

Reviewing the literature on anxiety and depression in Pacific youth: a fresh perspective

Leina Tucker-Masters¹, Dr Jemaima Tiatia-Seath²

¹School of Medicine, Faculty of Medical and Health Sciences, University of Auckland

²Te Wānanga o Waipapa, University of Auckland

Leina Tucker-Masters is a third year medical student at the University of Auckland, who completed a 2017 summer studentship under the supervision of Dr Jemaima Tiatia-Seath. Dr Tiatia-Seath is based in Pacific Studies, the University of Auckland and specialises in mental health, Pacific suicide prevention and postvention, youth issues, Pacific health and wellbeing, and inequities and inequalities in health.

There has been a paucity of recent research on Pacific mental wellbeing. Some research on rates of suicide in Pacific peoples has been conducted in New Zealand, but there has been little quantitative research on Pacific youth mental health in the Pacific region. This article aims to review existing evidence that discusses anxiety and depression among Pacific youth, and to identify gaps in the literature to direct further research in this area. It is hoped this will contribute to a growing evidence base to help inform policy and improve Pacific youth mental health initiatives.

Abstract

Introduction: The primary aim of this review was to investigate the current prevalence of anxiety and depression in Pacific youth who live both in Westernised countries and the Pacific region. A secondary aim was to identify key themes that underpinned anxiety and depression in Pacific youth.

Methods: Literature on the Pacific peoples of New Zealand, the United States, and the Pacific Islands within the last 15 years was examined. 91 pieces of evidence were collected. The databases Scopus, Medline, PubMed and Google Scholar were used to gather literature.

Result: The evidence suggests that Pacific youth have a higher prevalence of mental illnesses such as anxiety and depression compared to other ethnic groups. Common risk factors and protective factors from the literature that contribute to Pacific youth mental illness include spirituality, religion, culture, and family. In the Pacific Islands, urbanisation and modernisation are major risk factors for Pacific youth mental illness. For Pacific youth living in countries such as New Zealand and the United States, migration and acculturation are important risk factors.

Conclusion: This review has amalgamated various perspectives from studies on the topic of mental health in Pacific youth. The findings may provide evidence for mental health services that cater to Pacific youth. More research is needed, and the gaps of knowledge identified serve as a basis for future research possibilities.

Introduction

Before the early 2000s, little was known about the prevalence of mental illness among Pacific peoples. In New Zealand, Pacific peoples rarely presented to community mental health clinics with common mental illness diagnoses such as anxiety and depression compared to other ethnic groups.¹ It was therefore assumed that they had lower rates of mental illness than the general population. The ground-breaking Te Rau Hinengaro study in 2006 showed that New Zealand's Pacific peoples had higher rates of anxiety and mood disorders compared to the general population.¹ The Youth2000 survey series found Pacific youth were more likely to attempt suicide than the general population.² A 2017 review of suicide data has also concluded Pacific youth are more at risk of attempting suicide.³

Methods

The databases Scopus, Medline, PubMed, and Google Scholar were used to gather literature. The search terms focused on the three most important aspects of the review's aims. Key words for mental health were "mental health", "wellbeing", "anxiety" and "depression". Key words for Pacific peoples were "Pacific" and "Polynesia". Key words for youth were "youth" and "adolescent". Only literature written in English was accepted for review. Reports from a variety of organisations such as the World Health Organisation and the United Nations were included. In addition, the supervisor's personal collection of Pacific literature was included. In total, 91 pieces of literature were reviewed and 51 included in this article. Initially, the literature review was confined to the period between 2010-2016. However, due to a lack of evidence within this timeframe, it was extended to 2005. Due to the limited evidence pertaining to anxiety and depression for Pacific youth, evidence for Pacific peoples of all ages has been included. It is difficult to undertake a review on anxiety and depression without encountering evidence that includes mental illness, psychiatric distress and suicidal behaviours. Additionally, there is very little literature around anxiety and depression alone in the Pacific youth population. The search criteria were thus redefined to include studies that explored mental illness, psychological distress, and suicidal behaviour. The method used comes with limitations. Literature written in languages other than English were not included, despite the strong French presence in the Pacific. Literature may not be held on mainstream online databases, and therefore were not included in this review.

