Ms Karen Evison
Ministry of Health
Wellington

Friday, June 9, 2017

11:00 - 11:55 WS #33: Patient Self Management in a Technological Era
12:05 - 13:00 WS #41: Patient Self Management in a Technological Era (Repeated)
Patient self management in a technological era

where do you start?

Karen Evison
Ministry of Health, New Zealand
Overview

• Technology enabling good health
• Self Management and how it is evolving
• Technology – consequences and how to help (Obesity)
eHealth

The Technology and Digital Services business unit oversees the Ministry’s eHealth work programme, which aims to achieve the strategic outcomes described in the New Zealand Health Strategy and Digital Health 2020.

Digital Health 2020

Digital Health 2020 has been established to progress the core digital technologies presented in the New Zealand Health Strategy.

- Common capabilities
- Health information standards and architecture
- Information governance
- Preventative Health IT capability
- Regional IT foundations

Other eHealth initiatives

Strategic initiatives to use technology to deliver better health outcomes for New Zealanders.

Clinicians’ Challenge

The Clinicians’ Challenge 2017 seeks entries for innovative technology that will improve today and transition tomorrow. [Find out more](#).

Our focus

Our focus includes:

- Digital Health 2020
- Other eHealth initiatives such as:

Contact us

eHealth@health.govt.nz
Phone: (64) 495 2300
Fax: (64) 495 2240

News & media

- Call for clinicians to share disruptive ideas - 24 March, 2017

Related areas

- Consumer Panel
- Digital Advisory Board
- Health Informatics New Zealand
- Health Informatics Standards
Patient Portal – rate of uptake - December 2016

- National trend

Number of patients registered with a patient portal
Number of practices offering patient portals
Portals where to from here

- Good uptake by practices - 45% offer portals
- RNZCGPs survey – portals improve service
- Concerns re safety and privacy
- Guidelines - access to child/youth information
- Increase patient enrolments, functionalities
- Secure messaging and sharing clinical notes
- Primary care integration – DHB DAPs
- Website: [https://patientportals.co.nz/](https://patientportals.co.nz/)
Self Management

• “..greater control in looking after themselves, …, and in partnership with health professionals and community resources.”

• Key features:
  – Literacy
  – Coaching
  – Navigation
  – Patient centred
  – Empowering
Self management currently
• Evidence:
  – Increases sense of wellbeing
  – Improved health outcomes
  – Decreased secondary care use

• Examples:
  – Activated patients
  – Expert patient
  – Flinders
  – Stanford

• Average NZer’s has 40 mins with GP per year
How it evolves in practice

Phase 1
- Dr and Nse roles defined
- Care plans for some
- Some staff training
- Referral to self management courses for some patients

Phase 2
- LTC team approach
- Care plans for all
- Navigation activity
- Self management courses for all
- Business model allows for aspects to support this activity

Phase 3
- MDT within and beyond general practice
- All staff trained
- Social model of care
- Business model fully supports SM
- Kaiawhina act as connectors
Supporting self management project

• Health Literacy New Zealand and Health Navigator New Zealand working with 8 practices to develop tools, resources and training to enable people with LTC to self manage
• Training modules being developed, practice teams supported to test modules
• Modules include care planning and health literacy
SMS4BG

- NIHI and Waitemata DHB
- Text message based self management program
- RCT 366 patients with poor diabetes control
- Targeting Maori, Pacific and rural NZers
Findings to date

- 96% messages useful
- 95% good way to deliver program
- 96% culturally appropriate
- 98% age appropriate
- 81% impacted on their management
- 76% improved glycaemic control
- 2% choose to end messages early
HRC partnership - BetaMe

- Professor Diana Sarfati (Uni of Otago)
- Melon Health
- Midlands and Wellington
- RCT pre/diabetes (usual care or care + tech)
- Adding app for coaching, goal setting, private social networks, health hacks, data integration, resource library, modular education programs and video appointments
Mental Health Diabetes projects

• Improving mental health and wellbeing has the potential to improve both quality of life and glycaemic control
• The projects aim to improve access to primary mental health services for people with poorly controlled diabetes
• Situated in Northland and Tairāwhiti DHBs
• Malatest evaluating the project
Tairawhiti approach - Targeted

• Māori or Pacific person with poorly controlled Diabetes (HbA1c level of 64mmol/mol or more) and an indication of potential mild to moderate mental health issues:
  • poorly controlled diabetes
  • low/non-attendance
  • low/non-adherence with medication regimes
  • living in socially isolated situations
  • pressing issues (wider than health)
## Tairāwhiti – a case study

