Effectiveness of Structured Diabetes Education for Health Care Professionals in Primary Care

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Introduction:

Long Term Conditions (LTC) are the leading causes of mortality and morbidity worldwide. Diabetes Mellitus is a LTC with the potential for serious complications. Early diagnosis and appropriate management of Diabetes Mellitus can considerably reduce the risk of these problems particularly in high risk groups such as Maori/Pacific Island populations.

The WBOP PHO Health and Wellness Service delivers a structured and staircased diabetes education service to health care professionals (HPC) in primary care. Staircased learning ensures that practitioners are familiar with the fundamentals of diabetes before accessing insulin start classes and if desired subsequent insulin master classes. Attendance at the insulin start course is linked to accessing PHO diabetes funding for starting insulin therapy in primary care. Diabetes fundamentals is offered over two days following which attendees are eligible to attend insulin start education that is provided via a one day workshop. As an introduction and overview of diabetes a 1.5 hours professional development opportunity is offered to nurses. This is delivered in the evening. CME/CNE points are available for all sessions.

Aim:

Provision of structured and staircased education for HCP's working in General Practice, to support improved diabetes management in primary care. Education includes: Diabetes introduction (evening); Diabetes fundamentals (two day workshop), insulin starts (one day workshop), insulin master class (one day workshop).

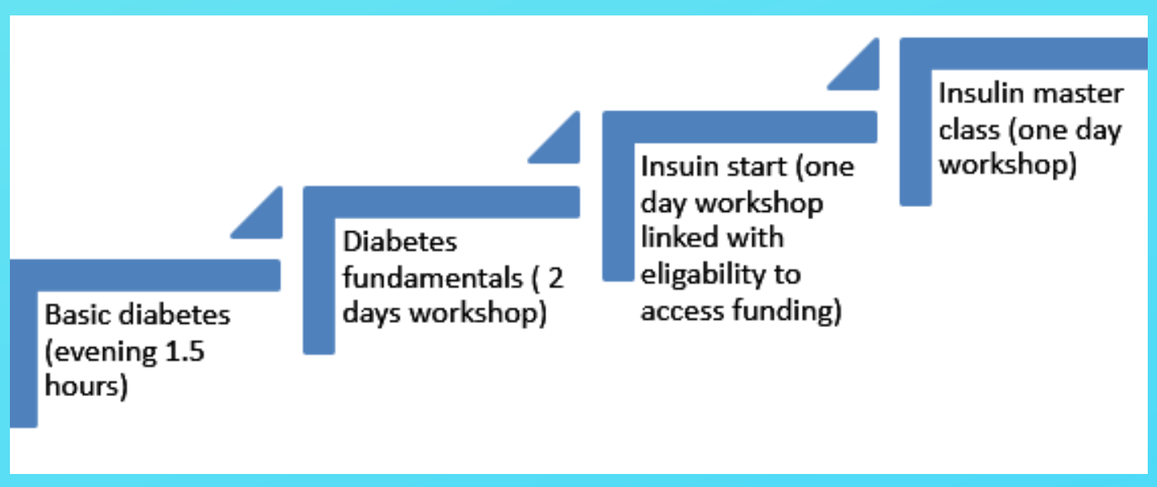
Methods:

The multidisciplinary team facilitates the education and have many years of experience in diabetes. Facilitators include senior nurses, Nurse Practitioners, Community Diabetes Nurse Specialists, Clinical Pharmacists, Community Dietitians and an Exercise Physiologist. The curriculum includes a focus on consultation skills, motivational interviewing, and improving self-management as well as where to refer for additional help. There is a specific focus on supporting Maori and Pacifica people who have diabetes.

All sessions delivered have specific learning outcomes and each workshop is evaluated against achievement of the key learning outcomes. These differ for each workshop as follows:-

- Evening diabetes basics aims to provide an overview and encourage enrolment into the full day workshops
- The two-day fundamental workshops aims to provide fundamental knowledge to support the effective provision of a nurse led diabetes clinic within General Practice.
- The one day insulin start workshops builds the necessary confidence and skills to enable attendees to commence once or twice daily insulin and support their patients to self titrate
- Once day insulin master class aims to develop further insulin management skills so that attendees can safely change from twice daily insulin regimens to basal bolus or other regimens more complex than once or twice daily.

