

Do Indigenous Health Workers Improve Chronic Care for High Risk Adults in Remote Communities?

Lessons from a cluster randomised trial and implications for service delivery.

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Abstract

Prevalence of diabetes and complex chronic conditions is greater, and complications higher for Indigenous people living in remote communities than the general Australian population. Outcomes can be improved greatly with appropriate primary care which includes local Indigenous health workers (IHWs) as key members of the team. IHWs provide language and cultural brokerage between non-Indigenous staff and clients that supports effective self-management.

We undertook a trial of a model of diabetes care where IHWs received training and ongoing support for clinical diabetes and chronic disease management in 12 remote communities. We devised a mixed methods evaluation of clinical outcomes, care processes and implementation fidelity. The trial was modestly successful in improving clinical outcomes and reducing complications requiring hospital care. However implementation of the model of care was compromised by major health service restructure and a lack of systems in some services to appropriately accommodate the IHWs as key care coordinators.

We conclude that the trial showed that IHWs contributed to improved outcomes in these settings despite these barriers, and that services and other health team members would benefit from a better understanding of the unique cultural and professional role of these workers if the best outcomes are to be achieved.

Introduction

Indigenous Australian adults with diabetes are younger, have poorer glycaemic control, and a higher rate of preventable complications, including avoidable hospitalisations, than the general population with diabetes and this is worse in remote settings.^{1,2} Comprehensive primary care using the 'chronic care model' has been shown to improve care processes and reduce avoidable hospitalisations, and success relies on accessibility and continuity of care.^{3,4}

However many remote communities still experience high staff turnover, fragile systems for care co-ordination and a focus on acute care. We aimed to develop a model where local Indigenous health workers received training and support to deliver culturally safe and accessible care co-ordination for a defined caseload of high risk adults with diabetes and other significant co-morbidities. The project 'Getting Better at Chronic Care' (GBACC) was funded by Queensland Health and the National Health and Medical Research Council, commencing in 2010.

Strategies used to build IHWs professional capacity and to create an environment to support implementation of the GBACC model of care included:

- Employment of IHW at level 004
- Defined caseload
- Quarantined time to do care coordination, service delivery and client education
- Project orientation and clinical upskilling in chronic disease care and care coordination
- Provision of chronic disease guidelines to define standards of care
- Development of care plans and team care arrangements (TCA)
- Provision of equipment needed to manage and deliver care
- Remote clinical supervision.

This model was tested using a cluster randomised controlled trial (RCT) design with 12 participating community clinics in far north Queensland and included 213 adults with poorly controlled diabetes and other significant comorbidities. The primary outcome measure was glycaemic control, and secondary outcomes included quality of life measures (QoL), development of complications and avoidable hospital admissions.⁵

Methods

The trial was approved by the Far North Queensland Human Ethics Committee with support from the relevant peak Aboriginal and Torres Strait Islander organisations and

registered as a clinical trial (Australian New Zealand Clinical Trials Registry ACTR12610000812099). The study was undertaken in 3 phases: RCT (18 months intervention, March 2012 - September 2013), evaluation (October - December 2013) and roll-out to the wait-listed control sites (2014 - 15). Evaluation overall used mixed methods, including clinical endpoints from the cluster RCT, a cost-impact analysis, a process evaluation using document review, and interviews with staff and participants in intervention sites to understand their experiences of the trial (Schmidt ANZJPH in press).

A more in-depth analysis of implementation fidelity is in development. A workshop was held in May 2015, where all stakeholders met to discuss the outcomes of the trial, lessons learned and the process to measure implementation fidelity. 'Implementation fidelity' measures were proposed to answer the following questions:

1. Adherence: Was the program delivered as designed?
2. Exposure or dose: What was the amount of the intervention delivered to the participants?
3. Quality of delivery: What was the manner in which the IHWs and other staff delivered the program?
4. Participant responsiveness: How much participants responded to or were engaged by the intervention
5. Program differentiation: Are there unique features of different components of the model and can you identify which elements are essential to get the outcome you are seeking?

Adherence (including dose) is key to implementation fidelity. If the intervention adheres to content, frequency, duration and coverage then it is likely there will be a high level of implementation fidelity. A low dose usually indicates low implementation fidelity.⁶

Here we report the main lessons from the workshop proceedings.

Findings

Clinical Outcomes

The first part of the trial showed that while the primary outcome measure (a clinically and statistically significant decrease of 1% in HbA1c) was achieved in the intervention group, care processes (check-ups, referrals) were not very different between groups except for improved levels of dietitian and dentist visits in intervention sites. Intervention group participants were slightly more likely to have a General Practitioner Management Plan (GPMP).⁷ Hospitalisations, especially those related to diabetes (as a primary diagnosis) and diabetes-related infections were significantly reduced in the intervention sites after 18 months, compared to control sites.

The Policy Environment

A process evaluation using key stakeholder interviews, IHW reports and a review of the service and policy environment showed that a major restructure of Queensland Health services following a change of government in 2012 impacted on staffing levels in all Queensland Hospital and Health Services project sites (9 sites including 5 of the 6 intervention sites).

