Effective weight management of obesity in PHC - multidisciplinary solutions for a wicked problem

Mark Harris
Elizabeth Denney Wilson
COMPaRE-PHC partners

- University of New South Wales – Centre for Primary Health Care & Equity
- University of Sydney – Boden Institute and School of Public Health
- University of Technology Sydney - Faculty of Health
- Queensland Health - Inala Indigenous Health Service
- Deakin University - Centre for Physical Activity and Nutrition Research
- University of Adelaide - School of Population Health
- Robert Gordon University - Centre for Obesity Research and Epidemiology
- Centers for Disease Control and Prevention - Division for Heart Disease and Stroke Prevention
- University of Otago - Edgar National Centre for Diabetes Research
Outline

• Significance
• Effective interventions: who, what, how
• Implementation: reach, adoption, implementation.
• Directions for future research
Why is obesity prevention and management important?

Increase in obesity

Footnote(s): (a) Based on Body Mass Index for persons whose height and weight was measured.

Source(s): Australian Health Survey: Updated Results, 2011-12
Why is obesity prevention and management important?

Persons aged 18 years & over - Body Mass Index scores(a), 1995 & 2011-12

Increase in obesity

Footnote(s): (a) Based on Body Mass Index for persons whose height and weight was measured.  
Source(s): Australian Health Survey: Updated Results, 2011-12
Trends in combined overweight and obesity ages 5-16
Burden of obesity

- 7.5% of the burden of disease
- 8% of national economic output
- 18,709 bariatric procedures in 2008/9
- 23% of males and 24% of females presenting in general practice are obese.

Burden (DALYs) attributable to high body mass, by specific cause, Australia, 2003
Effective interventions: who, what, how
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;
# Effectiveness in adults (% weight loss)

<table>
<thead>
<tr>
<th>Ask/Assess</th>
<th>Advise/Agree</th>
<th>Assist (Refer)</th>
<th>Arrange (FU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>2-3%</td>
<td>5-7%</td>
<td>Maintenance</td>
</tr>
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</table>
| Risk assessment and information | GP, PN or health worker  
  • Patient education tailored to risk and health literacy,  
  • Support for self monitoring,  
  • Motivational counseling | • Group education – health or community  
  • Telephone coaching  
  • Internet/Social media  
  • Mobile/text  
  • Behavioural counselling | GP or PN visit, phone, internet/ text |

Box 6.6

KNOWING WHEN TO REFER

Referral to an allied health professional

When individuals ask for specific information related to weight management or indicate interest in undertaking a specific weight loss program.

When community-based programs are available, especially for people with a BMI < 35 and without major comorbidities who are ready for change.

When specific health indicators demonstrate increased health risks (e.g. increased blood pressure, lipid profiles, blood glucose) and the individual would benefit from interventions related to weight loss.

When the individual’s eating patterns are not meeting nutritional requirements (e.g. to a dietitian).

When the individual might benefit from attending a structured group support program.

When the individual is having difficulty achieving behavioural change and may benefit from a behavioural weight loss intervention (e.g. to a psychologist).

Referral to specialist support

When the individual has a BMI > 35 kg/m² or BMI > 30 kg/m² with comorbidities.

When comorbidities need specialist management (e.g. musculoskeletal problems, sleep apnoea, fertility problems, type 2 diabetes, eating disorders, depression or other mental health comorbidities).

When a very low-energy diet or weight management medication is recommended (e.g. refer to a specialist weight management clinic).

When bariatric surgery is a consideration (e.g. refer to a specialised bariatric surgery centre).

When an endocrine or syndromic cause is suspected (e.g. refer to an endocrinologist).
Mean Weight Change According to Randomized Group.

Obesity management in children

- Primary goal to halt weight gain and allow the child to “grow into” their weight
- Weight management can:
  - Prevent development of short term complications eg musculoskeletal, psychological problems
  - Prevent or reverse risk of long term conditions eg CVD, fatty liver, T2DM
  - Prevent progression to adult obesity
- Management approach differs with age and degree of obesity
What works in Primary Health Care?

