Improving Access to Cardiac Rehabilitation for Remote Indigenous Clients

Frank Shepherd, Kristine Battye, Elizabeth Chalmers, Michael Bala

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INTRODUCTION

Cardiovascular disease is responsible for more death and disability in Australia than any other medical condition\(^1\). Furthermore, there is evidence to suggest that populations living outside capital cities have higher death rates from coronary heart disease\(^2,3\). Lower socioeconomic groups within Australia also have greater prevalence of the risk factors for CHD\(^4\). Lower socioeconomic status has been shown to not only affect death rates from CHD but also likelihood of readmission\(^5\).

The incidence and mortality of CHD in Aboriginal populations is much greater than in non-Indigenous Australians\(^6\). Indigenous Australians are twice as likely to die from CHD than non-Indigenous Australians\(^7\).

Furthermore, death rates from CHD amongst young and middle aged Aboriginal adults are ten to twenty times higher than the national average\(^1\).

There is much evidence to suggest that the higher mortality may be explained by the higher prevalence of risk factors compared to non-Indigenous Australians. Studies have shown Aboriginal people to have higher average blood pressure, smoking prevalence, diabetes, obesity, increased LDL cholesterol and decreased HDL cholesterol and hypertriglyceridaemia\(^8\)–\(^11\).

Cardiac rehabilitation is the co-ordinated use of medical, social, educational and vocational measures to give individual patients the opportunity to regain the highest possible level of function following an adverse cardiac event. It is an integral part of the care of a patient with CHD\(^1\).

There is much evidence to show that various individual measures to reduce risk factors for CHD are effective at reducing reinfarction and mortality\(^12\)–\(^15\). Whilst cardiac rehabilitation has been shown to have both short and long-term benefits, participation rates in such programs have traditionally been less than desirable\(^16\).

Several studies have suggested various reasons for not participating in cardiac rehabilitation. Lack of time, lack of professional services, financial reasons, lack of motivation, and work commitments were major factors identified\(^16,17\).

Further evidence identifying distinct groups within the community suggests there is a disparity in cardiac rehabilitation utilisation with lower rates among women, older patients, less-educated individuals, and the unemployed\(^17\).
Other work suggests that patient’s perceptions of the benefits of cardiac rehabilitation and barriers that may exist whilst they are in hospital were predictive of whether the patient is likely to undertake a rehabilitation program\textsuperscript{17}.

Differences in patient preferences in the nature of the rehabilitation program may also be a factor in participation rates.

Established evidence exists to suggest that primary prevention interventions can be effective in reducing the risk factors for CHD in the Indigenous population\textsuperscript{11}. However, there was no evidence available to document the effectiveness of a cardiac rehabilitation program in Aboriginal patients with established CHD.

**Barriers to Indigenous patients seeking cardiac rehabilitation**

Despite the available evidence to attempt to explain reasons for poor participation in cardiac rehabilitation in the general community, there is no literature specific to the Aboriginal community with regard to cardiac rehabilitation.

However, it is important to consider factors that may provide a barrier to Indigenous people seeking health care. Health for Aboriginal people cannot be dissociated from self-determination, land rights and “cultural vitality” — it cannot be divided neatly into “wellness” and “illness” or mental and physical aspects\textsuperscript{18}. Recent statistics showed that over 15% of Indigenous people did not have a doctor available to them within 25 km of their home, 17% did not have access to a nurse within 25 km, and 22% had no access to an Aboriginal health worker within 25 km. Over 12% of Aboriginal people had to travel more than 100 km to get to a hospital. For more than 23% an Aboriginal medical service was more than 100 km away\textsuperscript{18}.

Another important factor of great significance for Indigenous people in rural and remote areas was the extent of Indigenous involvement in the medical services they can access. A survey by the Australian Bureau of Statistics concerning Aboriginal health found that over three-quarters of their respondents said it was important that Indigenous people are involved in the provision of their health services\textsuperscript{18}.

The interaction with regards health care between Aborigines and non-Aborigines can also lead to barriers to participation in health care. Attitudes of Indigenous people towards western medicine are shaped by history and contemporary influences\textsuperscript{19,20}. Members of the medical profession in the past have been involved in reinforcing racist theory, implementing policies based on those theories, planning and undertaking processes that deprived Aborigines of their liberty, and using Aborigines as uninformed and non-consenting subjects in medical experiments\textsuperscript{21}.

