Improving the effectiveness of primary health care with obese patients

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Outline

• The problem
• Management of obesity in PHC – evidence based approaches and actual practice
• COMPaRE PHC’s research
• Discussion Q&A
The problem
Obesity is usually defined in terms of body mass index (BMI)

- BMI = weight (kg) / height (m²)

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI (kg/m²)</th>
<th>Risk of co-morbidities</th>
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<tbody>
<tr>
<td>Normal range</td>
<td>18.5-24.9</td>
<td>Average</td>
</tr>
<tr>
<td>Overweight</td>
<td>25-29.9</td>
<td>Increased</td>
</tr>
<tr>
<td>Obese class I</td>
<td>30-34.9</td>
<td>Moderate</td>
</tr>
<tr>
<td>Obese class II</td>
<td>35-39.9</td>
<td>Severe</td>
</tr>
<tr>
<td>Obese class III</td>
<td>≥ 40</td>
<td>Very severe</td>
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WHO, 1998
Waist circumference is a surrogate measure of abdominal or visceral fat

**Men**
- Increased risk >94cm
- Greatly increased risk >102cm

**Women**
- Increased risk >80cm
- Greatly increased risk >88cm
The challenge
Rise of obesity across all ages

Persons aged 18 years & over - Proportion who were obese(a), 1995 to 2011-12

Age group (years)

%
Disparities in Obesity (%) by IRSD Quintile, Males and Females Aged 25-64, 1989 to 2001
Impact of obesity

Burden (DALYs) attributable to high body mass, by specific cause, Australia, 2003

- Between 1-5% of total health cost
- Over $1000 per person per annum excess health costs

7.5% of the total burden of disease

Diagram showing:
- Type 2 diabetes
- Ischaemic heart disease
- Colorectal cancer
- Breast cancer
- Stroke
- Cardiovascular
- Gall bladder disease
- Colon cancer
- Diabetes
- Musculo-skeletal
Management in Primary Health Care
BMI in general practice adults (18+ BEACH 2003-2013)
Weight loss in general practice patients

*BEACH 2007-8: SAND Survey*

43% of overweight and 68% of obese adults attempted weight loss in the previous 12 months*.

- 25% had tried a weight-loss programs,
- 39% followed structured diet plan and 26% meal replacements,
- 68% exercise program
- 31% received advice from GP; 8.6% were referred to specialist or dietician.

One third had found these successful

- 0.4% had a surgical (bariatric) procedure.
Effective interventions for diet and PA

• Support to change both diet and physical activity
• Use problem solving, self-monitoring, goal-setting, action plans, relapse prevention.
• Encourage social support (i.e. engage others who are important such as family, friends, and colleagues)

• Greaves et al. Systematic review of reviews of intervention components associated with increased effectiveness in dietary and physical activity interventions. BMC Public Health 2011, 11:119
Counterweight

One in 6 achieve >5% weight loss at 12 or 24 months

Br J Gen Pract. 2008; 58: 548-554
Mean Weight Change According to Randomized Group.

Obesity Treatment for Socioeconomically Disadvantaged Patients in Primary Care Practice

Effects of lifestyle intervention on (A) weight, (B) systolic BP

Modest weight loss of 5-10% is sufficient to achieve clinically significant benefits

- Blood pressure - 1% fall in weight = 1% fall in SBP, 2% fall in DBP
- LDL reduces by 1% for every kg lost
- 55% reduction in incidence Prevention of diabetes in high risk patients and improved glycaemic control
- Reduced risk of CVD and CVD death especially if reductions in visceral fat occur
Multidisciplinary approach

• Range of health professionals including practice nurses, dietician, exercise physiologists and psychologists.

