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# Education and debate

## Prevention and control of diabetes in Pacific people

Sunia Foliaki, Neil Pearce

Diabetes is a major problem worldwide. Among Pacific people, prevention and control of diabetes lies in counteracting rapid changes in lifestyle and must take account of political and economic factors and social structure

Early studies clearly showed that while diabetes was virtually non-existent in populations indigenous to the Pacific maintaining a traditional lifestyle, the reverse was true for the urbanised Pacific populations.<sup>1</sup> In recent decades diabetes prevalence has increased rapidly over time in the indigenous people in the Pacific region (Polynesian, Melanesian, Micronesian), both in the Pacific islands and in countries such as New Zealand.<sup>2</sup> Epidemiological evidence indicates that prevalence is generally lowest in traditional Pacific environments, and is higher in both urban Pacific and adopted metropolitan environments; in the latter environments, prevalence is markedly higher in Pacific people than in white people. Prevalence has been increasing rapidly in all three environments, and Pacific people experience greater morbidity and more complications than white people with diabetes.

Genetic factors alone cannot explain these patterns, which are due to rapid changes in lifestyle and risk factors such as obesity, unhealthy diets, and physical inactivity that have become widespread throughout the region.<sup>2</sup> Although the risk factors associated with diabetes are now reasonably well understood, the prevention and control of the condition in the Pacific, and in Pacific people in Western countries, is not straightforward. We here consider the individual level and population level approaches to diabetes prevention and control in Pacific people.

### Individual level

Vigorous pharmacological interventions have a clear role in the management of existing diabetes. Nevertheless, in some Pacific countries a large proportion of resources is spent on identifying people with diabetes and on a variety of non-standardised drug treatment regimens. Modification of individual behaviour is undertaken in less than 5% of the population.<sup>3</sup> Given the high cost of drugs and laboratory items in most Pacific Island countries, alleviating such unavoidable expenses calls for some basic elements of standardisation of affordable yet effective diagnostic procedures and treatment, in both tertiary and peripheral levels. The vaccine independent initiative operates in the Pacific; through it regional bulk purchase of normally expensive vaccines and other immunisation equipment have been conducted via Unicef, which

could purchase and sell at much lower prices. This has proven successful and may be a model for getting drugs and pharmaceutical needs for diabetes and other non-communicable diseases. More specialised tertiary therapeutic regimens may be country specific and would be determined best through local studies.<sup>4</sup> Such specialised facilities still remain remote and centralised in specialist centres, which are rare in most Pacific Island countries. There is a lack of trained community health workers, nutritionists, and health educators in peripheral services, and this has to be remedied before effective diabetes programmes can be developed. In some cases the traditionally centralised infrastructures of health service delivery and training will need to be re-evaluated.

These issues are different for Pacific people in Western countries, where funding for pharmaceuticals is generally readily available, but access to the health services may be a problem. Most Pacific Island patients in Auckland, New Zealand, could not name the nature, symptoms, or complications of diabetes.<sup>5</sup> They were also least likely to have received diabetes education (European 69%, Maori 70%, Pacific Islander patients 49%). The preferred sources for diabetes education were lay educators, and no Pacific Islanders indicated a preference for hospital based ongoing education.

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Affordable yet effective procedures for diagnosis and treatment of diabetes are needed in Pacific Island countries, such as Nauru

PAUL ZIMMET

Simmons et al concluded that the delivery of diabetes education is not only uneven but grossly inadequate among Pacific Islanders and needs better coordination and integration with primary health care.<sup>5</sup>

In New Zealand, one approach to improving access has been the development of more outreach services addressing diabetes with the inclusion of a wide representation from various sectors, both from the community and from healthcare providers. This was further supplemented in the early 1990s with the proposal for utilisation of local data for developing diabetes plans locally to address Maori and Pacific people's needs in particular.<sup>6</sup> However, such projects frequently falter due to a combination of financial constraints affecting patients and services as well as coordination.<sup>7</sup>

Randomised trials show that behavioural interventions, particularly those involving weight management, can prevent the development of diabetes and can make a significant impact in people with established disease.<sup>8-10</sup> The problem is how to successfully implement such interventions in indigenous communities. The Native Hawaiian diabetes intervention program, modelled on the Native American diabetes project,<sup>11</sup> was tailored to meet the needs of Native Hawaiians. It uses resource materials developed by the American project, substituting Native Hawaiian perspectives, including the Hawaiian language, spirituality, and traditional customs, for Native American cultural references. The project, which has been implemented in two Native Hawaiian communities and delivered by Native Hawaiian community members, utilises a five part curriculum that incorporates established standards of care and Native Hawaiian perspectives.<sup>12</sup> Initial findings show that lifestyle interventions implemented with a family (ohana) support were more likely to advance to positive dietary and exercise behaviours than was a standard intervention without the family support.<sup>13</sup>

