the needs of those who had to travel from rural and regional centres. Given the substantial interest from AHWs in remote areas of NSW, it was decided that a second course would be conducted in block format to accommodate needs of participants residing outside the Sydney metropolitan area (Group 2). The two blocks consisted of three continuous days of education and experiential sessions spaced one month apart. Course participation was free for AHWs; however participants were required to pay for their own travel and accommodation needs. Some subsidised accommodation on nearby hospital campuses was made available to participants.

### **Setting**

The majority of education sessions were delivered at a medium-sized TAFE campus in the Sydney Metropolitan area. This facility is located close to major highways and is accessible via public transport. Education sessions were conducted in one classroom with capacity of approximately 40 students and desks. Site visits took place at local tertiary health care facilities including a major 420-bed and a 975-bed hospital, and an urban Aboriginal Medical Service. To minimise transport needs on site visit days, corresponding education sessions took place on-site in classrooms or meeting rooms. Participants utilised public transport or carpools to attend.

### **Participants**

Twenty-one AHWs participated in the program between October 2005 and June 2006. Group 1 participants (n=9) were from urban areas and Group 2 participants (n=12) were from rural areas of

NSW. Both groups were predominantly comprised of female participants (n=19, (90%)). Only two AHWs had experience working with cardiovascular conditions and one AHW had a tertiary qualification. All course participants had a minimum of 12 months working as an AHW. When asked about prior knowledge of the subject matter covered in each day of the course along a continuum from 'very good' to 'poor,' participants mainly indicated 'fair' and 'poor' levels of prior knowledge.

### **Methodology/Sequence of events**

Principles of action learning<sup>10</sup> underpinned many of the sessions where students worked together to complete assessments. Students were also encouraged to relate information to their workplace and develop plans to be enacted upon their return and identify a mentor. Concurrently, a range of social programs were organised to promote networking. TAFE provided information about support services such as literacy and numeracy programs and provided expertise in targeting learning materials appropriate to learner needs.

A key feature of the program was experiential learning, where participants visited health care settings to see cardiovascular risk reduction programs in action and to observe therapeutic and diagnostic interventions. Steering committee members representing cardiac rehabilitation services at a large metropolitan hospital and the Aboriginal Medical Service organised visits to relevant sites. The particular departments visited in hospital were selected to allow the participants to observe the journey of a typical patient with CVD in real-world settings: emergency department, catheter laboratory, cardiology ward, and cardiac rehabilitation. A visit to the pathology library provided visual reinforcement of learned concepts. At the Aboriginal Medical Service, participants observed the Diabetes Health Workers undertake a comprehensive vascular health assessment including assessment of blood pressure, urinalysis, weight measurement, assessment of physical activity and point of care measurement of cholesterol and blood sugar levels.

### *Evaluation method*

A mixed method evaluation using quantitative and qualitative data collection methods was prospectively undertaken to inform course development<sup>11</sup>. Two questionnaires developed by the Steering Committee assessed knowledge and confidence with cardiovascular disease and were administered prior to and immediately following the course. The 25-item knowledge questionnaire asked about risk factors, symptomatology and physiology. The 20-item confidence questionnaire asked participants to indicate on a Likert-type scale to what extent they felt confident with statements within three subscales in relation to CVD: knowledge (e.g. signs and symptoms of heart attack, depression), skills (eg taking blood pressure, performing a glucometer reading), and communication (e.g. talking to a doctor about a patient, being asked to give opinion at a meeting). Results were tabulated and checked by two members of the research team. Data was entered into SPSS version 14.0 for analysis. Paired samples t-tests were carried out on questionnaire scores to identify any differences in pre-/post-test scores. A MANOVA was used to analyse concurrently any difference between groups. Results were significant if  $p < .05$ . Semi-structured interviews were conducted with participants one month after completion of courses. The interview guide included topics involving the participants' experiences as a course participant, their perceptions of relevance of course content to needs, use of and barriers to the use of course information and resources in current workplace, course impact on practice, and interest in further training. Participants' perspectives were recorded via hand-written notes taken during the interviews and then collated in preparation for thematic-content analysis.