• May involve range of health and non health services and programs available in the community

• May be in person, by phone or on-line
Lifestyle Intervention pathway for adults: 5As Model

**Assess**
- BMI, WC, diet (F&V, fat), physical activity

**Advise**
- Dietary energy deficit of 2500 KJ per day, 300 min moderate or 150 min vigorous activity/week

**Agree**
- Negotiate goals: 5-10% weight reduction

**Assist**
- Referral to diet and physical activity education and development of skills (eg shopping, food preparation, exercises) and/or behaviour change

**Arrange**
- Follow up and review for relapse prevention and support

* All patients but especially higher risk patients: physiological risk factors (hypertension, high cholesterol, pre-diabetes); indigenous and CALD groups; family history of CVD, diabetes, renal disease, OA;
Each additional 5As counselling practice was associated with higher odds of being motivated to lose weight (OR= 1.31, 95% CI 1.11–1.55) intend to eat better (OR = 1.23, CI 1.06–1.44)

Assessment (% of GP records)

- BMI: 25.6 PEP, 22.2 MAGNET
- WC: 6 PEP, 4.3 MAGNET
- Smoking: 74.3
- BP: 72.9

PEP  MAGNET
Assessment Vs Advice (Population Survey)

- Blood pressure: 90
- Blood cholesterol: 70
- Blood glucose: 60
- Diet advice: low fat: 20
- Diet advice: fruit/veg: 10
- Physical activity advice: 10
Advice and referral for lifestyle interventions (diet, PA or weight loss) over past 3 months in general practice (PEP audit baseline)
5As approach

- Assess: 34%
- Advise/Agree: 26%
- Refer: 11%

Sustained Weight Loss: 4-6%
COMPaRE-PHC Research
How COMPaRE-PHC research addresses the 5As for weight management in adults

Assess
- Cost effectiveness of guideline implementation

Advise/Agree
- Counterweight pilot studies.
- Better Weight Management in General Practice for patients with low health literacy

Assist/Arrange (Refer, F/U)
- General Practice Referral study

Sustained Weight Loss
What influences GP referral of obese patients

• Aim to describe the influences on GPs referral of obese patients for surgical or non surgical interventions
• In depth qualitative interviews with 24 GPs from 4 urban and rural Medicare Locals in NSW
• Mixed-method analysis was applied using inductive thematic analysis and quantitative data.
Current NHMRC Guidelines

• For adults with BMI >40 kg/m² or BMI >35 kg/m² with co-morbidities that may improve with weight loss, bariatric surgery may be considered.

• Bariatric surgery, when indicated, should be included as part of an overall clinical pathway for adult weight management that is delivered by a multidisciplinary team and includes planning for continuing follow-up.

• Bariatric surgery may be a consideration for people with a BMI >30 kg/m² who have poorly controlled type 2 diabetes and are at higher cardiovascular risk.
Influences on GP referral decision making:

- GP attitudes
  - Perceived efficacy
  - Empathy vs unsympathetic
  - Patient expectation
  - Normative influences
    - Professional
    - Patient
    - Control factors
      - Medico-legal guidelines
      - Motivation
      - Comorbidity
      - Ability to pay
      - Health literacy
      - Nurse capacity
      - Availability/transport
      - Practice
      - System
      - Intention to Refer
Influences on GP referral for lifestyle

- Perceived efficacy
- Empathy vs unsympathetic
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- System

GP attitudes

Normative influences

Control factors

Intention to Refer (11%)
• Obviously the outcomes are variable, some patients do better than others but my experience has been favourable – [Urban GP]

• We’ve got a good dietician in own and he sits down and talks to them with a combination of regular exercise program and diet and only a tiny percentage of people lose weight. [Rural GP]

• ..they may or may not put changes in place. But again, motivation is probably the biggest issue there.” [Urban GP]

• ..their English is of course not perfect so they prefer a Vietnamese dietician.” [Urban GP]

• I want lots of people with a BMI over 30 to go somewhere, but most are not really interested or motivated to change [Rural GP]

• It gives you a bit more credibility if people know you’ve been on a similar journey [Rural GP]
Influences on GP referral for surgery:

- Perceived efficacy
- Empathy vs unsympathetic
- Patient expectation
- Medico-legal
  - Guidelines
- Professional
- Motivation
- Comorbidity
- Ability to pay
- Health Literacy
- Nurse capacity
- Availability/transport
- Patient
- Practice
- System

GP attitudes

Normative influences

Intention to Refer (<1%)

External factors
• If they are only 30 to 32 they might improve. But if BMI is 40 plus, [lifestyle] interventions aren’t strong enough [Urban GP]