Results

Prevalence of anxiety and depression among Pacific youth

In the Pacific region, Pacific youth are more likely to experience a mental illness such as anxiety and depression compared to other ethnic groups. In the early 2010s, the United Nations conducted a Global School-Based Student Health Survey (GSBSHS) which included 12 Pacific Island nations. The questionnaire was sent out to students aged 13-17 years, and included questions around their mental health. Mental health statistics on loneliness, suicidal ideation in the past twelve months, and suicide attempts in the past twelve months, were collected from the survey.³⁻¹⁴ The results, summarised in Figure 1, illustrate that youth from the Pacific Islands have higher levels of suicidality compared to the New Zealand youth population. According to the GSBSHS and the Youth'12 survey, a Samoan high school student was twenty times more likely to attempt suicide than a New Zealand high school student.^{12, 15}

In New Zealand, Pacific youth are more likely to experience mental illnesses such as anxiety and depression compared to the general

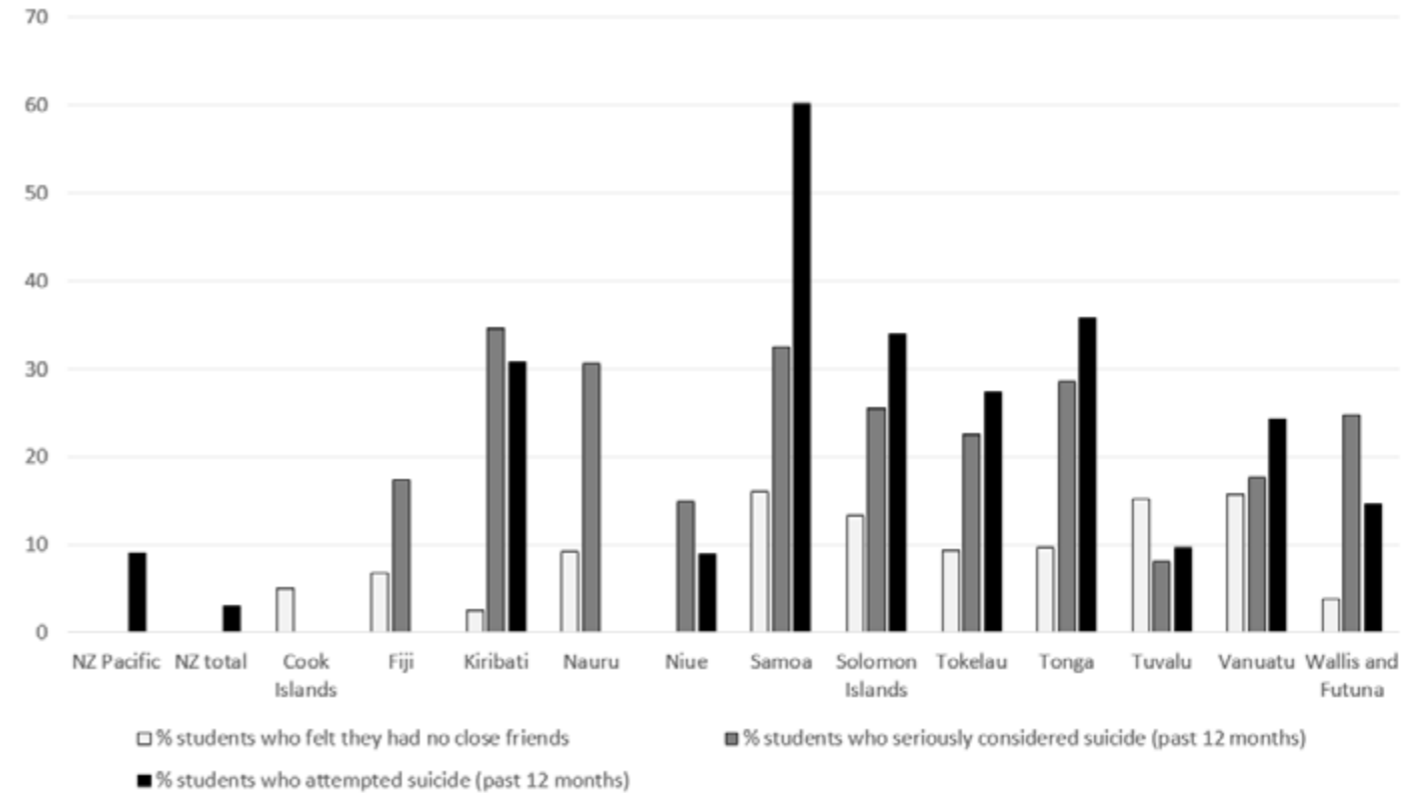


Figure 1. Summary of responses to the Global School-Based Student Health Survey and the Youth'12 survey on mental health and suicidality¹⁻³