– Mark (in kaiāwhina programme):

<table>
<thead>
<tr>
<th>Before</th>
<th>Now – six weeks later</th>
</tr>
</thead>
<tbody>
<tr>
<td>No interest in preparing meals</td>
<td>Engaged in sandwich club</td>
</tr>
<tr>
<td>Difficulty shopping</td>
<td>Kaiāwhina supermarket tours, gaining confidence in buying right food within his budget</td>
</tr>
<tr>
<td>Little contact with whānau</td>
<td>Joined lunchtime walking group</td>
</tr>
<tr>
<td>Overweight (127kg), no exercise</td>
<td>Losing weight (125kg)</td>
</tr>
<tr>
<td>Uncontrolled diabetes (HbA1c 86)</td>
<td>Reducing HbA1c (now 82)</td>
</tr>
</tbody>
</table>

**Wanted to lose weight and sort out his lounge. Felt hopeless.**

**Feeling happier and has a plan towards new lounge suite.**
Northland DHB

Tamariki programme
- Whānau with child newly diagnosed with T1 DM in previous year
- Whānau with Child with poorly controlled T1 DM high HbA1c
- Kaiawhina co-ordinates and supports tamariki and their whanau

Rangatahi programme
- A series of workshops delivered by the Company of Giants theatre group
- Bring together clinicians and patients in a new model of care that removed barriers of access, and where the clinicians were naïve participants – engaging in full and level playing field
- Three cohorts of young people

Adult programme
- Mixed model including workforce development, group sessions, e therapy and specialist support in primary care
Health App overload

- App and info overload
- Fragmented
- Re-inventing the wheel!
- Quality concerns
- Dr. Google!
- Verbal information only - < 50% recalled
- Expensive, wasteful and inefficient!
- Became too hard to find right info at right time!
- Misleading info online!
- Safety concerns!
We know

• Over 165,000 health apps!
• Around two-thirds of Kiwis aged 15 and over now own a smartphone
• Despite digital divide – 2.5 million smartphone users in NZ
• Important opportunity, but very little guidance available and
• very few clinicians recommending apps
NZ Health App Library – consumer facing

**Enhanced user experience**
Responsive website so viewable on all devices. Nearly 50% views are on mobiles now.

**Self care focus**
Looking for apps that help people take positive steps to prevent or minimise health impact.

**Easy to read**
Aim to use plain language, white space, bullet points, sub headings and short sentences so easier to read and to read online.

**Relevant to New Zealanders**
Many apps not useful in NZ if services focused or databases not local.

**Improving health literacy**
Strong focus. Working on improving layout and design to simplify further.

**Peer review & Consumer Input**
Co-design process. Ongoing work to find better process for multiple user reviews.

www.hn.org.nz
App quality assessment

**Formal review**
Based on the Mobile App Rating Scale (MARS) developed by Queensland University of Technology, Australia. Scores apps on 4 main dimensions:
1. engagement,
2. functionality,
3. aesthetics, and
4. information quality

**Clinical review**
Undertaken by a health professional working in the area of interest. Intended to gauge the clinical value, relevance and safety of the app to its target audience.

**Technical review**
To highlight the technical aspects of an app that may be of importance to users such as security, privacy, and performance.

**User review**
To get the users opinion of the app – did the app do what they expected, what they liked about the app, and their dislikes.

**NZ relevance**
To highlight aspects of an app that may not be relevant to NZ users such as units of measure requiring complex conversions, food database that includes products not available in NZ, etc.
Publication

View online at:
www.healthnavigator.org.nz/apps/
An app aimed at people who think they may have arthritis.

### ArthritisID app

<table>
<thead>
<tr>
<th>ArthritisID</th>
<th>Basic Features</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No in-app advertising</td>
<td>pending</td>
</tr>
<tr>
<td></td>
<td>Requires the internet function</td>
<td>User score</td>
</tr>
<tr>
<td></td>
<td>Data can be exported</td>
<td>Clinical score</td>
</tr>
<tr>
<td></td>
<td>Social networking options</td>
<td>NA relevance</td>
</tr>
<tr>
<td></td>
<td>Support - online community</td>
<td>Technical score</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formal review (MASS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.1 out of 5</td>
</tr>
</tbody>
</table>

### What does the app do?

This app has a screening tool and a series of questions for the 'detection' of arthritis. It provides a description of the different types of arthritis (such as gout, osteoarthritis, rheumatoid arthritis) and the treatment options for each such medication, exercise, diet and nutrition.

For the complete app description, go to [Times](#) (app).

