IMPROVED WEIGHT MANAGEMENT IN TEAM-BASED PRIMARY CARE

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Team

- Decision Maker - Nick Kates, QIIP
- Co-investigators
  - Tracy Hussey, John Dwyer, Michelle Edwards, Rick Goy
  - Ross Kirkconnell, Heidi Smith
- Coordinator - Dawna Royall
- MSc - Olivia O’Young, Carol Haberman
- Undergraduate students and other helpers!
- Funding – CIHR Knowledge to Action
Purpose

- Draft flexible planning framework for obesity management in team-based primary care
- Logic model linking activities with desired outcomes for specific target groups
- Based on:
  - Chronic Care Model
  - WHO planning framework for prevention of chronic disease
  - MRC (UK) guide to developing and evaluating complex interventions.
Ontario’s Chronic Disease Prevention and Management Framework

INDIVIDUALS AND FAMILIES
- Healthy Public Policy
- Supportive Environments
- Community Action
- Personal Skills & Self-Management Support
- Delivery System Design

HEALTH CARE ORGANIZATIONS
- Information Systems
- Provider Decision Support

COMMUNITY

Productive interactions and relationships
- Activated communities & prepared, proactive community partners
- Informed, activated individuals & families
- Prepared, proactive practice teams

Improved clinical, functional and population health outcomes
### The Stepwise Framework

**1. PLANNING STEP 1**
Estimate population need and advocate for action

**2. PLANNING STEP 2**
Formulate and adopt policy

**3. PLANNING STEP 3**
Identify policy implementation steps

<table>
<thead>
<tr>
<th>Policy implementation steps</th>
<th>Population-wide interventions</th>
<th>Interventions for individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National level</td>
<td>Sub-national level</td>
</tr>
<tr>
<td>Implementation step 1</td>
<td>Interventions that are feasible to implement with existing resources in the short term.</td>
<td></td>
</tr>
<tr>
<td><strong>CORE</strong></td>
<td></td>
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</tr>
<tr>
<td>Implementation step 2</td>
<td>Interventions that are possible to implement with a realistically projected increase in, or reallocation of, resources in the medium term.</td>
<td></td>
</tr>
<tr>
<td><strong>EXPANDED</strong></td>
<td></td>
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<tr>
<td>Implementation step 3</td>
<td>Evidence-based interventions which are beyond the reach of existing resources.</td>
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<tr>
<td><strong>DESIRABLE</strong></td>
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</tbody>
</table>

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*WHO Preventing Chronic Diseases – A Vital Investment, 2005*
Developing and evaluating complex interventions: new guidance

Prepared on behalf of the Medical Research Council by:

Peter Craig, MRC Population Health Sciences Research Network
Paul Dieppe, Nuffield Department of Orthopaedic Surgery, University of Oxford
Sally Macintyre, MRC Social and Public Health Sciences Unit
Susan Michie, Centre for Outcomes Research and Effectiveness, University College London
Irwin Nazareth, MRC General Practice Research Framework
Mark Petticrew, Department of Public Health and Policy, London School of Hygiene and Tropical Medicine

www.mrc.ac.uk/complexinterventionsguidance
Activities

- Identify promising strategies from:
  - Scoping review
  - Focus groups of providers and patients
    - Hamilton Family Health Team

- Review and develop draft
  - Consensus process
    - Queens Decision Centre
    - Guelph Family Health Team
Scoping Review (Arksey & O’Malley, 2005)

- Systematic Lit Review vs. Scoping Review
  - Both rigorous and transparent
  - Narrow vs. Broad research questions
  - Quality assessment vs. NO quality assessment

- “Augmented” Scoping Review
  - QA on quantitative intervention studies
Criteria

- Relevant or potentially relevant to primary care
- Focus - Lifestyle, diet and/or PA
- Diet/activity or BMI and/or other outcomes
- All study designs
  - Intervention
  - Organization of care
  - Patient or Provider perspectives
- Varying age groups
- Varying health status
Search Strategy- search databases

- Studies published:
  - English
  - Jan 2003 and June 2009

Databases:
- PUBMED (Medline)
- CINAHL
- Cochrane Central Register of Controlled Trials
- SCI-Expanded
# Search Strategy - search terms

## Non-Drug Treatments
- Nutrition therapy
- Primary prevention
- Secondary prevention
- Health promotion
- Exercise
- Self-care
- Lifestyle
- Behavior therapy
- Self-efficacy

## Obesity/Overweight
- Overweight
- Body weight
- Diabetes mellitus
- Chronic disease
- Dyslipidemia
- Hypertension
- Coronary disease
- Cardiovascular diseases
- Body mass index