All attendees at workshops are provided with the opportunity to utilise expert nurses for mentoring within their own practice environment.



Evaluation feedback is received from all workshops and have been consistently positive.

Two-day diabetes fundamentals: "Understand the fundamentals of lifestyle management", "Aware of potential complications", "More aware of patient Self-Management"

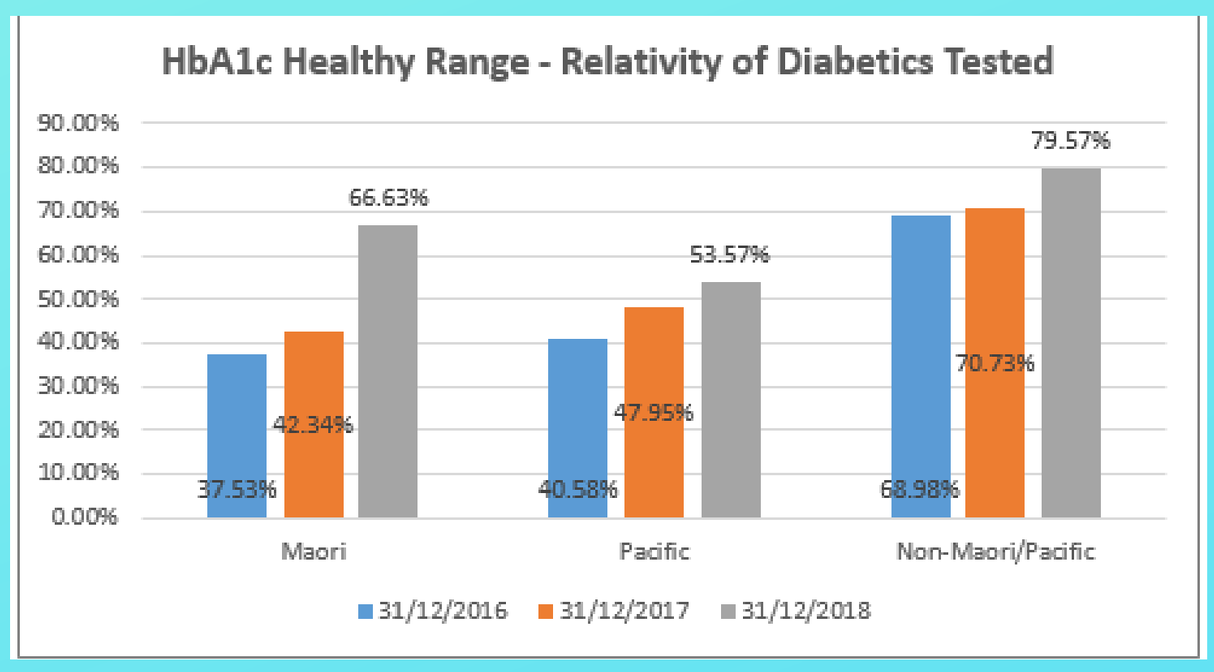
Starting insulin workshop: "I will talk about insulin history in the early stages of diabetes management", "I will be more proactive in recommending earlier insulin", "Incorporate the check list into my practice"

