Innovations in service delivery to improve Maori health outcomes: a mobile disease state management nursing service

Abstract: An innovative nursing service to Maori communities was initiated in 2000, based on continuing disparities between health status of Maori and non-Maori peoples in New Zealand and a recognition that much Maori morbidity and early mortality is accounted for by three disease states, diabetes, heart disease and airways disease. The paper describes the project based on Kaupapa Maori heath providers employing registered nurses who completed an advanced post-graduate diploma programme specialising in disease state management. The first nurses to be employed as Maori mobile DSM nurses who lacked models and mentors needed to develop their professional practice and document outcomes for clients. Using case notes and drawing from community health theory, the paper describes the scope and strategy of practice in client's home settings that these nurses developed. Although it is too early to demonstrate statistically that the initiative is improving health outcomes for Maori, anecdotally the service is succeeding where mainstream services have had limited effect. (Pacific Health Dialog 2003, Vol. 10 (2); Pg 171-177)

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Introduction

Disparities in health status between Maori and non-Maori peoples have been consistently identified in recent studies and literature." Health services in New Zealand that are ostensibly available to all New Zealanders according to need, not ability to pay, have demonstrably not had the same positive health outcomes for Maori as for other New Zealanders. An important response to persistent inequalities and access difficulties has been the development of health services by and for Maori characterised by a community health development approach and an emphasis on self-determination.'

In January 2000, the Health Funding Authority's Maori health team proposed a Maori Mobile Disease State Management (DSM) Nursing service in conjunction with a specialist post-graduate nursing education programme.[a] The one-year Post Graduate Diploma in Health Science would equip a registered nurse with expert knowledge in the management of three specialist areas: diabetes mellitus, cardio-vascular and respiratory diseases.

In July 2000, the Health Funding Authority contracted 36 Maori health providers, selected through a preferred provider process and conditional on their recruiting and sponsoring a registered nurse, to deliver Won Mobile (DSM) nursing services. At the same time the preferred educational provider was selected, with Auckland University's newly established School of Nursing being contracted to deliver the customized programme. The location of the School in the Faculty of Medical & Health Sciences facilitated the use of expert academic clinicians to prepare the nurses in managing the disease states prevalent among Maori people. Of 44 Maori Registered nurses' 41 completed the programme. One of the significant aspects of the mobile service has been the specially designed and advanced programme to upskill these nurses, many of whom have continued their studies to Masters degree levels.

The purpose of the present paper is to describe an innovative mobile Maori nursing service that reflects community development principles and client/family centred care models. The paper begins by describing the service in the context of the Maori health profile. It goes on to discuss the commitment to the service by the nurses themselves who participated in two *huh* [meetings]. The approach to client-centred care that nurses have developed is illustrated using case examples. The paper concludes by emphasising the need for this service to continue within communities.

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The Mobile Maori Disease State Management Nursing Service

This initiative was in line with one of the current Government's goals to reduce inequalities and target disparities in health, particularly pronounced between Maori and non-Maori peoples[5,7]. It was envisaged that this would be achieved through better co-ordination of strategies across the sectors by supporting and strengthening the capacity of Maori communities.
The New Zealand Health Strategy" identified health gain priority areas and formalised strategies that included targeting diabetes, asthma and cardio-vascular disease as Maori population health and disability objectives and addressed contributing factors such as smoking, poor nutrition, obesity and lack of physical exercise. In addition, the Burden of Disease Study'° identified priority health issues for Maori using an epidemiological approach and noted that:

- Cardio-vascular diseases made the largest contribution to health loss in Maori populations.... Ischaemic heart disease accounts for the highest rate of DALYs lost by Maori males and females.
- Diabetes (as a disease, not a risk factor) made the second largest contribution to rates of DALYs lost for Maori males and females.
- The contribution of diabetes as a risk factor accounted for the highest rate of DALYs lost among Wad males and females.
- Smoking, hypertension, high blood cholesterol and low physical activity all ranked highly as contributors to the burden of disease.