- Sargent (2010) reviewed 17 interventions in primary care targeting overweight/obese children
  - 8 reported significant change in BMI
  - 4 reported change in dietary intake
  - 2 reported changes in physical activity
- Wake (2013) 12 month outcomes of Hopscotch shared care trial
  - Both intervention and control children lost weight
    - 26% moved from “obese” to “overweight categories”
### Key opportunities for child obesity

<table>
<thead>
<tr>
<th>Ask and assess</th>
<th>Advise/ Agree</th>
<th>Assist (Refer)</th>
<th>Arrange (FU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure Ht/Wt and plot BMI</td>
<td>Benefits of healthy weight</td>
<td></td>
<td>Regular monitoring</td>
</tr>
<tr>
<td>Dietary behaviours (sugar sweetened drinks, fruit and veges, patterns)</td>
<td>Choose water, increase fruit and veges, eat breakfast, TV off</td>
<td>Whole of family approach/limit availability</td>
<td>Provide written information/websites</td>
</tr>
<tr>
<td>Physical activity</td>
<td>Active for 60 + minutes/day</td>
<td>Whole of family/explore community opportunities</td>
<td>Link into community</td>
</tr>
<tr>
<td>Sedentary behaviours</td>
<td>Limit TV time</td>
<td>Set limits on screen time</td>
<td>Provide written information/websites</td>
</tr>
</tbody>
</table>
PHC providers

• More than 50% of practices have a nurse
  – Enjoy preventive care
  – Brief workshop can increase confidence, skills and knowledge (Robinson 2013)

• Skill development
• Community referral network
• Appropriate remuneration to implement obesity prevention
Disadvantaged and vulnerable groups
Why is obesity prevention and management important?

Inequity in obesity
Helms Health Literacy and risk factors (PEP study)

- Inadeq PA: Low HL 45.00%, High HL 67.50%
- Inadeq Diet: Low HL 90.00%, High HL 75.00%
- Overweight: Low HL 22.50%, High HL 45.00%

*P* < 0.001
Health literacy and health action

**Basic or functional health literacy** - basic reading and writing skills to function in daily life.

**Communicative or interactive health literacy** to participate in a range of activities and apply information to changing situations.

**Critical health literacy** - advanced skills used to exert more control over one's life.

**Impacts**
- Use of Primary Health Care
- Communication with providers
- Self management of diet, physical activity and weight


What can be done?

Action has to focus on improving individual skills and making health service, education and information systems more appropriate.
Disadvantaged patients with low health literacy

ASK: Screening, clinical sensitivity.

ASSESS: BMI, WC, diet, PA, readiness

ADVISE: Interpreters, graphic education materials, communication strategies including "teach-back"

AGREE: Negotiate realistic goals

ASSIST: Navigation. Coaching tailored to language and culture, group education.

ARRANGE: Phone follow up, social support
Health Literacy Screening

A. How often do you have someone help you read health information materials?

B. How often do you have problems learning about your medical condition because of difficulty understanding health information materials?

C. How confident are you filling in medical forms by yourself?
Reach, Adoption, Implementation
Confidence in preventive activities in general practice (GP and PN)

- Assess: SNAPW risk factors: 74.5%
- Advise (SNAPW): 76.4%
- Assist: Referral (SNAPW): 45.4%
- Management of obesity and overweight: 68.9%

UNSW research centre for primary health care and equity
## Confidence and Interest in obesity

<table>
<thead>
<tr>
<th>Task</th>
<th>Moderate/Very Confident</th>
</tr>
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<tbody>
<tr>
<td>Conducting adult health checks</td>
<td>87.9%</td>
</tr>
<tr>
<td>Providing advice to overweight adult patients about healthy eating and activity</td>
<td>75.9%</td>
</tr>
<tr>
<td>Conducting child health checks</td>
<td>43.8%</td>
</tr>
<tr>
<td>Advice to parents of overweight children</td>
<td>36.8%</td>
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### Interest in further education and training

<table>
<thead>
<tr>
<th>Task</th>
<th>Moderately/very interested</th>
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<tbody>
<tr>
<td>Participating in further training in child obesity prevention in general practice</td>
<td>87.7%</td>
</tr>
<tr>
<td>Being more involved in providing child obesity prevention services in general practice</td>
<td>77.2%</td>
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</tbody>
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Assessment

Low recording rates
Assessment vs Advice

Have you checked your BP, BC, BG?

