Preventing diabetes, addressing prediabetes and supporting self management

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MINISTRY OF HEALTH

Diabetes Day

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Outline

- Preventing diabetes
  - At risk populations
- Consistent with international activity WHO
- NZ work collated with facilitators for change

Global report on diabetes WHO

"Effective approaches to prevent type 2 diabetes include policies and practices across whole populations and within specific settings that contribute to good heath for everyone regardless of whether they have diabetes, such as exercising regularly, eating healthily, avoiding smoking, and controlling BP" WHO 2016

A challenge is to join up personal and population approaches in a complex area….

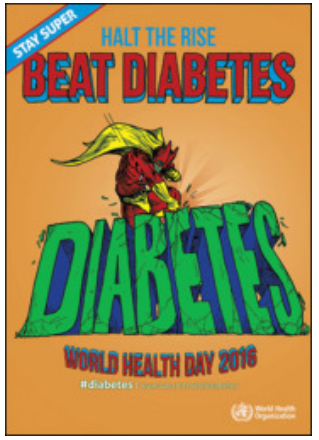
At Risk populations

- "Prediabetes" a risk factor not a condition
- Severe mental illness- Diabetes – death rate 3 times

(www.tepou.co.nz/equallywell)

- Obesity
- Ethnicity, family etc

Balance of solutions between health, community and self/ whanau



Activated People -Self Management

- ✓ Helps people develop the knowledge skills and confidence to manage their own health
- ✓ Can improve self esteem and confidence to perform tasks of every day life
- ✓ Can reduce attendance in primary and secondary care
- ✓ Can be one on one (motivational interviewing, health coaching, behavior change etc)
- ✓ Group (Stanford model widely used)
- ✓ Health literacy an important component
- ✓ Peer learning and support
- ✓ Consider mental health

Diabetes Innovation Fund Projects

Background

- The risk of progression for pre diabetes* to Type 2 diabetes can be substantially reduced through lifestyle modification.

*HbA1c in the range 41-49 mmol/mol

Diabetes Innovation Fund

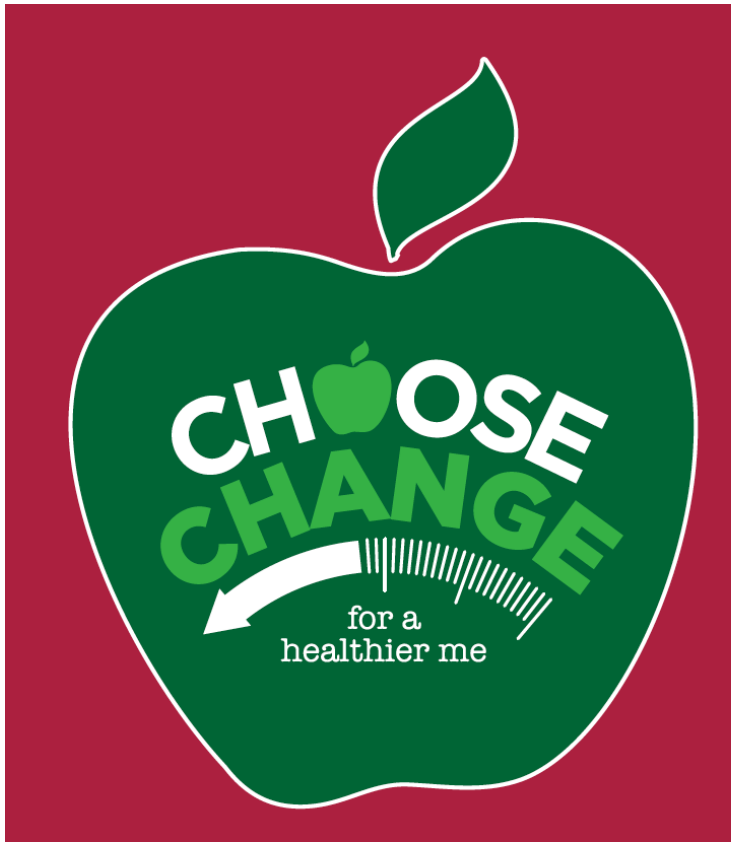
- To develop a Green Prescription (GRx) model tailored to better meet the needs of patients at risk of, or living with, type 2 diabetes.