<table>
<thead>
<tr>
<th>PROS ✓</th>
<th>CONS X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple design, concise easy to understand information.</td>
<td>Dangerous to rely on an app for diagnosis.</td>
</tr>
<tr>
<td>Information includes self-care advice, gives &quot;red flag&quot; symptoms or features for each type of arthritis to suggest urgent review by a doctor.</td>
<td>Not all medications are available in New Zealand.</td>
</tr>
<tr>
<td>Helps user to analyse their symptoms and could lead to seeing their doctor for assessment.</td>
<td>Information is very brief — an introduction only.</td>
</tr>
</tbody>
</table>

Date of this review: July 2016
Adult obesity in New Zealand

NZ Health Survey 2015/16

% adults (15+) who are obese by ethnicity

Maori: 47.1%
Pacific: 66.9%
Asian: 15.4%
NZ European: 29.5%

% adults (15+) who are obese by deprivation

Quintile 1*: 23.2%
Quintile 2: 26%
Quintile 3: 30.7%
Quintile 4: 34.8%
Quintile 5: 43.7%

Maori vs. non-Maori: aRR=1.69 (1.58-1.82)
Pacific vs. non-Pacific: aRR=2.38 (2.21-2.56)
Most deprived vs. least deprived: aRR=1.70 (1.50-1.94)

*least deprived
aRR= adjusted rate ratio

NZ Health Survey 2015/16
Adult Obesity Over Time

NZ Health Survey 2015/16
• No single intervention – need to address the obesogenic environment as well as a life-course approach.

• Three critical time periods in the life-course:
  – preconception and pregnancy
  – infancy and early childhood
  – older childhood and adolescence.
NZ Childhood obesity plan overview

• 22 initiatives
  • Targeted interventions for those who are obese, increasing over time
  • Increased support for those at risk of becoming obese
  • Broad approaches to make healthier choices easier for all New Zealanders.

• Brings together initiatives across government agencies, the private sector, communities, schools, families and whanau.

Childhood obesity health target – Raising Healthy Kids

• A new health target has been implemented from 1 July 2016:
  • By December 2017, 95% of obese children identified in the Before School Check (B4SC) programme will be offered a referral to a health professional for clinical assessment and family based nutrition, activity and lifestyle interventions.
  • The target was selected as the B4SC focuses on early intervention to ensure positive, sustained effects on health.
  • The target defines obesity as a BMI above the 98th centile on the NZ-WHO growth chart.
Weight management
IN 2-5 YEAR OLDS

1. MONITOR
Monitor growth.

2. ASSESS
Take a full history for BMI above 91st centile.
Consider:
- co-morbidities
- family, history of obesity, early cardiovascular disease, or dyslipidemia
- precipitating events and actions already taken
- usual diet and level of physical activity and sleep patterns
- current physical and social consequences of overweight
- signs of endocrine, genetic or psychological causes
- medications that may contribute to weight gain.

Include in a clinical examination:
- blood pressure with appropriate cuff size
- skin: intertrigo, cellulitis, carbuncles
- hepatomegaly
- enlarged tonsils
- ascertainment of short stature/poor linear growth
- abnormal gait, flat feet, lower leg bowing or problems with hips or knees
- dysmorphic features
- undescended testicles (boys).

If trending towards overweight, provide the family or Whānau with brief nutrition and physical activity advice.

If overweight or obese discuss long-term health risks with the family or Whānau.

Proceed to stage 2: Assess.

3. MANAGE
Aim to slow weight gain so the child can grow into their weight.
Use the Food, Activity and Behaviour (FAAB) change approach to address lifestyle interventions.

- Food/nutritional balanced diet
- Physical activity and reduces sedentary time
- Sleep
- Behaviour strategies.

To support meaningful engagement and improved health outcomes, it is important that a mutually agreed weight management plan takes into account the broader social, environment and cultural contexts of the child, family and Whānau.

4. MAINTAIN
Maintain contact and support and continue to monitor the child’s height and weight to ensure they are adequately supported.

Reinforce healthy eating, physical activity, behaviour strategies and sleep advice.

Identify and promote local support services. Develop collaborative partnerships with MoH provider organisations, Pacific health providers, Whānau Ora providers and other community-based organisations as appropriate.

Refer to paediatric services if significant co-morbidities are identified or if an endocrine or genetic cause for obesity is suspected.

Agree a plan for review and monitoring.

Reassess if progress is not sustained.

Monitor Growth

NZ-WHO Growth Charts

If trending towards overweight, provide the family or whānau with brief nutrition and physical activity advice.