Indigenous Health Workers (IHWs) form an essential link between Aboriginal communities and medical services. They play a central role in the promotion of health and the treatment of illness. Their success often lies in the fact that they have a close association with, and an intimate knowledge of the communities they serve. They link western health beliefs to Aboriginal health or cultural practices\textsuperscript{22}. The role of the IHW varies across Australia, often depending on the location of the community they support. Remote area IHWs are often relied upon to provide clinical skills, whereas urban-based IHWs where medical services are more available may be seen in more of an educative and liaison role\textsuperscript{22}.
IHWs provide culturally appropriate and effective services for Aboriginal families and communities; they have a particularly vital role in follow-up with patients to encourage compliance with treatment regimes\textsuperscript{22}.

Given the size and extent of the cardiovascular disease burden for Indigenous people, the development and delivery of cardiac rehabilitation and secondary prevention programs for Indigenous people is urgently required.

**The Northern Queensland Rural Division of General Practice Program**

The Northern Queensland Rural Division of General Practice has established a primary care model of cardiac rehabilitation and secondary prevention deliverable to people in rural and remote areas.

Cardiac rehabilitation has three phases.

- **Phase One** is delivered by hospital staff while the patient is in ICU or the Medical Ward and involves providing the patient with information about their condition, education on how to cope with the illness and referral to support services. The patient is usually recruited for Phase Two during this time. The patient has to consent to being enrolled in Phase Two.

- **Phase Two** is the General Practitioner based primary care model of cardiac rehabilitation where the GP monitors the patient’s progress after they leave hospital.

- **Phase Three** is when the patient is able to maintain the program with a minimum of supervision.

The uptake of this program by Indigenous people has been low. At present only 5% of Indigenous patients who are eligible for the Mt Isa rehabilitation program are being recruited compared to approximately 31% for other Australians. In addition to factors already outlined there is also concern that Aboriginal people might not be receiving the appropriate support to enrol in cardiac rehabilitation. High turnover of medical staff in rural and remote areas and reluctance by some patients to make regular visits to a medical practitioner make monitoring of the patient’s progress difficult.

The Indigenous Health Worker has been identified previously as being important in the rehabilitation of Indigenous patients when they return to their communities. Cardiovascular training for health workers has already been provided in Mount Isa. The training was designed to provide skills for the health worker in the follow-up of Indigenous cardiac patients when they leave hospital and return to their community. A regime was put in place for health workers to monitor Indigenous cardiac patients in the crucial eight-week period after leaving hospital. The regime provided for the shared care of the patient by the health workers and the doctors and nursing staff. However uncertainty about the health workers’ role has contributed to confusion as to each party’s responsibility in managing and caring for Indigenous cardiac patients.
AIM OF THE STUDY

The study will identify barriers to Indigenous patients taking up cardiac rehabilitation in the Mt Isa District and will implement strategies that will improve participation in the program by Indigenous cardiac patients.

The aims of the project will be achieved by conducting a survey among the target groups to determine:

♦ whether the cardiac rehabilitation program is accessible and appropriate for Aboriginal and Torres Strait Islander people in rural and remote towns and communities; and

♦ the role health workers would have in supporting and caring for Indigenous patients who suffer from cardiovascular disease.

METHODOLOGY

Community consultation and community participation are seen as vital to allow the objectives of the project to be met. Community ownership of the project is evidenced by the membership of the Project’s Steering Committee. Steering Committee members live and work in all rural and remote communities and towns targeted by the project.

Semi-structured interviews were designed for the identified target groups.

The themes for the interviews included:

♦ the target group’s knowledge of cardiac rehabilitation;

♦ the target group’s views about whether the programs are accessible and appropriate for Indigenous people; and

♦ the target group’s views about the health worker’s role in cardiac secondary prevention rehabilitation.

Questionnaires for each of the target groups were developed and tested and were then used as the focus for discussion. Interviews were conducted individually or in a group setting as appropriate. The project officer, a local Indigenous researcher, recorded responses to the questions and other qualitative data.

Interviews were conducted with the following:

♦ Indigenous health workers;
♦ Aboriginal liaison officers;
♦ Indigenous cardiac patients; and
♦ relevant medical practitioners and nursing staff.