Example of two Programmes

	Habour Sport	Sports Bay of Plenty
Programme	• Weekly (weeks 1-12) and then fortnightly (weeks 13-24) sessions with a Healthy Lifestyle Coordinator • 1:1 dietitian consultations and nutritional workshops • 1:1 psychology consultations or group psychotherapy • Weekly exercise options	• Advisors supported clients to set and achieve nutrition and physical activity related goals. • Nutrition educational sessions • Offered new options and/or linked to existing physical activity. • Monthly follow-up meetings for up to 6-months
Participants	• 331 people enrolled; 287 (87%) completed initial 12-week programme • 79% aged 50+; 63% women	• 174 people enrolled • 65% aged 50+; 68% women
Results at 6 months*	• 80% reduced HbA1c	• 66% reduced HbA1c

*only measured in those who completed the 6 month follow-up

Habour Sport – Aims



- Test the effectiveness of a coordinated multi-disciplinary, multi-ethnic approach in control and management of pre and type 2 diabetes.
- Reduce HbA1c in people with pre and type 2 diabetes into normal ranges and improve biometric measures (waist circumference, weight, BMI).

Habour Sport – Setting

- Four regional sports trusts who each targeted one high risk ethnic group
  - Counties Manukau Sport (South: Pacific Island)
  - Harbour Sport (North: NZ European/other)
  - Sport Auckland (Central: South Asian)
  - Sport Waitakere (West: Māori).

Habour Sport – Programme

- Weekly consultations with a Healthy Lifestyle Coordinator (weeks 1-12), reducing to fortnightly (weeks 13-24)
- 1:1 dietitian consultations and nutritional workshops
- 1:1 psychology consultations or group psychotherapy
- Weekly exercise options
  - E.g. low impact circuit classes, aqua and bolly aerobics, walking groups, boxing classes, sports activities, gym workouts and hydrotherapy

Habour Sport – Outcomes

- Changes in the following at 12 and 24 weeks:
  - HbA1c
  - weight,
  - waist circumference
  - fat mass
  - muscle mass
  - physical activity levels
  - blood pressure

Habour Sport – Participants

- 331 people with pre or type 2 diabetes were enrolled
- 287 (87%) completing the intensive 12-week first stage (week 1-12).
- 79% were aged 50+, 63% female.

Habour Sport – Results

- Proportion of participants reducing (to any degree) HbA1c
  - 12 weeks: 78%
  - 24 weeks: 80%
- Mean HbA1c decreased in all ethnicities by a minimum of 3.3mmol/mol at 24 weeks.
- At 24 weeks
  - 81% showed a reduction in blood pressure
  - 71% showed decreased fat mass
  - 89% reported increased physical activity.
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Sports Bay of Plenty – Aims

- To connect those people identified as pre-diabetic with information, education and practical experience of nutrition and physical activity to reduce the risk of their progression to diabetes.

Sports BoP – Setting

- Identification of pre-diabetes (HbA1c 41-49) took place in the Bay of Plenty GP practices via a blood test.

- Those identified were then referred by their GP practice to the project via a secure e-referral process or hand-written referral to Sports BoP.

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Sports BoP – Programme

- Advisors supported clients to set and achieve nutrition and physical activity related goals.
- Nutrition educational sessions were offered including a nutritional workshop, one on one session with a Dietitian and two healthy cooking classes.
- Clients were offered new options and/or linked to existing physical activity.
- Monthly follow-up meetings for up to 6-months, where advisors motivated and supported them to achieve their goals.

Sports BoP– Outcomes

- Changes in the following at 6 months:
  - HbA1c
  - weight,
  - waist circumference
  - blood pressure

Sports BoP – Participants

- 274 participants were referred
- 68% female
- 65% age 50+
- 50% Māori; 44% Pākehā
- 174 (64%) engaged in the programme
  - 6% declined
  - remainder could not be contacted

Sports BoP – Results

- 66% showed a decrease in HbA1c from baseline at 6 months
  - Reductions among participants different regions varied:
    - Rotorua 49%
    - Western BoP 70%
    - Eastern BoP 75%
- 130 (75%) participants provided weight at 6 month follow-up
  - 51 (39%) lost at least 1.6kg of their baseline body weight.
- 70 participants had their lip profiles recorded at baseline and 6 months, with the following proportions moving from abnormal to normal results:
  - Cholesterol: 17%
  - Triglycerides: 20%
  - HDL cholesterol: 6%
  - LDL cholesterol: 13%

Energised Practices – Aims

- Reduce the number of people with pre-diabetes progressing to Type 2 diabetes.
- Achieved by increasing the number of people receiving consistently high quality GRx support provided by GPs and PNs.