The effect of these changes on the project was significant, including reduced staff numbers, recruitment delays and difficulty maintaining basic services during a prolonged period of management change. Thus it was estimated that the IHWs were able to spend only between 30-50% of their allotted time on the project, due to other work demands arising from staff shortages. This significantly reduced the 'dose' of the intervention.

Team Work

The program logic assumed that the IHW would negotiate initial and subsequent GPMPs, the annual cycle of care, appropriate referrals and follow-up, as well as home medicine reviews where appropriate, and provide support for self-management. The figure summarises the program logic.

However a major issue in many of the sites was failure to engage the GP to assess patients and devise a GPMP.

Additional problems related to the use of a shared medical record, where the IHWs and other team members were unable to access electronic records due to technical problems and in some cases, a view that the IHWs were not 'front line clinical workers' and were unable to initiate Chronic Disease guideline-recommended tests.⁸

Overall, there was a shortage of essential allied health support, including diabetes educators, visiting podiatrists and nutritionists. In general there was good engagement by the allied health team members when available, as they saw the IHWs as key contacts with clients. Many doctors and nurses worked as locums for short periods, and did not appear to receive orientation regarding chronic care or the role and skills of the IHWs.⁹

Client Engagement

A series of clinical review sessions undertaken with the IHWs during their in-service training revealed a high level of satisfaction by the IHWs with their role, the support they got from the outreach team and confidence in their clinical competence. The IHWs expressed disappointment in the willingness of some health staff to participate in care planning and appropriate

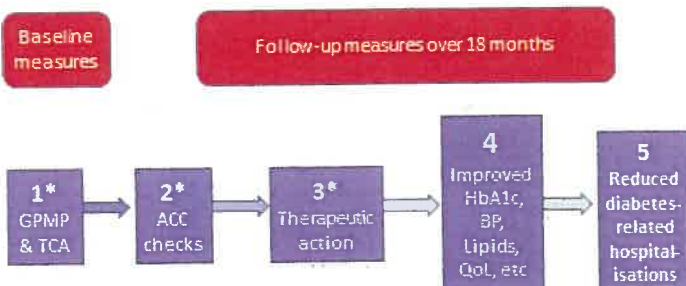
follow-up. Around half the high risk clients appeared reluctant to engage with care offered by the IHW initially, often due to other priorities including work, family and other problems. In some cases this changed over time, and anecdotal evidence suggests that many of the 'non-engaged' clients accepted support after a period of time.

In some cases the IHWs were able to negotiate a more supportive role from family members. Evidence suggested better client engagement is reflected in the reduced avoidable hospitalisations in the intervention group, especially for acute catastrophic infections and causes directly attributable to diabetes. This suggests that these problems are identified and dealt with earlier, through IHW brokerage.

Conclusions and Implications for Service Delivery

Aboriginal and Torres Strait Islanders living with chronic disease in remote settings are disadvantaged in several dimensions. Low levels of employment and incomes coupled with high food prices and poor choice of fresh produce, crowding and sometimes chaotic domestic life

Does having IHW-led case management lead to an improvement in care processes, appropriate therapeutic action and clinical outcomes for Indigenous adults with poorly controlled diabetes over 18 months?



GBACC Program logic: IHWs will facilitate GPMP (1) which should generate a further set of activities (checks) in the annual cycle of care (ACC) (2), followed by appropriate therapeutic action (3), which should lead to improvement in clinical outcomes (4) and reduced avoidable hospitalisations (5).

* (1), (2) and (3) are brokered by the IHW, indicating better client engagement.

can make effective self-management difficult. There are also chaotic health systems issues to navigate including high turnover of itinerant non-Indigenous health staff, many of whom lack an understanding of chronic disease protocols, as well as appropriate cultural education and awareness. Without appropriate orientation new staff are often unable to communicate effectively or respectfully with clients. In these settings it is important that members of the chronic care team include the IHWs as key brokers with clients and include them (with client consent) in consultations. The IHWs are then able to explain complex concepts to clients, in plain English and local language. Much of this work happens in the community and outside of the clinic and is therefore not immediately visible to other health staff.

For health staff working for the first time in remote communities, where strong chronic care systems and cultural and clinical orientation may not be the rule, we suggest the following:

Always seek advice from the local IHWs regarding how to engage with clients and include them in your consultations. They are valuable members of the team and the best placed to communicate with clients, though often their role is not as clearly defined as other health professionals.

Seek advice from the longstanding service manager about chronic care systems, clinical protocols and referral pathways. This information is essential to effective management, and is not always collected in one place as an orientation package.

For primary care services, the lesson learned from this trial is that IHWs can be highly effective team members in a difficult environment for good chronic care. However, to be most effective, non-Indigenous staff need to engage respectfully with the IHWs, understand the roles of each team member in the delivery of care and receive appropriate cultural and clinical orientation.

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