Indigenous cardiac patients were identified from Aboriginal and Torres Strait Islander people who were admitted to the High Dependency Unit at Mount Isa Base Hospital.
between December 1998 and May 2000. Further cardiac patients were identified as part of the community consultation process.

The project officer approached patients with the assistance of an Indigenous Health Worker. Patients had the study explained to them, were given an information sheet and were asked to sign a consent form.

All stored data was de-identified and kept secure in Word and Excel files with password protection.

The quantitative data was collated into simple tables. The text from interviews will be analysed using quantitative methods.

Ethical clearance was obtained from the local Human Research Ethics Committee.

This paper reports preliminary data.

RESULTS

Indigenous health workers

Twenty-two of the 28 Indigenous health workers (IHWs) were interviewed in Mt Isa and in six remote settings.

At present Indigenous health workers do not generally monitor cardiac patients as heart patients. However health workers visit these patients as clients who suffer from chronic illnesses such as diabetes or renal disease.

From a total of 47 Indigenous cardiac patients interviewed only one (1) patient was visited and monitored by health workers in accordance with the protocol developed by the NQRDGP in 1999.

Table 1 Questions about cardiac rehabilitation for IHWs

<table>
<thead>
<tr>
<th>About cardiac rehabilitation</th>
<th>% Yes</th>
<th>% No</th>
<th>% Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do IHWs have adequate skills to do CR?</td>
<td>15</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td>Are IHWs aware of the 3 phases of CR?</td>
<td>37</td>
<td>63</td>
<td>0</td>
</tr>
<tr>
<td>Do IHWs have a role in Phase 1 now?</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Should IHWs have a role in Phase 1?</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Are IHWs aware of NQRDGP program?</td>
<td>32</td>
<td>68</td>
<td>0</td>
</tr>
<tr>
<td>Do IHWs have a role in Risk factor Modification?</td>
<td>37</td>
<td>63</td>
<td>5</td>
</tr>
<tr>
<td>Is shared care happening?</td>
<td>59</td>
<td>36</td>
<td>5</td>
</tr>
</tbody>
</table>

Indigenous cardiac patients

Records did not indicate the ethnicity of the patients. Patients were identified as being Aboriginal or Torres Strait Islander from personal knowledge and by health workers who worked for the Mount Isa Aboriginal and Torres Strait Islander Health Program. The CNC of ICU also assisted in identifying Indigenous patients.
Ninety-four patients were identified as possible cardiac patients suitable for rehabilitation.

Forty-seven patients were interviewed. Twenty-one were male and 26 were female. Sixty-five per cent were over the age of 50.

In Mt Isa 30 patients consented to interview, 12 refused and 13 could not be located or had moved. In the remote communities, 17 patients were interviewed, 15 had moved or could not be located and one centre with 7 patients identified could not be visited.

### Table 2 Questions about cardiac rehabilitation for patients

<table>
<thead>
<tr>
<th>About cardiac rehabilitation</th>
<th>% Yes</th>
<th>% No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you know about CR?</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>Do you think CR is worthwhile?</td>
<td>23</td>
<td>67</td>
</tr>
<tr>
<td>Do you understand what CR is?</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>Has a IHW spoken to you about CR?</td>
<td>4</td>
<td>96</td>
</tr>
<tr>
<td>If IHW involved would you be more likely to participate?</td>
<td>37</td>
<td>63</td>
</tr>
<tr>
<td>Would you like to have spoken to a IHW about your heart problem?</td>
<td>83</td>
<td>17</td>
</tr>
<tr>
<td>Have you made some lifestyle changes?</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Stopped smoking?</td>
<td>47</td>
<td>53</td>
</tr>
<tr>
<td>Changed diet?</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>Increased exercise?</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>Take medications?</td>
<td>90</td>
<td>10</td>
</tr>
<tr>
<td>Are medications helpful?</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>Fully understand CR?</td>
<td>21</td>
<td>79</td>
</tr>
<tr>
<td>Fully engaged in CR?</td>
<td>6</td>
<td>94</td>
</tr>
</tbody>
</table>

### Doctors

There were 23 doctors identified as having a role in cardiac rehabilitation. Of these 20 were in the primary care sector and three were hospital based. Eleven doctors were interviewed. Two GPs declined to be interviewed and the others were not available because of work commitments at the time. Eight doctors were Mt Isa based and three were on remote communities.