• I wouldn’t refer someone for bariatric surgery if I didn’t think that they’d adequately explore [other] options. Rural GP

• It is a last resort. Urban GP

• Cost is another barrier… its not done under the public system, but people have to find somewhere up to $10,000 to have this surgery done. And so that basically excludes the lowest classes of people who might need it most because they have high risk and comorbidity. Rural GP

• The main factor would be patients initiating the request Rural GP

• There is a lot of stigma, a lot of patients are embarrassed to be referred for surgery Urban GP

• A lot of people view it as an easy option Rural GP
Summary

• **Significant variation between GPs.** GPs were more likely to approach referral positively if they felt they had a variety of options for the patient. Older GPs more negative but few differences based on locality.

• **Factors influencing lifestyle referral:** Patient health literacy, practice capacity and system factors.

• **Factors influencing surgical referral:** Importance of GP attitudes, feedback, patient demand and ability to pay.
Policy Implications

• Role of Medicare Locals/PHNs in commissioning services and programs and facilitating quality improvement.

• Improving e-health systems to facilitate communication, recording and audit of assessment; advice and goal setting; referral; follow up

• Better integration with population health strategies and specialist obesity services (including surgery)

• Adapting existing PHC payment systems to support PN role and facilitate integrated referral pathways.
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<th>Group</th>
<th>Promising interventions</th>
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<td>Children &lt;2 years from socioeconomically disadvantaged families</td>
<td>Interventions had a positive impact on obesity related behaviours (e.g. diet quality) but few measured the longer-term impact on healthy weight gain.</td>
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<td>Pre-schoolers (3-5 years) from socioeconomically disadvantaged families</td>
<td>Findings were mixed. More successful interventions required high levels of parental engagement, behaviour change techniques, focus on skill building and links to community resources</td>
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<tr>
<td>Disadvantaged adults</td>
<td>Evidence for effectiveness of health literacy interventions for weight loss which targeted diet, physical activity and behaviour change. Insufficient research on disadvantaged adults</td>
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<td>Ethnic minorities</td>
<td>Culturally adapted interventions, incorporating nutrition and physical activity education, delivered by a multidisciplinary team were effective in improving health literacy and weight. Ethnicity can be a barrier and a facilitator</td>
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Our research: Stream 1

How can PHC engage families with young children to promote healthy weight in both parents and their children?

- ‘Growing Healthy’ is developing and testing a mobile telephone infant feeding app and website for disadvantaged mothers with babies younger than 9 months. The app offers parents expert information on breastfeeding, formula feeding, mixed feeding, solids, sleep and feeding patterns, recipes, and help and support.

- The feasibility the program is being assessed in 3 settings: 1) MCH services in Victoria 2) general practices in NSW 3) an Indigenous health service in Queensland.
Our research: Stream 2

**Better Management of Weight in General Practice**

- This study aims to evaluate a multi-level intervention for obese patients with low health literacy attending general practice. The intervention aims to improve patients’ health literacy for weight management and assist them to attend community-based weight management lifestyle modification programs.

- A cluster randomised trial is being conducted in 20 practices in disadvantaged areas of Sydney and Adelaide.
Our research: Stream 3

Health economic evaluation

• Comparison of the cost effectiveness of program in improving implementation of NHMRC obesity guidelines in general practice using data from the PEP study linked to Medicare and PBS data

Pilot studies of practice nurse program

• The Counterweight Program is an evidence-based weight management program for use in general practice. COMPaRE-PHC is working with Counterweight in the UK to adapt the program in pilot studies are being conducted in Adelaide and Sydney.
Summary

• Obesity is a major problem especially for vulnerable population groups
• There is considerable opportunity to address this in PHC but gaps in performance across the 5As.
• Our research is providing Australian evidence on both the reasons behind the gaps in current performance and the feasibility and effectiveness of strategies improve the management of obesity in PHC especially with vulnerable population groups
COMPaRE-PHC is funded by the Australian Primary Health Care Research Institute, which is supported by a grant from the Commonwealth of Australia as represented by the Department of Health and Ageing.