Public health intelligence highlighted the challenge for nurses in developing and delivering a nursing service that would potentially reduce Maori morbidity and mortality in these priority areas. The concept of mobile (DSM) was a new endeavour for the Maori health providers involved, as it was for the majority of the Won nurses. The mobile nursing service is *Kaupapa Maori* [the Maori way], resulting in a service that is a unique, specialized, and effective approach. It utilizes the combination of a cultural and clinical pathway to meet the health needs of the clients. The service is *whanau* [family or extended family] based and the majority of the consultations are in the *whare* [homes] of the clients,

the client together with their whanau being in control of managing their own health and well-being, promoting independence and self-management. In contrast to being disease-focussed, the care plan focuses on positive living through the management of disease and its consequences. The idea that the client is in control of the management of their own health starts in their own environment. They are able to relate health management to the lifestyle around them 24 hours a day. The mobile service acknowledges family ties as well as *whanau, hapu and iwi* [family, sub-tribe and tribe] links. It also recognizes that care is more effective when a client chooses their own treatment and healing processes rather than accepting what has been chosen for them. It presents clients with options and negotiates with them as to which approaches are most acceptable. The disease management of a whanau member within a whanau addresses the cultural context for health care not only in physical terms but culturally and emotionally.

The process of consultation is important to achieve this outcome; therefore the DSM Nurse liaises between the client/whanau and other services. These services include the GPs and the Practice Nurse, hospital-employed District Nurse, Community Occupational Therapist, Community Physiotherapist, Social Worker, specialists, and any other community service deemed necessary to meet the client/whanau needs. In these ways the mobile DSM nurses have begun to break down barriers to access that may have existed for clients for long periods of time. One of the important factors is to bridge the communication gaps between Maori, community and hospital services, and the ability to establish and maintain a positive image in the communities of service provision is critical for the mobile DSM nurses when the strategy is focussed on reducing inequalities in health. Effective chronic disease and risk factor management in the primary care setting fosters direct participation in health services for families and provides a support person to assist them to access what is needed for their health and well-being. Networking with local pharmacists and GP's is an essential part of the service and the need for client education regarding medication, diagnosed conditions and the results of follow up tests was identified as a `gap' within health service provision. Likewise, networking with all the Health Secondary Services (HSS) personnel, and community health services to improve the links between the HSS and the community is a major function of the service where 60% of clients in have two or more of the target disease states. Other clients with one or more target disease states also suffer from other morbidities, such as renal failure and leg ulcers. Overall there are many factors that will determine the success of this health contract. The fact that many of the clients live in poverty conditions and are unable to afford the cost of transport to attend out patient appointments, GP consultations, prescription charges, disability equipment and encounter difficulties in negotiating bureaucratic organisations affects the management of their care.

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The future of the mobile service will be determined by the ongoing needs of the people who access the service. It has the ability to coordinate all health care for its clients as it delivers the care within a well-balanced structure that recognizes the Maori concept of health Te *Whare* Tapa *Wha*[d] and the Treaty of Waitangi.

The *hui* (meetings)

After the contract had been in place for 2 years the idea was initiated of bringing together in a hui the mobile DSM nurses from around the country. *Apanui* (invitation) was sent out to all the nurses believed to be still delivering the service. The result of that panui was the inaugural 3-day hui (funded by the Maori Health Directorate) for the nurses held at Kirikiriroa Marae, Hamilton, in the Spring of 2002. The purpose of the hui was to bring together nurses, who came from as far north as Kaitaia and as far south as Christchurch, to celebrate and share their experiences and knowledge of the service they are providing in their area.

The hui was an opportunity to discuss some key issues and potential solutions for the future. The hui identified that this first group of DSM Mobile Maori nurses may be leading the way for New Zealand's first Maori Nurse Practitioners.[e] High workloads, working in isolation and working in a context of a general lack of understanding about the DSM nursing role were key issues. The highs and the lows of providing a service in the community were identified and acknowledged, and strategies were discussed as to how the nurses may support and assist each other in their role often as the sole health professional in a community. The hui at Kirikiriroa concluded with the election of a steering committee to establish the Mobile Maori DSM Nurses Trust, a legal status seen as validating the group and provide them with a voice to support the continuation of the concept.

Participants typically observed

"If you have a nursing workforce that is culturally competent and clinically effective then you will get a better health outcome. They're not there to do the easy stuff. They're there to work with our people who already have significant problems or potentially will have, to prevent complications and improve their quality of health and well-being."

"There is a lack of integration between primary and secondary services and we are not getting referrals or good information when we should."