BP, Blood Pressure
- Assessment: 90.6%
- Advice: 26.6%

BC, Blood cholesterol
- Assessment: 73.9%
- Advice: 15.5%

BG, Blood Glucose
- Assessment: 69.4%
- Advice: 19.9%

Diet, less fat food
- Assessment: 26.6%
- Advice: 19.9%

FV, Fruits & Vegetables
- Assessment: 15.5%
- Advice: 19.9%

PA, Physical Activity
- Assessment: 15.5%
- Advice: 19.9%
Who received advice on healthy eating and activity?

<table>
<thead>
<tr>
<th></th>
<th>Not Owt %</th>
<th>Owt/obese %</th>
<th>Odds Ratio (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Eating</td>
<td>Male</td>
<td>49.4</td>
<td>57.1</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>32.8</td>
<td>47.0</td>
<td>1.8 (1.3, 2.6)</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>Male</td>
<td>45.3</td>
<td>58.4</td>
<td>1.7 (1.1, 2.7)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>35.0</td>
<td>48.9</td>
<td>1.8 (1.2, 1.9)</td>
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Referral (adults 45-69, HIPS study)
Barriers

- Barriers to adoption of evidence based preventive care include those related patients and their social context and PHC providers and their practice and service context.
LEAP

Links
- Referral services
- Education and health literacy resources

Education
- Guidelines
- Motivational Counseling
- Practice Improvement

Audit
- Recording
- Performance against guidelines and peers

Practice Facilitation
- Review audit
- Organisational plan
- Targeting high risk
- Referral
<table>
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<th>Strategy</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>Population planning and Service partnerships with LHDs, NGO, Local govt and private providers</td>
<td>Improved availability, affordability and integration of community based referral services</td>
</tr>
<tr>
<td>Practice improvement</td>
<td>Practice visits for audit and improvement</td>
</tr>
<tr>
<td>PCEHR and IT/IM</td>
<td>Improved referral communication and follow up</td>
</tr>
<tr>
<td>Targeted programs for disadvantaged populations including indigenous</td>
<td>Improved access to health assessments and lifestyle interventions</td>
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Unanswered questions
### Our Research Programs

#### Knowledge Gaps:

1. How can PHC support healthy weight in families with young children?
2. How can assessment and brief advice in PHC be lined with more intensive interventions?
3. How can PHC support healthy weight for disadvantaged groups?
4. How can guidelines for overweight and obesity, diet and physical activity be implemented in PHC?

<table>
<thead>
<tr>
<th>Knowledge Gaps</th>
<th>Change to diet and physical activity routines in families with young children</th>
<th>Management of overweight adults with low health literacy</th>
<th>Implementation of obesity guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interventions by practice nurses to prevent obesity</td>
<td>Web links to referral programs and long term support</td>
<td>Practice facilitation. audit and links to community programs</td>
</tr>
<tr>
<td></td>
<td>Trial evaluating change in behaviours, parental efficacy, use of health services</td>
<td>Cluster randomised trial evaluating change in quality of care, change and maintenance of patient behaviours and weight control</td>
<td>Mixed method study evaluating change in provider roles, information systems, referral to health and other services and programs</td>
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Towards improving obesity management and prevention

The Centre for Obesity Management and Prevention Research Excellence in Primary Health Care (COMPaRE-PHC) aims to inform new guidelines that will prevent and manage obesity in disadvantaged populations across Australia. It is the only research centre focused solely on the wellbeing of socially and economically vulnerable groups, where the incidence of obesity has increased the most. The Centre is addressing key gaps in current knowledge about obesity prevention across the lifecycle, the role of allied health services in weight management, and the part that Medicare Locals and existing population health programs can play in obesity prevention.

COMPaRE-PHC is a collaborative partnership comprising:

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COMPaRE-PHC includes:

- three streams of research
  1. Families with young children
  2. Disadvantaged communities
  3. Implementation of guidelines
- a program of knowledge transfer and exchange
- a research capacity building program with PhD scholars and postdoctoral researchers
www.comparephc.unsw.edu.au

To be launched on 8th of July

Funded by the Australian Primary Health Care Research Institute