If overweight or obese discuss long-term health risks with the family or whānau.

Proceed to stage 2: Assess
Intervene Early

• A change of centile channel is an indicator that the child’s growth trajectory needs to be watched and an early intervention is likely to be more straightforward and effective.

Z score (SD):  
+1.3  91st Centile  
+2.0  98th Centile

Acknowledgement: Dr Pat Tuohy
‘My child exercises every day of the week with horse riding and running and as you should know muscle weighs heavier than fat.’

‘There are much fatter children out there and my son isn’t that bad!’

‘If you look at the rest of his activities and family members then his natural weight and body size is large.’

‘He is very short for his age and I feel he will even out as he grows.’

What’s ‘normal’?
“Our findings highlight a mismatch between health professionals perceptions of how difficult these discussions are and reality, in that most parents are receptive to the information if delivered well.”

Having the conversation....

- Show concern, rather than professional detachment
- Be confident and caring
- Allow time for questions
- Provide written information to parents
- Value the child and respect the parents

The most important aspect of these conversations is to make the experience **positive** and **non-judgmental**.

The style in which this feedback is provided appears to be less important.

Mikhailovich & Morrison, Journal Of Child Health Care 2007 11(4)  
Manage

**Food**
- Nutritionally balanced diet
- Appropriate portion sizes
- Family meals
- Slower eating
- Avoid snacking

**Activity**
- Play and physical activity
- Reduce screen time (esp TV)
- Sleep time
  - Infants: 12-15
  - Toddlers: 11-14
  - Preschoolers: 10-13

**Behavioural Strategies**
- Change what is available at home
- Keep ‘treats’ out of site
- Increase easy accessibility to healthy options
Maintain

• Review opportunistically
• Accept setbacks – maintain positivity
• Encourage family activities and sport
  • Link with local Regional Sports trust
• Encourage cultural initiatives
  • e.g. Kapa-Haka
• Support communities
  • Healthy Families NZ
  • Iron Maori
  • Community gardens/Kai Atua
Adult Obesity

• Motivate a weight loss attempt

• Healthcare professional advice to lose weight was associated with increased odds of

  – Wanting to weigh less (OR=3.71; 95% CI: 2.10-6.55)

  – Attempting to lose weight (OR=3.53; 95% CI: 2.44-5.10)

Jackson et al BMJ Open 2013, 3: e003693
### Making an offer of support

<table>
<thead>
<tr>
<th>Intervention (n=940)</th>
<th>Control (n=942)</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Physician offered referral to a weight management group</td>
<td>– Physician advised the patient that their health would benefit from weight loss.</td>
</tr>
<tr>
<td>• 772 (72%) agreed to attend</td>
<td>• 82 (9%) attended weight management group</td>
</tr>
<tr>
<td>• 379 (40%) attended</td>
<td>• Mean weight change at 12 months: <strong>1.04 kg</strong></td>
</tr>
<tr>
<td>• Mean weight change at 12 months: <strong>2.43 kg</strong></td>
<td></td>
</tr>
</tbody>
</table>

**adjusted difference = 1.43 kg** (95% CI 0.89-1.97)

An example of a conversation

- HCP: While you are here, I’d like to have a brief discussion about your weight. From the measurements we have taken, your BMI is >30 which puts you into the very overweight category and increases your health risk.
- Patient: Oh?
- HCP: I know weight management can be challenging but I’ve got some information here which I think you might find helpful. Are you willing to have a look at them?
- HCP: Okay
- Doctor: Great, I’d really like to encourage you to give these things a go. Would it be OK if I followed up with how you’re getting on when I next see you?
- Patient: Sure, I guess
- HCP: Don’t worry, I’m not going to lecture you. I know how difficult making changes can be. I’d just like to support you as much as I can to get to a healthy weight, however long that takes.
- Patient: Thanks
Overweight healthcare professionals?

What do patients think?

- Survey of 600 overweight or obese adults

<table>
<thead>
<tr>
<th>Patients estimation of doctors weight</th>
<th>Normal (n=118)</th>
<th>Overweight (n=312)</th>
<th>Obese (n=170)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust* advice on weight control</td>
<td>76%</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>Trust advice on diet</td>
<td>77%</td>
<td>87%**</td>
<td>82%</td>
</tr>
<tr>
<td>Trust advice on physical activity</td>
<td>79%</td>
<td>86%</td>
<td>80%</td>
</tr>
</tbody>
</table>

* Rated ‘a great deal’ or ‘a good amount’ of trust
**Significantly greater than normal weight (p=0.04)