### Table 3 Question about cardiac rehabilitation for doctors

<table>
<thead>
<tr>
<th>About cardiac rehabilitation</th>
<th>% Yes</th>
<th>% No</th>
<th>% Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of NQRDGP program?</td>
<td>72</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Aware of three phases?</td>
<td>72</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Aware of Indigenous Health program?</td>
<td>72</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Should IHWs have a role in CR?</td>
<td>100</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Is shared care happening?</td>
<td>18</td>
<td>37</td>
<td>45</td>
</tr>
<tr>
<td>Are their barriers to IHWs being involved in CR?</td>
<td>64</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Are all the NQRDGP Chronic Disease programs available to Indigenous clients?</td>
<td>0</td>
<td>55</td>
<td>45</td>
</tr>
</tbody>
</table>
**Nurses**

There were 23 nurses who were appropriate to be interviewed. Fifteen were from remote communities, 6 from Mt Isa Base Hospital and 2 from the primary care sector. Eight nurses were interviewed, five from remote communities and two from the hospital.

**Table 4 Questions about cardiac rehabilitation for nurses**

<table>
<thead>
<tr>
<th>About cardiac rehabilitation</th>
<th>% Yes</th>
<th>% No</th>
<th>% Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware Of NORDGP program</td>
<td>63</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Aware of three phases</td>
<td>100</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Aware of Indigenous Health Program</td>
<td>87</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Should IHWs have a role in CR?</td>
<td>87</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Is shared care happening?</td>
<td>50</td>
<td>37</td>
<td>13</td>
</tr>
<tr>
<td>Are their barriers to IHWs being involved in CR?</td>
<td>37</td>
<td>26</td>
<td>37</td>
</tr>
<tr>
<td>Are all the NORDGP Chronic Disease programs available to Indigenous clients?</td>
<td>50</td>
<td>0</td>
<td>50</td>
</tr>
</tbody>
</table>

**DISCUSSION**

This paper provides a preliminary view of the study and further qualitative analysis will provide more information about barriers to accessing care. From the results so far some of the issues that are apparent include the following.

*Training versus workforce issues*: The training package was accredited and most IHWs had successfully completed the requirements but training in new roles for IHWs needs to be followed by a negotiation with other professionals in the primary care sector to allow the new role to be adopted. There is general agreement from the participants that IHWs have a role in managing cardiac rehabilitation. The patients themselves reported that they would value being able to talk to an IHW about their cardiac condition.

*Chronic illness versus individual diagnoses*: Only one patient was fully engaged in the program including involving an Indigenous Health Worker. IHWs have achieved an established role in the community for diabetes and renal disease so cardiac rehabilitation needs to be addressed as part of the raft of chronic illness. This approach fits well with the holistic view of health held by Aboriginal people.

*Behaviour change*: The fact that 47% of patients interviewed reported having quit smoking means that behaviour change is occurring. The difficulties in addressing dietary change in remote communities require interventions at the macro level. Food availability, costs of transport, locally produced fresh food all need to be addressed. Pharmaceutical companies who offer non-pharmacological support to patients on lipid lowering drugs for example could adapt these products for remote Indigenous patients. Most of the patients reported compliance with using medications and believed they were helpful.
Knowledge of cardiac rehabilitation: the IHWs had received specific training but there were inconsistencies among the medical and nursing staff interviewed in their knowledge of the program and their views on shared care. This is possibly due the high levels of turnover for doctors and nurses in the remote communities but also reflects the lack of understanding by these professions of the role of IHWs. This in turn reflects a lack of recognition at a national level. There was evidence on two communities in particular where the medical and nursing staff worked with the IHWs as part of the primary care team and their responses were the most positive and the patients were more likely to be engaged in the program.

CONCLUSION

Chronic and complex care in rural and remote settings must take into account the context of the settings and be flexible. Training about chronic illnesses and their management for health professionals needs to be linked to structural adaptations in the delivery of health services to allow efficient use of the range of skills of each of the professions. To allow for each of the health professionals to carry out their job effectively clear role delineation for all of the parties need to be negotiated. Particular consideration is needed of the Indigenous Health Worker’s role. Multi-disciplinary training and adaptation of programs for rural and remote settings may help in providing better care and also assist in addressing recruitment and retention issues as well. Once the analysis of this project is complete and potential interventions identified there will be a trial of these in the Mt Isa District.

REFERENCES