## Primary Care
- Primary health care
- Family physicians
- Nurses
- Allied health personnel
- Health educators
- Dietitians
- Multidisciplinary care team
Initial Screening Process

Titles/Abstracts 26,075

Full-Text Citations 1039

Included Citations 360 (225 unique studies)

***Note- additional citations (related to a given study) were retrieved and reviewed where applicable
Quality Assessment

(Public Health Research, Education & Development)

A) Selection Bias

B) Study Design

C) Confounders

D) Blinding

E) Data Collection Methods

F) Withdrawals & Drop-outs

(City of Hamilton, 2007)
Quality Assessment of Intervention Studies (n=176)

- Strong: 2
- Moderate: 67
- Weak: 107
# Studies by Country of Origin (n=176)

- U.S.: 78
- U.K.: 33
- Netherlands: 14
- Australia: 11
- Canada: 8
- Sweden: 6
- Italy: 4
- Germany: 3
- New Zealand: 3
- Finland: 2
- France: 2
- Spain: 2
- Switzerland: 2
- Denmark: 1
- Norway: 1
- Republic of Ireland: 1
- Combo Eur Countries: 5
% Studies by Unique Target Groups

- Generally Healthy: 3%
- High CVD or Health Risk: 6%
- Moderate Chronic Disease or Multiple Conditions: 48%
- Other categories: 6%, 7%, 3%, 6%, 12%, 5%, 7%
Weight/BMI & A1c Studies

- Promising weight management strategies:
  - Studies which report weight or BMI
  - Studies which report A1c

- Clinically significant Δ

- Further evaluated based on QA
  - Representativeness of population, sample size, % completers, ITT, study design
“Promising” Δ in Weight/BMI

- 12/73 demonstrated **clinically relevant** results

- “Clinically relevant” defined as:
  - ≥ 3.0% Weight Loss
  - OR
  - ≥ 1 BMI unit decrease

- After QA, only 6 studies “promising”
% Studies by Delivery Channel

- F2F 1:1 Included: 77%
- Telephone Included: 27%
- F2F Group: 40%
- Computer/Web Included: 1%
- Mailed Materials: 4%
- Provider Ed Included: 40%
- ALL Weight/BMI: 83%
- PROMISING Weight/BMI: 83%

***Note: more than one delivery method may be indicated for each study***
% Studies by Provider

- **MD/RN/NP Only**
  - PROMISING Weight/BMI: 33%
  - ALL Weight/BMI: 27%

- **Other Allied Health Included**
  - PROMISING Weight/BMI: 50%
  - ALL Weight/BMI: 40%

- **RD Included**
  - PROMISING Weight/BMI: 83%
  - ALL Weight/BMI: 41%

- **Other Educator Included**
  - PROMISING Weight/BMI: 4%
  - ALL Weight/BMI: 23%

- **Lay Person Included**
  - PROMISING Weight/BMI: 3%
  - ALL Weight/BMI: 3%

***Note: more than one type of provider may be indicated for each study***
“Promising” Δ in A1c

- 18/72 studies reported *clinically relevant* results

- “Clinically relevant” defined as:
  - ≥ 1.0% decrease in A1c

- After QA, 11 are “promising”
% Studies by Delivery Channel

***Note: more than one delivery method may be indicated for each study***
### % Studies by Provider

<table>
<thead>
<tr>
<th>Provider</th>
<th>PROMISING A1c</th>
<th>ALL A1c</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD/RN/NP Only</td>
<td>1%</td>
<td>31%</td>
</tr>
<tr>
<td>Other Allied Health Included</td>
<td>73%</td>
<td>51%</td>
</tr>
<tr>
<td>RD Included</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Other Educator Included</td>
<td>27%</td>
<td>13%</td>
</tr>
<tr>
<td>Lay Person Included</td>
<td>9%</td>
<td>4%</td>
</tr>
</tbody>
</table>

***Note: more than one type of provider may be indicated for each study***
Personal Skills & Self-mgt Support

- Beyond providing basic diet/PA counselling
- Shared decision-making and goal setting
- Learn to self-manage/be active in own care
Delivery System Design

- Case management (planned interactions and f/u)
  - Bray et al. (2008)- APN facilitated diabetes education, patient flow, and management in the practice

- Focus on health promotion and disease prevention
  - Andrews & Holland (2003)- offered lifestyle program suitable for anyone to attend

- Population needs-based care
  - Tailored interventions to various target groups
Provider Decision Support

- Provider education beyond training on lifestyle education
- Evidence-based guidelines
- Measuring outcomes and giving feedback
- Supplying tools- e.g. treatment algorithms, access to specialist expertise
Conclusion