population. A 2011 report from the Mental Health Commission stated that 21.8% of Pacific children and youth had experienced some sort of psychological disorder, compared to 19.5% of children in total.¹⁷ A report released from Statistics New Zealand and the Ministry for Pacific Peoples (formally, the Ministry of Pacific Island Affairs) in the same year reported that Pacific youth were twice as likely to have depression, be anxious, or attempt suicide compared to non-Pacific youth.¹⁸ Pacific youth were also found to have lower contact with mental health services, with only 7.9% attending mental health clinics compared to 13% of non-Pacific, non-Maori youth.¹

In the United States, there is evidence to suggest that Pacific peoples have higher rates of mental illness than non-Pacific peoples. It is difficult to determine the exact rates of anxiety and depression in American Pacific youth, as 'Pacific Islanders' are often grouped with Asian Americans in data sets. However, a 2013 study confirmed that 4.8% of the American Pacific population suffered from moderate to severe depression, compared to

1.5% of American Asians and 3% of the total population.¹⁹ Pacific peoples in the United States also had less engagement with counselling services proportional to their representation in the population.²⁰

Risk factors and protective factors impacting on anxiety and depression among Pacific youth

The evidence highlights that for most Pacific youth, the themes of spirituality, religion, culture, and family underpin mental wellbeing. These themes can be seen as both risk factors and protective factors. For Pacific youth living in the Pacific Islands, urbanisation and modernisation are risk factors for mental illness. For migrant Pacific youth, acculturation, deprivation and discrimination are risk factors mental illness. These factors are summarised in Figure 2.

In the Pacific Islands themselves, studies have explored the harmful and protective links between spirituality and mental illness.²¹⁻²⁴ Literature stated that Pacific peoples were likely to attribute mental illness to spiritual

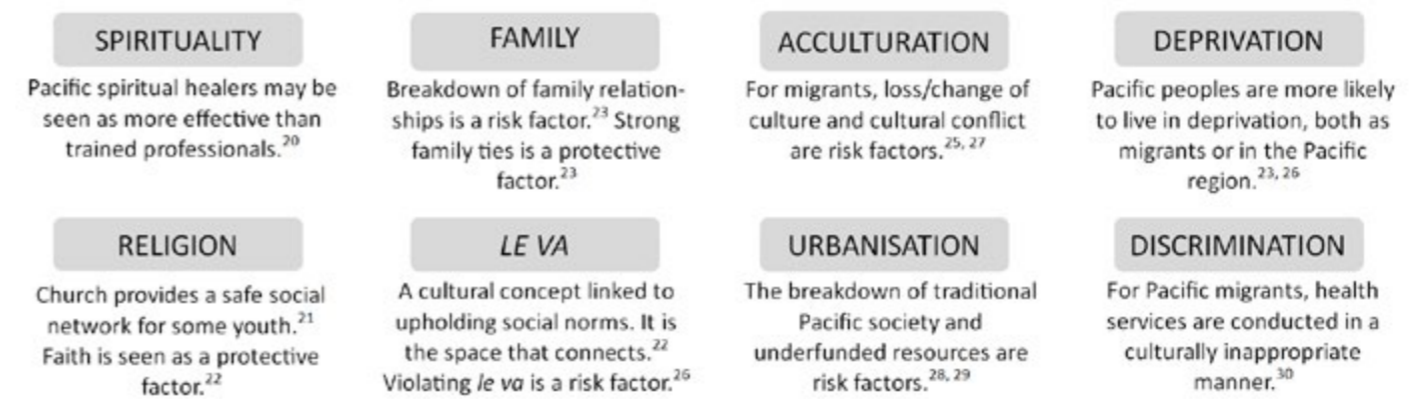


Figure 2. Summary of factors identified in the literature that influence the prevalence of anxiety and depression in Pacific youth.

possession. These spirits could be benevolent or malicious, depending on the island's culture. Studies also found that traditional healers were often considered more trustworthy and effective than Western mental health professionals, and in some cases, Western treatments seemed to exacerbate mental illness among Pacific patients.^{21, 24, 25} New Zealand studies focusing on Pacific peoples have identified ghosts, intergenerational curses, and offending spirits as causes of mental illness.²⁶⁻²⁸