## **Outcomes**

### *Questionnaire Results*

Seventeen participants completed pre-test and post-test questionnaires. Of the four people who did not complete both pre- and post-test questionnaires, one withdrew and three were absent on either the first or last day of the course, when measures were implemented, due to illness or work-related



issues. Paired samples t-tests indicate statistically significant increases in pre-/post-test scores for each group on both the knowledge and confidence questionnaires (Table 1). Figure 1 depicts confidence levels as nearly doubled across each of the three confidence domains for all participants, while Figure 2 shows that CVD knowledge scores increased by 86% at the end of the course. MANOVA analysis indicates no significant differences observed for the size of change pre-/post-test based on course delivery schedule.

### *Interview Findings*

The majority of participants who undertook this course discussed perceived benefits of acquiring the information and provided concrete examples regarding how the experience impacted on a personal, professional, and community level. For AHWs not working in the area of CVD, some of the content was challenging, yet all saw direct or indirect benefits to their practice. The following quotes reflect participants' thoughts regarding the knowledge and skills obtained in the course and their perception of how the material was relevant in their current workplaces:

- *“I was able to go back and tell the doctors about the new guidelines”*
- *“I say to people this is really important ...taking care of your heart”*
- *“Now when people come to the desk for an appointment with chest pain and things like that ...I know how important it is”*
- *“Now I've seen a stent. I can talk to people better about this, make them less scared.”*
- *“It's been great to be able to talk to the doctors about people's cholesterol levels and things like that...I feel better about that”*
- *“This has been perfect for my job, it's what I do everyday. Just getting more information and being sure of what I am saying has been great”*

These statements reflect the AHWs' enhanced recognition of CVD signs and symptoms and their significance. Emerging from these statements is also an increased confidence gained as a result of knowledge attainment. Encouragingly, AHWs felt more confident in discussing CVD with doctors and in providing accurate information to patients. Several participants returned to their workplaces with ideas regarding development of services and health promotion activities as a direct consequence of targeted activities within the course.

Despite these positive perceptions, not all participants felt that the course content addressed their needs as depicted in the following excerpt:

“Learning to do a blood pressure is one thing... It would have been better if things had been more integrated...like I would have liked to have known things like how does an AMS work... how do you integrate an Aboriginal Health Worker in the system...what is the professional role and scope of practice?” Focussing on the patient journey would have been a good idea...like how do you get a referral?”

This excerpt from the one individual who withdrew from the course includes a perception that some of the activities and information sessions were disparate, thereby highlighting a challenge in meeting the needs of diverse skill levels of participants.

#### *Implications for future education initiatives for Aboriginal Health Workers*

Overall, participants were satisfied with the experience of the course, although some were initially sceptical of the need and also of their own abilities. Some found the transition to adult learning a challenge and still retained memories of previous educational experiences which shaped their behaviours within the course, as depicted in the following excerpt:

*“You know I really regret missing that session...I didn’t go that day because I didn’t finish my assignment.....I didn’t think it would be OK to say I didn’t have time or I needed help or something like that.”*

As illustrated in this statement, participants reflected on this concept of negotiating their role as adult learners. They offered suggestions for improving future participants’ experiences in an effort to minimise the strain associated with balancing assignments with other life commitments as depicted in the excerpt below.

*“You know it was just full on from the start...I found that a bit tough....getting used to doing assignments and homework again...fitting it all in was you know a bit hard.....I don’t know if I really expected all of that ...even though I got all the stuff...it may have been better to get it all together...know what you were really in for.”*

This participant suggested that more orientation and lead-in time would have assisted with adaptation to undertaking the course as an adult learner. Although aspects of the course were

challenging, especially medical terminology, with support, participants adapted and rose to the challenge. Some participants acknowledged challenges in literacy but thought there were adequate resources to assist them.

## **Discussion**

Significant improvements in all participants' CVD knowledge and confidence levels at the end of the course indicate that the program was successful. Participants not only gained factual knowledge of CVD, but also gained confidence in their understandings, skills, and communication abilities related to their CVD practice. In light of such improvements, particularly in regards to confidence levels nearly doubling, it appears that the course content and delivery was acceptable and appropriate for this group of Aboriginal Health Workers. Improvements were similar across both groups, therefore timing of delivery of sessions (ie. weekly versus block format) did not appear to impact on outcomes.