- Promising studies limited
  - 1:1 counselling, group counselling, involving RDs, and other allied health care professionals
  - Provider education
  - CCM model and addressed a change in the organization of care

- Overall, no clearly superior interventions emerged

- Provides direction for interventions combining elements
2. Focus groups - Methods

- Hamilton Family Health Team (FHT)
- Generate ‘new ideas’ for weight management in the FHT ensuring providers’ and patients’ perspectives included
- Professional moderator
- Clinical vignettes to focus discussion
  - Obese adult with multiple chronic conditions and barriers to weight loss (e.g. low income, time constraints, low motivation)
    ALSO obese child
- ~ 1 hour long
- Audio-taped and transcribed
- Thematic post-hoc analysis (NVivo)
Focus group - Participants

- n = 6 to 13 participants / group
- Provider focus groups (n=7 groups)
  - 5 specialty groups (dietitians, mental health workers, pharmacists, physicians)
  - 2 mixed provider groups (nurses, NPs, administrators, other providers)
- Patient focus groups (n=4 groups)
  - ‘Healthy You’ program (2 groups)
  - Diabetes program
  - Early Years Centre
Focus group - Results

- Program activities incorporated into themes directed at patients and the organization

- Clinical Care Themes
  - Raising awareness among patients / developing intention
  - Screening for obesity / health risk
  - Clinical care (assessment and diagnosis)
  - Skill building / education / counselling
  - Ongoing support
  - Social and peer support
Focus group - Results

- Organizational Effort Themes
  - Coordination / collaboration / partnerships
  - Creating awareness among health professionals
  - Adding new expertise to the team
  - Marketing
  - Lobbying / Advocacy
3. **Consensus workshop**

- 11 members Guelph Family Health Team
- Review themes and program ideas from focus groups to develop draft planning framework
- All-day workshop
- Electronic meeting system
  - Queen’s executive decision centre
- Professional moderator
a. Identify target groups – population-based planning
b. Identify desired health outcomes for target group

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Pregnancy</th>
<th>3-12 years</th>
<th>13-18 years</th>
<th>18+ years health risk or chronic disease</th>
<th>18+ years medically complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired Outcomes</td>
<td>appropriate weight gain; manage gestation diabetes</td>
<td>healthy growth; develop &amp; foster good habits</td>
<td>healthy body image; healthy attitudes re: drugs etc.</td>
<td>moderate weight loss; manage chronic disease</td>
<td>Quality of life; self-management skills</td>
</tr>
</tbody>
</table>
**Consensus workshop - Process**

c. **Brainstorm strategies and interventions for target groups of interest – discuss and collapse ideas**

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<th>Age groups</th>
<th>Pregnancy</th>
<th>3-12 years</th>
<th>13-18 years</th>
<th>18+ years health risk</th>
<th>18+ years medically complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening for obesity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Skill building</td>
<td></td>
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<tr>
<td>Ongoing support</td>
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<tr>
<td>Social / peer support</td>
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<td>Age groups</td>
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<tr>
<td>Raising awareness</td>
<td>pamphlet</td>
<td>educational info targeting parents</td>
<td>media campaign</td>
<td>waiting room activities</td>
<td>increase awareness re: FHT programs</td>
</tr>
<tr>
<td>Screening for obesity</td>
<td>BMI</td>
<td>screen early for BMI</td>
<td>BMI, blood pressure</td>
<td>BMI, waist circumference</td>
<td>depression, mood disorder screen</td>
</tr>
<tr>
<td>Clinical care</td>
<td>verbal advice</td>
<td>regular visits to PCP</td>
<td>regular visits to PCP</td>
<td>SMART goal setting</td>
<td>SMART goal setting</td>
</tr>
<tr>
<td>Skill building</td>
<td>family counselling</td>
<td>Weight loss grp DEC class</td>
<td>Self-mgt class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ongoing support</td>
<td>internal referral</td>
<td>online support</td>
<td>telephone follow-up</td>
<td>group visits Link to specialty programs</td>
<td></td>
</tr>
<tr>
<td>Social / peer support</td>
<td>buddy system</td>
<td>develop peer leaders</td>
<td>peer-led support</td>
<td>social services</td>
<td></td>
</tr>
</tbody>
</table>
Consensus workshop - Summary

- Need to consider mental health and SES issues in all groups

- Satisfaction evaluation. Participants were:
  - ‘very satisfied’ with the workshop
  - ‘strongly agree’ that participation was an effective use of time
  - ‘moderately agree’ that the planning framework can improve PC weight management services
Next phases

- CIHR Funding confirmed
  - Four more consensus sessions - 12 FHTs
  - National review by expert panel – CON to help
- Team grant proposal – PHCS and UofG funding to develop