Religiosity is a strong theme that underpins Pacific mental wellbeing. With 80% of New Zealand Pacific peoples affiliated to a church, it is believed that close community networks provide a safe sociocultural support to those with a mental illness.²⁶ In addition, prayers from a church minister help to relieve mental illness.^{28, 30} Strong spiritual and religious faith is often seen as a protective factor for mental illness, and can help hasten recovery time.^{28, 29}

The cultural concept of '*le va*' was identified in the literature as being a both a risk factor and a protective factor, primarily in Samoan youth anxiety and depression. *Le va* can best be translated as an interconnecting space that connects people together, nurturing positive relationships between them.^{24, 26, 28, 30-33} The literature indicates that mental illness in Pacific peoples is borne out of an imbalance of these relationships. Harming the space, or *le va*, is a consequence of overstepping boundaries, whether they be on a societal, community, familial, and individual level.^{22, 24, 30, 33} To violate *le va* is to disrespect Samoan social norms, beliefs and standards, and subsequently offend one's family and community.³⁴ Consequences of offending *le va* can include public humiliation and loss of status. This in turn may lead to the onset or development of mental illness.³⁵

Family is another important theme to consider when examining Pacific youth anxiety and depression, as it is both a risk factor and a protective factor.³⁵ The breakdown of traditional family structures in the Pacific region has led to an increase in negative mental health outcomes for Pacific youth.³⁶ Bereavement of a close family member may also be a contributing factor towards mental illness.³⁵ Strong familial and societal pressures to conform to Pacific social norms are another risk factor for Pacific youth mental illness and suicidality.^{16, 37, 38} However, research shows that when the family of a Pacific mental health patient is included as a positive and encouraging support structure during recovery, the patient experiences improved mental health outcomes at a faster rate.^{28, 39}

For youth living in the Pacific Islands, urbanisation and modernisation are risk factors for anxiety and depression. Studies claim that unemployment, poverty, and a breakdown of the traditional supportive village structure have all played a role in increasing mental illness among Pacific young peoples.^{21, 36} This is coupled with under-resourced and over-stretched mental health services and an ingrained stigma associated with mental illness.^{40, 41}

The consequences of historical migration are risk factors for mental illness in New Zealand Pacific youth. Acculturation is an important risk factor. Acculturation describes the loss of, or change of, a person's traditional culture when confronted with their adoptive culture.⁴² An example for New Zealand Pacific youth is the difference between defining the concept of 'self' in New Zealand European and Pacific settings. For many Pacific communities, the concept of self is relational and dependent upon the relationships one has with their family and community. In a Westernised setting such as New Zealand, the concept of self is normally deemed individualistic and independent.^{31, 33} Pacific youth experience conflict between these opposing world views, which can lend itself to psychological distress and mental illness.³⁹ The literature argued that Pacific youth who are New Zealand born, or of mixed-ethnic Pacific and New Zealand European ethnicity, are more likely to experience the negative effects of acculturation on their mental health.^{39, 43, 44}

The literature identified poverty, unemployment, social and economic constraints, economic and cultural pressures, and social deprivation as major risk factors for Pacific mental illness.^{28, 39, 43, 45-47} The Samoan practice of *fa'alavelave*, in which individuals remit some of their financial

earnings to their family and wider community, has been identified in the literature as an economic risk factor for depression.^{39, 43, 48} Pacific peoples are more likely to live in areas of higher social deprivation, which can be correlated to higher rates of suicide. In addition, they have higher rates of suicide than those of European descent in the same deprivation bracket.³ Pacific patients are less likely to engage with mental health services and experience barriers to accessing these services in relation to transportation costs, extra childcare costs, and taking time off work.²⁸

Pacific youth living in developed countries are more likely to be discriminated against, which is a risk factor for mental illness. Studies from New Zealand and the United States have found that perceived discrimination leads to heightened stress, anxiety and depression.^{19, 49} A New Zealand study showed that increased bullying of nine-year-old Pacific boys led to an increase in their depressive symptoms.⁵⁰ In addition, there is an undercurrent of discrimination in the provision of mental health services for Pacific peoples, as most services are conducted in English. This lack of Pacific health literacy was described by Pacific patients as being culturally inappropriate.^{31, 51}