### Population level

Clear evidence exists internationally that it is possible to achieve weight loss through interventions on nutrition and exercise, and that this will result in a reduced risk of diabetes, a reduced risk of progression to diabetes in those with impaired glucose tolerance, and better control in those who already have the condition. Some preliminary work has been done on adapting such interventions for the prevention and control of diabetes in indigenous peoples. However, the limitations of behavioural interventions should also be considered.<sup>14 15</sup> The incorporation of healthy public policies into population level approaches to prevention,<sup>16</sup> in combination with individual lifestyle approaches, perhaps represents the greatest potential for diabetes prevention and control.<sup>17 18</sup>

The problems of obesity and diabetes in the Pacific occur as much due to a changing environment as to the lifestyle "choices" individuals can make given their economic and social position. People will not necessarily eat and drink what doctors or nurses advise them to—but they will eat, smoke, and drink what is affordable and available to them.<sup>15</sup> The routine and continuous campaigns by health educators to promote healthy lifestyles would seem to be just that: routine,

when there is nowhere to go in the evening but the bars that increasingly occupy waterfronts, and when "hideaway" islands and local beaches are no longer available to locals for subsistence fishing and leisure swimmers but oriented more towards places for drinking after work. Alcohol trading hours are liberalised or regulations not enforced, drunkenness is condoned, alcohol and tobacco are selected as exclusive duty free items, and fast food restaurants are encouraged in the name of development.

Similarly, the promotion of exercise as opposed to productive physical activities is questionable when people cannot have access to or afford sports and recreational facilities. Given that the terrain in most Pacific Island countries is ideal for walking and cycling to and from work, such an opportunity has not been harnessed as we opt for the unhealthier sedentary mode of settling behind driving wheels and taxis. Unfortunately, walking or cycling to and from work often becomes a health hazard when roads are not designed for cyclists or pedestrians but are primarily designed for motor vehicles.

Individual diet is also strongly conditioned by local economic conditions. For example, squash farming exports from Tonga contribute to and improve Japan's nutrition, but the cash returned is engulfed 10-fold by the food items, mostly processed, that make up 25% of Tonga's annual imports. Acres are dedicated to tobacco or coffee plantations throughout the region as Pacific Island governments continue to emphasise cash cropping with little consideration of local nutritional requirements. One of the outcomes of government policies driven by World Bank recommendations could be a deterioration in the nutritional status of many Pacific countries.<sup>19</sup> Nutrition is an essential input for national development in Pacific Islands, including the development of sustainable indigenous fishing and farming industries producing healthier and preferred food at reduced cost as well as supporting the local economy.<sup>19</sup>

Thus, sustained or significant improvements in health may be a reality only when fundamental issues of land and social inequality, as well as politico-economic inequality, are resolved.<sup>20</sup> These considerations have received little attention in health promotion programmes in the Pacific, in which the emphasis has seemed to be on community based education programmes focusing on health promotion, with little on health protection. The population approach to the prevention and control of diabetes requires a comprehensive and multidisciplinary approach that takes into account not only biophysiological and lifestyle influences but also the politico-economic environments and social structure.

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## Summary points

Diabetes is rare among indigenous Pacific populations maintaining a traditional lifestyle but is high in urbanised Pacific populations

Rapid changes in lifestyle and risk factors such as obesity, unhealthy diets, and physical inactivity have become widespread throughout the region

Pharmacological interventions remain expensive

Most health intervention programmes in the Pacific focus on health promotion with little emphasis on health protection

Politico-economic policies and social structures conducive to healthy lifestyles must be ranked above health promotion and pharmacological interventions to control diabetes in Pacific people

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## Quality improvement perspective and healthcare funding decisions

Ashley Bloomfield, Robert Logan

Efforts to apply explicit prioritisation processes to healthcare funding decisions have had mixed results in New Zealand. But a quality improvement approach has advantages over existing prioritisation approaches

New Zealand, along with other countries, developed more transparency in making decisions about prioritising healthcare funding during the 1990s.<sup>1,2</sup> In New Zealand, prioritisation approaches drew heavily on economic principles and used empirical evidence.

This paper reflects on experience with prioritisation of healthcare funding in New Zealand, identifying the benefits and also the shortcomings. It examines whether quality improvement, which is receiving increasing attention in New Zealand and internationally, is useful in making funding decisions both across and within services. We argue that a quality improvement approach has several advantages over existing prioritisation approaches, and we provide examples of how such an approach might be applied.

### New Zealand's experience with priority setting

In the late 1980s and early 1990s, many developed countries restructured their healthcare systems, in part to improve efficiency and address rising costs. In New Zealand, major reforms in 1992 resulted in a

purchaser-provider split with a strong emphasis on contracting and regulated competition. The Core



Best use of resources for competitors in New Zealand's southern traverse endurance race is to prioritise finishing than winning

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