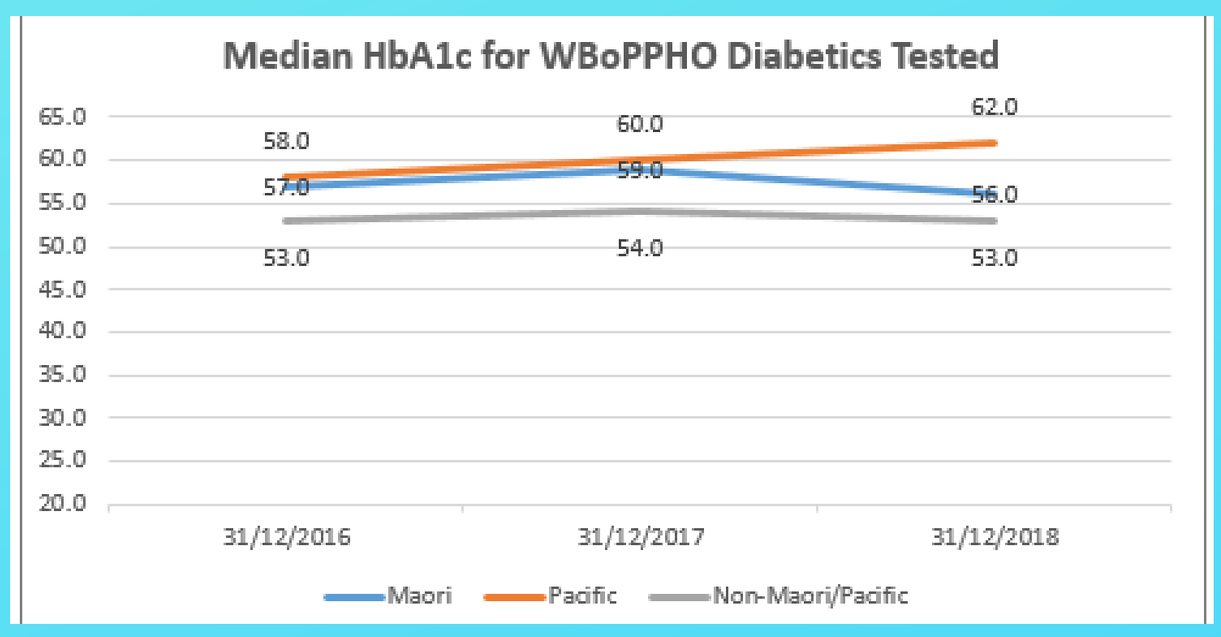
Master class: "Aim for patient discovery and self-management", "focus on good days of BGL trends and work on these further", "review of medications ensuring patient understands", "Continue to promote smoking cessation and lifestyle measures"

Results:

A total of 148 general practice based health care professionals attended workshops between 2016-2018. Almost all General Practices have nurse led clinics for diabetes management and currently 90% of WBOP PHO practices commence once or twice daily insulin independently. Referrals to the hospital or to primary care based community nurse specialists for insulin start have reduced dramatically with now less than 2.2% of referrals being received for insulin starts. Prior to commencing insulin start education in the community the majority of insulin starts were undertaken by specialist diabetes staff who are traditionally based in the hospital. Consideration was given to the different cost models operating in hospital services and General Practice as we wanted to ensure that costs were not shifted on to the patient. In WBOP PHO patients are not charged for annual review or for insulin starts. Funding is also available to enable funded appointments for individuals with poor glycaemic control (HbA1c 75mmol/mol or above).

See graphs below to highlight overall improvement in HbA1c from 2016-2018. Healthy Range <64mmol/mol





Discussion

A positive shift in HbA1c results over the last 3 years are seen with a noteworthy improvement in both Maori and non-Maori/Pacific in 2018 and a steady climb is seen with Pacifica. It is encouraging to see a narrowing of inequality for both Maori and Pacifica against non-Maori/Pacific.

The median HbA1c results shows all three cohorts sit in a range of less than <64mmol/mol. Glyceamic control is acceptable in many individuals in this range, however we are aware that microvascular complication risk increases markedly over 55mmol/mol. See below:

(Note that while the lift for Pacific patients might appear to be unfavourable, the number of Pacific diabetics tested in the last period was 4x greater than in the December 2017 period. Also the number of patients in the highest blood glucose range was 4x higher but the relative proportion of those Pacific diabetics in the highest range has reduced in each period (from 13% to 11.7%). We also ascertain during this period that screening numbers may have improved and perhaps more people were diagnosed with T2DM.

Conclusion:

The provision of structured and stair-cased HCP education supports improvement in patient outcomes. HCPs appreciate provision of regular education

Funding ensures cost shifting to the patient does not occur and the completion of education create eligibility to access funding. This appears to work well.