### *Growth via collaboration*

Facilitators, as well as participants, recognised this course as a process of discovery; not only learning more about each other but also about the challenges of teaching and delivering information to a group with heterogeneous needs and baseline knowledge levels. The enthusiasm and commitment of these busy professionals was palpable and there was a sense that they had learned just as much as the course participants. Steering Committee members and course facilitators recognised that they had also developed and grown professionally during the course. In particular, professionals reported an increase in their levels of cultural competence and awareness of issues facing Aboriginal people.

The course afforded opportunities for learning in a range of formats and milieus where partnerships and links were emphasised. Collaborative learning activities appeared to have been favoured and

experiential site-based learning was considered to be advantageous. Visiting hospitals and other facilities seem to increase confidence levels and forge sustainable links and relationships. Encouragingly, there was report of breaking down the barriers and an increased interface between community and non-government organisations and the acute care setting. There was also an increase in participation of Aboriginal people in cardiac rehabilitation programs within the Area Health Service.

On the basis of the evaluation reported above and subsequent discussions, program modification has been undertaken. An ongoing mentorship program has been implemented to increase the forging of links and skill development. Further mapping of the educational program is being undertaken to increase the interface with TAFE and other education providers.

Although findings reported above are context specific, lessons learnt from this project are likely applicable to other settings looking to engage AHWs. Importantly, the Steering Committee concluded from the evaluation that:

1. Program content needs to be flexible to accommodate a range of learning styles and baseline knowledge.
2. Group sessions and experiential learning, particularly involving site-based visits, were preferred by participants and are likely more culturally appropriate.
3. Action learning is a preferred learning style and is empowering for participants.
4. Promotion of networks and mentorship models promotes learning and sustainability of learning outcomes.
5. Wherever possible, learning outcomes should be measured in respect of certificate of attainment and articulate with nationally accredited courses.
6. Inter-sector and interdisciplinary partnerships are valuable in the promoting the role of the Aboriginal Health Worker.

## **Conclusions**

The model of educational intervention trialled in this program is a useful strategy in promoting CVD knowledge in AHWs, increasing the knowledge of Aboriginal health in the mainstream health setting and importantly, forging partnerships. The increased levels of confidence noted are encouraging in empowering AHWs to be advocates for their community members. These partnerships are important in minimising barriers in accessing health services and promoting networks to improve the health of Aboriginal Australians.

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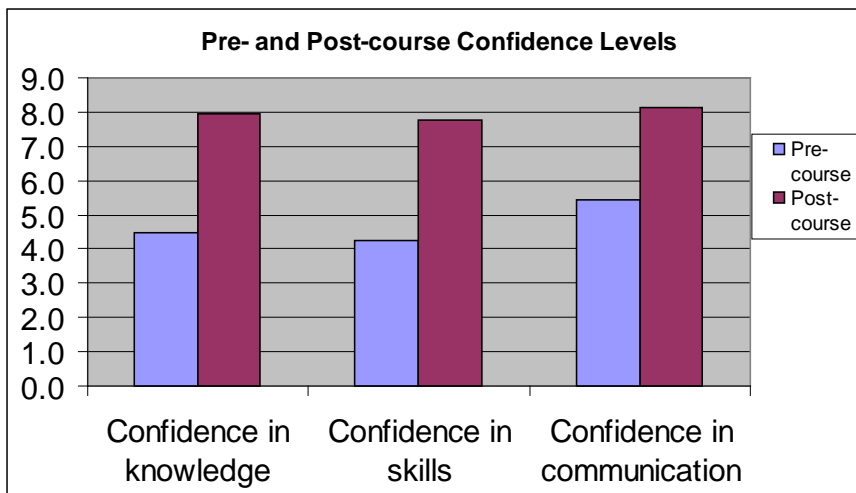
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**Table 1. Paired Samples T-Test Results (N = 17)**

Construct	Pre-test Mean (SD)	Post-test Mean (SD)	P-Value
Knowledge	9.93 (4.02)	17.43 (3.32)	0.000*
Confidence in Knowledge	4.46 (1.84)	8.08 (1.60)	0.000*
Confidence in Skills	4.29 (2.75)	8.16 (1.84)	0.000*
Confidence in Communication	5.52 (2.39)	8.34 (1.69)	0.000*

\* Significance at  $p < .05$ .

**Figure 1 Pre- and Post-course Confidence Levels (N = 17)**



**Figure 2 Pre- and Post-course Knowledge Scores (N = 17)**