A second hui was held the following year in New Plymouth, where an increased number of participating nurses reflected the changing population of mobile DSM nurses. The original group of 41 qualifying DSM nurses has changed over the three years: some left their contracts permanently, some left and returned, and new nurses were employed. All the nurses were encouraged to undertake advanced postgraduate studies. The message "Our whanau hapu and iwi are deserving of nothing less than the best," was the clear message. A series of recommendations concluded the hui aiming at improving quality of professional service, strengthening support and increasing the Maori DSM nursing workforce. The hui celebrated the approval of Janet Maloney-Moni as the first Maori Nurse Practitioner. Janet encouraged participants to also work toward approval as a strategy for future involvement in the delivery of health care to Maori and communities and as an opportunity for Maori nurses to strengthen their leadership: "I am doing this service because it has the potential to actually address the health disparities between Maori and non-Maori health."

A Maori DSM nurse's case notes: A client-centred educative approach

Case 1

A client newly diagnosed with diabetes approached the mobile service. During the first meeting with the client it was identified he had special learning/education needs and knew very little about diabetes. Factors taken into consideration for learning included his ability and energy level to learn and absorb new information, his adjustment to the change in his health status and the value he placed on health. Past learning experiences and barriers to learning were discussed. There are many teaching aids available to use when teaching a client about their condition and their usefulness was identified during assessment. Teaching on a one-to-one basis is effective for a newly diagnosed client with diabetes. Strategies used included: simple explanations followed by more complex information; responding to issues and concerns that presented themselves; clarifying each point as the client gained understanding of the condition; providing small pieces of information at a time and repeating the information; and checking that all information was relevant.

The purpose of education was to change behaviour, and it worked best to make small changes progressively over a period of time. The client did not like the idea of eating less fat so identifying what foods he considered contained fat was the first step. The next step was to set a goal to reduce the fat of those foods over a period of time. Consistent with a self-care ethos, it was important for the client to monitor the change and keep a daily diary recording eating patterns. At the end of each teaching session an evaluation was completed to assess the process and outcome of the learning. This part of the session gave important information about what worked and what didn't work for the client. It also helped to plan the next step in meeting the education needs of the client.

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Case 2

A referral was made to the mobile service from the coronary care unit to assist and support a client with congestive heart failure (CHF), who had recently been discharged from hospital. During the first home visit the client asked why he had to be weighed every day, what all the tablets were he had to take, and for how long was he going to take the tablets. The first step was to identify how much information he had been given and understood during his stay in the hospital. The next step was to identify exactly what information the client felt he needed to know first. As personally administering medication was new to the client, a simple explanation of each medication was given followed by questions to assess both the client's and his wife's understanding. It was important to link the information to what was happening to the client in his present health status and why weighing was necessary. The client was able to ask questions at any point, as he participated in the discussion. Progressively, the client was able to understand why he had to take the medication and for how long, and he learned the technique of placing daily medication in the correct slots in the tablet organiser. He also understood the reason why he had to weigh himself everyday and was looking forward to the challenge and results of this task.

Discussion

The ethnic gap in avoidable mortality remains wide and the greatest scope for narrowing the ethnic gap is

in primary prevention – reducing disparities in socio-economic status and in lifestyle; addressing smoking, diet and physical activity'". The Ottawa Charter for Health Promotion [15] defines health promotion as enabling people to have more control over, and to improve, their health. The central message is that improvements in environments and in the lifestyles of individuals would be the single most effective means of reducing mortality and morbidity. Work completed recently in New Zealand16 reinforces international evidence that suggests that a range of social, cultural, and economic factors are the main determinants of health.

Approximately 150 of all Maori deaths each year are due to diabetes. Maori have one of the highest death rates of diabetes in the world'". Access to and the availability of both prevention and education among Maori youth and diabetes management education among older Maori will be important if increased rates of disease amongst Maori are to be avoided in the future. According to Barrettle, health promotion for Maori means *tino rangatiratanga o te Hauora,* [having control or self-determination over their health] is the process that assists whanau to make choices to regain and maintain tino rangatiratanga o te Hauora and includes the process of social and political action for health development. The Maori mobile DSM nursing service is an important initiative in the context of tino rangatiratanga o te Hauora as illustrated in the case notes.