Energised Practices – Setting & programme

- General practice setting.
- Focussed on providing GPs/PNs, information, support, training, advice, resources and other activities designed to assist them in providing healthy lifestyle advice to patients.
- Energisers (support workers) worked on engaging the practices and assisting them in developing activities to meet local need.

Energised Practices – participants

- 493 patients
  - 59% Type 2 diabetes, 41% Pre-diabetes.
  - 59% female
  - 70% aged 50+
  - 60% NZ European, 29% Māori, 2% Pacific

Energised Practices – results

- 36 of 37 practices targeted were enrolled.
- 73% of practices increased the number of GRx referrals.
- Increased awareness of the importance of healthy lifestyles.
- Among the 24 fully engaged practices there was a mean increase of 33 referrals to standard GRx, compared with baseline.
- Anecdotal data suggest that some people lost weight and reduced HbA1c (outcome data not reported)

Barriers

- Recruitment
  - Although the pool of potential participants is large not all are interested in assistance, or even see the need to participate in programmes to help improve their health
  - Referrals from primary care worked well, but took time to develop relationships and referral mecanisms

Barriers

- Clinicians
  - Lack of buy in from practice staff
  - GPs were slow to engage and refer patients
  - Common barriers to GPs engaging and referring include
    - lack of time
    - lack of knowledge
    - don’t see the need
    - competing priorities

Barriers

- Getting blood tests done
  - money for GP visits
  - some GPs/PNs refused to write a follow up Hba1C script prior to 6 months
  - time to go to the GP
  - lack of transport to GP or lab
  - time spent waiting in a lab
  - lack of understanding of the rationale for a repeat test
  - fear of the results

Barriers

- Barriers to participant behaviour change
  - Health literacy
    - Many patients, especially those from Pacific populations, had an overall low understanding of the relevance of pre-diabetes and consequences.
  - Patients don't see the need for support
  - Significant time commitments (work, family, church)
  - Lack of transport
  - Mental health and social issues

Barriers

- Patient contact and follow-up can be difficult
  - did not have telephones, or changed their phone number
  - those who changed addresses frequently
  - those who do not succeed in their behaviour change are often reluctant to be contacted

Facilitators

- Referrals
  - promotion to GPs/PNs was seen as a successful approach
  - a multistage approach is needed
    - engagement with practices
    - promotion of the programme
    - simple instructions and tools on how to refer
    - undertaking follow-up visits/calls and reminders.
  - Feedback to referrers was also seen as a good way to further promote the programmes

Facilitators

- Early engaging with primary care staff
  - A three step process:
    - **Engagement**: facilitated engagement with practices to develop and strengthen relationships
    - **Negotiating**: describing what is on offer, but tailoring it to the needs to the practice and staff
    - **Implementation**: training, tools, resources, updates, monitoring and feedback.
- Effective communication
  - Communication tools included
    - programme information evenings for practice staff
    - practice presentations
    - sharing of patient case studies.

Facilitators

- Strategies to change clinician behaviour
  1. Leadership
  2. Training – where possible this should be brief and instructional, for example training in using referral systems and what to say to their patients
  3. Systems and tools to help identify people in need and refer on for help
  4. Audit and feedback
  5. Incentives

Facilitators

- Programme components
  - Support from peers
  - Accountability – e.g. Choose Change utilised a commitment contract at enrolment that set out the expectations of the programme
  - Participant engagement - Activities that are geared to the right level of health literacy are important
  - Relevance to a wide audience - programmes need to be generic in their content, but allowing for tailoring where possible.
  - Integration of behavioural support

Discussion

- *What is working locally?*
- *How are you reducing disparity?*
- *What will you do differently?*
- *Ministry will produce a more comprehensive resource*

Thanks to Hayden McRobbie for analysis of the projects