Discussion and future research recommendations

The literature indicates that there is a significant gap in evidence-based knowledge on Pacific youth anxiety and depression. The Global School-Based Student Health Survey has limitations, as there were no specific questions around anxiety and depression. Questions instead pertained to loneliness, suicidal ideation, and suicide attempts. In addition, the disproportionate number of students admitting to suicide attempts but not suicide ideation in countries such as Samoa calls into question the efficacy of the survey. Many of the conclusions drawn from the survey results were therefore exploratory. The New Zealand data collected was either old and detailed, or current and generalising. Many conclusions in this literature review were therefore drawn on mental illness rates in New Zealand Pacific adults from older literature.

It was challenging to interpret literature from the United States, as the category 'Pacific Islanders' was often paired with Asian Americans, in a group termed AAPI. Studies have shown that Asian Americans have a lower prevalence of mental illness than 'Pacific Islanders', and so any study that did not separate the two ethnic groups falsely cited Pacific Islanders as having a low risk of mental illness.²⁰ The evidence collected from American studies focused mainly on risky sexual behaviour, violence, or substance abuse, instead of anxiety, depression, or psychological distress. It was difficult to interpret this data for the literature review. Research from the United States may have focused on high rates of Pacific violence and substance abuse because it presents more immediate damage to American society than high rates of anxiety and depression.

Many studies chose to investigate the near-epidemic rates of suicide in the Pacific. However, these studies noted that in ethnic minorities suicide is not strongly linked to mental illness and that suicide may not be an appropriate indicator for anxiety and depression. An alternative view on this is that stigma against mental illness, alongside underfunded mental health services, could be the cause of high suicide rates but low mental illness diagnoses not proportionate to the population.

Older studies highlighted the importance of spirits, witchcraft, magic or religious beliefs in the pathology of mental illness in Pacific populations. In contemporary Pacific youth, themes such as *le va*, acculturation, modernisation, and poverty may more important risk factors of mental illness.

More research is needed on the rates of anxiety and depression among youth in the Pacific region. A culturally relevant Pacific study focusing solely on mental illness such as anxiety and depression is needed to address this gap in the literature. More research is needed on Pacific mental illness in the United States, as ethnic grouping of Pacific Islanders and Asian Americans is misrepresenting Pacific peoples in mental health data. More New Zealand-based Pacific mental health research is needed,

focusing on the rates of anxiety and depression in New Zealand-born and Pacific mixed-ethnic youth.

Conclusion

This literature review concludes that Pacific youth are experiencing higher levels of depression and anxiety compared to other ethnic groups worldwide. Themes such as spirituality, family, religion and *le va* are risk and protective factors for Pacific youth across the globe. Acculturation and deprivation are risk factors for migrant Pacific youth. Urbanisation and modernisation are risk factors for Pacific youth in the Pacific region. Pacific youth mental health and wellbeing is an under-researched area of study. There are a number of opportunities to develop this field with new and innovative information.

Conflicts of Interest: None

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Correspondence: Leina Tucker-Masters, ltuc336@aucklanduni.ac.nz

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ACADEMIC: AUDIT

Glycaemic control in Otago children with type 1 diabetes

Cameron Castle, Alice Alsweller, William Crawford, Ben Drinkwater, Timothy Cederman, Emma Kersey, Brian Do, Tim Wareing, Matt Gaston

Department of Preventive and Social Medicine, Dunedin School of Medicine, University of Otago

Final year medical students at the University of Otago undertake a research project, as part of their medical education, in the Department of Preventive and Social Medicine, to extend their knowledge of research methods and develop strategies for avoiding or ameliorating problems in the delivery of health care.

Abstract

Introduction: Type 1 Diabetes mellitus (T1DM) is one of the most common chronic childhood diseases. Regular glycaemic control audits are important for the Otago region to evaluate its management of this population. This audit aimed to describe the change in glycaemic control using HbA1c, by year from 2009 to 2011, and May 2016 to April 2017, in Otago children (aged <18 years) with T1DM; and to compare these children to national HbA1c targets.

Methods: Recorded HbA1c data were retrospectively collected from the Southern District Health Board (SDHB) diabetes database on 131 patients, 0 - 18 years inclusive, with T1DM, for periods 2009, 2010, 2011 and 2016/ 2017. This data was analysed using Microsoft excel version 2016 and R v3.4.0 software.