Historically the emphasis in health education has been on the body of health information to be communicated, i. e. content. Equally important are the means of influencing desired change i.e. process. To improve a community's health through changes in nutrition requires an ability to be able to use those processes of influence to alter dietary behaviour in line with the content of scientific information available on the benefits of such a change. For example, diabetes continues to be described as the "sugar disease" or Te *Mate Huka.* This description means the primary message getting through is to stop using sugar in tea/coffee, to stop eating sweet things, and to stop drinking fizzy drinks etc. This focus is also evident when clients are being assessed for financial support for their diabetes diet where an extra benefit paid is for clients to afford sweetener alternatives. Rather the focus needs to be on all foods that we eat and how foods are processed in our bodies leading to an understanding of carbohydrate foods and how these convert to glucose in the body. The rationale for this fact is based on the staple diet – bread - that has been apart of our culture for generations. Bread is the most affordable food item for the majority of Maori families and is offered at all sorts of cut prices. For Maori, it is a food item at every hui throughout the country, at every meal for the majority of families, and at every celebratory occasion. The message needed to support dietary change is not about sugar, it's about carbohydrate: fundamentally, in the face of the "diabetes epidemic", Maori are being asked to change their staple diet. Health promotion must be based on the right messages for the right issue and ensuring the appropriate resources to change are available.

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Although the first nurses who participated in the mobile DSM nursing service identified themselves as Maori, their nursing education had socialized them into the beliefs and approaches that characterise mainstream health services. As they interacted in clients' whare and marae, with whanau and hapu, they embarked on their own journeys as they developed new ways of delivering their expert service. The following describes a journey of discovery typical among the first Maori DSM nurses.

A journey of discovery

A Maori man was diagnosed with diabetes. He was so shocked and in such a state of disbelief he found it very difficult to cope. He could not believe he had been diagnosed with this terrible disease. The DSM Nurse entered his life and asked if she could join him on this journey to provide him with *awhi* [caring] and *tautoko* [support] to ease the burden of this disease. As they journeyed along, *Waikato te awa he piko he taniwha [a* saying meaning the river of life] he experienced the negative aspects of the journey, but was encouraged to keep following the path guided by *uenuku* [rainbow] to attain *tino rangatiratanga* [self-determination] at the end.

As his journey progressed, and guided and supported by the DSM Nurse, negative aspects occurred: for example increased HbA1c, foot problems, vision problems, mobility problems, temptation of fast foods, undoing past dietary choices, changes in lifestyle, exercising, adjusting to insulin. This journey is a continuous process because diabetes is a lifelong disease. The change is aimed at normalising their lifestyle changes. The man is part of a whanau, hapu, and iwi who also make this journey. Mobile DSM nurses, are simply the helpers to guide them on this journey safely and holistically. DSM nurses take the fear out of the journey, but do not take control of their journey.

Conclusions

The contract between the Ministry of Health and Maori health providers for the mobile DSM nursing service comes up for renewal in 2004. There is a risk that the contracts will not be renewed: three years is insufficient to demonstrate statistically that Maori morbidity and early mortality is being reversed through the service. The Mobile Maori DSM Nurse Trust has taken it upon itself to ensure that the contract will continue, indeed expand. These highly educated and articulate, committed women are documenting qualitatively in their case notes how their approach is improving health outcomes for clients and their whanau, and are being empowered through knowledge to change lifestyles and behaviours factoring in poor health profiles. These gains are observed to be not confined to clients and whanau but are filtering out to influence the wider Maori communities in a manner that mainstream health services failed to achieve.

a. The Maori Mobile Disease State Management Strategy Funding for the initiative came from two sources – Community Services Funding and the Diabetes Workforce Development budget. Both allocations needed to be spent within the financial year ending 30 June 2000.

b. In order to enrol, Registered Nurses needed to be based with a health provider that held a contract for Disease State Management Services. All except 2 nurses were Maori: in the 2 cases the kaupapa Maori providers were unable to recruit Maori nurses.

Health goals and targets in the New Zealand Health Strategy have been identified using disability adjusted life years (DALYs) to help rank health issues.

c. Health goals and targets in the New Zealand Health Strategy have been identified using disability adjusted life years (DALYs) to help rank health issues. The methodology is the same used in the Global Burden of Disease Study ". DALYs are calculated by combining the number of years of life lost by each group with the equivalent number of years lost to disability adjusted for severity.

Te Whare Tapa Wha is a concept of health embedded in Maori culture. It was articulated in writing by a group of Maori women researchers"The "four cornerstones": mental state, physical state, spiritual, and family (immediate and extended).

e. The advanced nursing role of Nurse Practitioner provides for Masters prepared nurses approved by the Nursing Council to practice autonomously and prescribe in their approved scope of practice. See [13]

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Talk health. The dreary, never - ending tale. Our mortal maladies is worn and stale; you cannot charm or interest or please by harping on that minor chord, disease. Say you are well, or all is well with you, and God shall hear words and make them true.
Ella Wheeler Wilcox (1850 - 1919)