Results: Mean all-age HbA1c values were lower in 2016/2017 when compared to 2009-2011 (71 mmol/mol and 77 mmol/mol, respectively). Average HbA1c value in the 0-12 age group remained constant while the 13-18 age group decreased (84 in 2009 to 73 in 2016/2017). The percentage of children achieving guideline HbA1c targets were 11% in 2011 and 30% in 2016.

Conclusion: Mean HbA1c values of children with T1DM in Otago in the 2016/2017 group were lower than National Diabetes Audit Mean HbA1c values. The average HbA1c (73 mmol/mol) is still above the recommended target value of 58 mmol/mol. There were more children meeting the target value in 2016/2017 compared with 2009-2011.

Ethics consultation:

Ethics approval was not required for this project, however the University of Otago Human Ethics Committee (Health) were consulted for use of health-related audit data. The Ngāi Tahu Research Committee were consulted during this process to ensure effective audit data research in accordance with benefiting Māori development.

Background

Type 1 diabetes is one of most common chronic diseases of childhood. Internationally the incidence of type 1 diabetes has been increasing.¹ Local research suggests that similar trends have been occurring in New Zealand. In a 2012 Auckland review of type 1 diabetes in children aged 0-14 years, the incidence increased from 10.9 per 100,000 in 1990, to 22.5 per 100,000 in 2009. The greatest increase in incidence occurred among

children aged 10-14 years.² A similar review was done in Canterbury of type 1 diabetes in young people aged 15-24 years. The researchers found an increased prevalence of about 45 per 100,000 (12%) between 2003 and 2010.³ A cross-sectional survey of 4,721 New Zealanders aged 15 years and above found a diabetes prevalence of 7.0%. They were unable to distinguish between type 1 or type 2 diabetes in their study. It was more frequent in men (8.3%) than women (5.8%). Pacific Islanders (15.4%) and Māori (9.8%) had a higher prevalence than NZ European and Other groups (6.1%).⁴

Diabetes is an illness of special interest for the Ministry of Health and the Southern DHB. The national priority of the National Diabetes Work Programme is on delivering and enhancing care and quality of life for people with diabetes.⁵ This includes prevention, identification and management of the increasing burden of this disease. Maintaining glycaemic control is important as healthy control is associated with a lower risk of long term complications of diabetes as demonstrated by long-term follow-up studies.^{6,7}

Glycaemic control can be estimated by measuring the glycated haemoglobin A1c (HbA1c) level indicating the level of glucose in the blood over the previous 12-week period.⁷ The International Society of Paediatric and Adolescent Diabetes (ISPAD) recommends a HbA1c target of <58 mmol/mol (7.5%) for those children who have T1DM, which is reflected in the *New Zealand Starship* guidelines.^{8,9} As adolescents progress into adulthood, this level is reduced slightly to the adults' target HbA1c of 53 mmol/mol (7.0%).¹⁰ It has been reported that children and adolescents often fail to meet glycaemic targets. Analysis of international paediatric diabetes registers show that 54-58% of paediatric patients fail to achieve the international target haemoglobin for young people (58 mmol/mol).⁹ This is particularly noticeable as children enter the pubescent period with a number of studies showing poorer glycaemic control in the adolescent population.¹¹ A 2006 New Zealand national audit of diabetes in young people aged 0 - 26 years suggested inadequate glycaemic control with a group mean HbA1c of 76 mmol/mol (9.1 +/- 0.3%).¹²

Over the past 10 years considerable changes have occurred in New Zealand and Otago regarding access to diabetes technologies (insulin infusion pumps), insulin therapies, and target orientated goal setting. Insulin pump therapy has gained popularity since its advent. In New Zealand, insulin pumps became eligible for public funding in September 2012. Between 2012 and 2014, funded pump use among patients with type 1 diabetes ($n = 13,727$) increased from 1.8 to 9.3 % overall.¹³ This change follows a similar pattern worldwide as insulin pumps may offer a number of advantages. Continuous infusions have been shown to achieve HbA1c targets, lower insulin requirements and decrease treatment induced hypoglycaemic crises and/or ketoacidosis hospital admissions, ultimately improving patient quality of life.¹⁴

It is unclear how well these apparent clinical benefits seen in randomised clinical trials translate into clinical practice in New Zealand. Quality of control of T1DM may be affected by many variables such as patient selection and motivation, and the insulin pump experience of the medical