Recommendations for growth monitoring, prevention and management of overweight and obesity in children and youth in primary health care 2015

Canadian Task Force on Preventive Health Care

March 2015

Putting Prevention into Practice

Use of slide deck

- These slides are made available publicly as another vehicle for dissemination of the practice guidelines.
- Some or all of the slides may be used with attribution in educational contexts.

- Guidelines were published online March 30, 2015

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Overview of Presentation

- Background on Child Obesity
- Methods of the CTFPHC
- Recommendations and Key Findings
- Implementation of Recommendations
- Conclusions
- Questions and Answers

Child Obesity Prevention and Management

BACKGROUND

Background

- The prevalence of obesity in Canadian children has risen dramatically from the late 1970s, more than doubling among both boys and girls

- Recent estimates (2009- 2011) indicate **32%** of children 5-17 years are **overweight (20%) or obese (12%); obesity** prevalence is almost **twice as high in boys** (15% vs 8%)

- Childhood obesity is associated with increased risk of cardiovascular disease, diabetes and other chronic conditions in adolescence and later in life

- Excess weight in children often persists into adulthood

Child Obesity 2015 Guidelines

2015 Guideline Objectives:

- This guideline provides recommendations for prevention of overweight and obesity in healthy weight children and adolescents aged 0 to 17 years of age in primary healthcare settings

- This guideline provides guidance for primary care practitioners on the effectiveness of overweight and obesity management in children and youth aged 2 to 17 years.

- These guidelines do not apply to children and youth with eating disorders, or who are underweight, overweight, or obese (prevention) or with health conditions where weight management is inappropriate (management).

Structured Interventions

- **Behavioural modification programs** focused on diet, increasing exercise, or making lifestyle changes, alone or in combination, that take place over weeks or months.
- Follow a comprehensive-approach delivered by a specialized inter-disciplinary team, involve group sessions, and incorporate family and parent involvement.
- Delivered by a primary health care team in the office or through referral to a formal program within or outside of primary care, such as hospital-based, school-based or community-based programs

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METHODS

Methods of the Task Force

- Independent panel of:
  - clinicians and methodologists
  - expertise in prevention, primary care, literature synthesis, and critical appraisal
  - application of evidence to practice and policy
- Child Obesity Working Group
  - 5 Task Force members
  - establish research questions and analytical framework

Methods of the Task Force

- Evidence Review and Synthesis Centre (ERSC)
  - Undertakes a systematic review of the literature based on the analytical framework
  - Prepares a systematic review of the evidence with GRADE tables
  - Participates in working group and task force meetings
  - Obtain expert opinions

Task Force Review Process

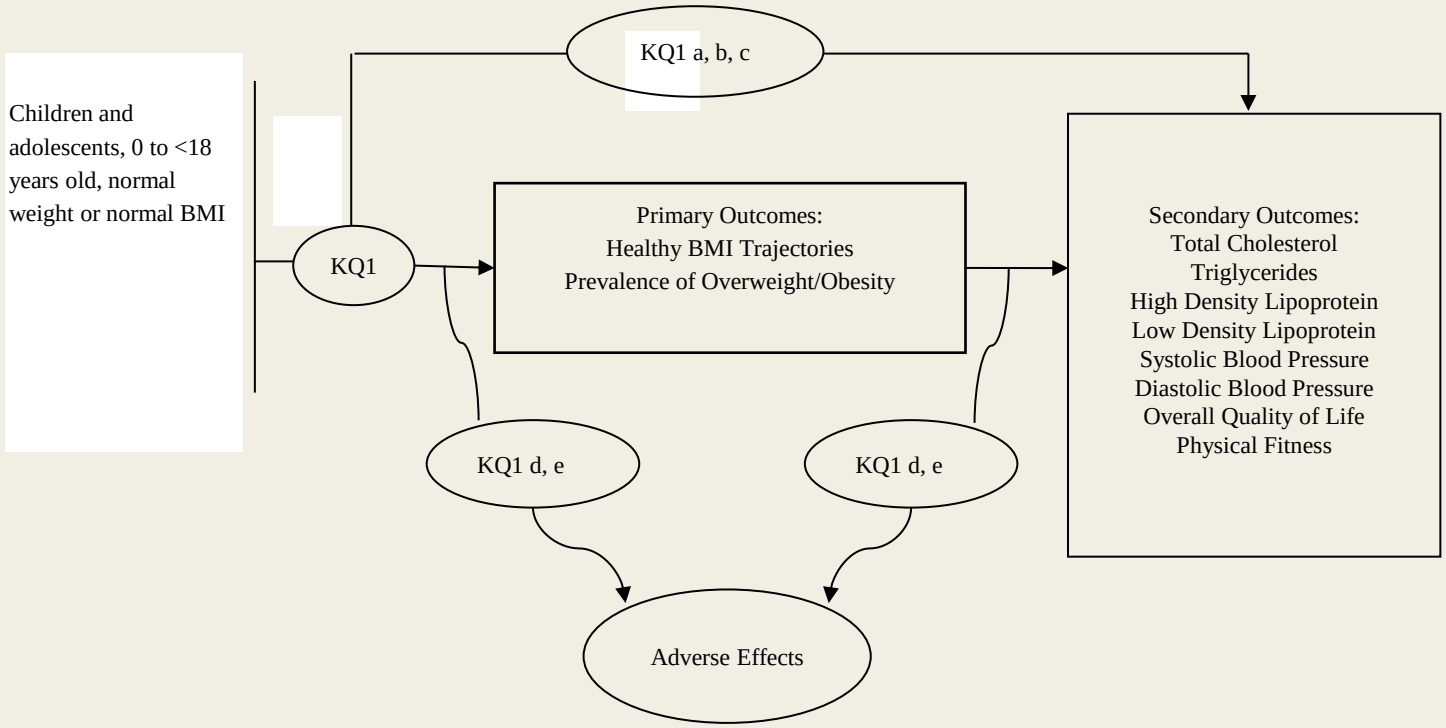
- Internal review process involving guideline working group, Task Force, scientific officers and ERSC staff
- External review process involving key stakeholders
  - Generalist and disease specific stakeholders
  - Federal and P/T stakeholders
- CMAJ undertakes an independent peer review journal process to review guidelines

Research Questions

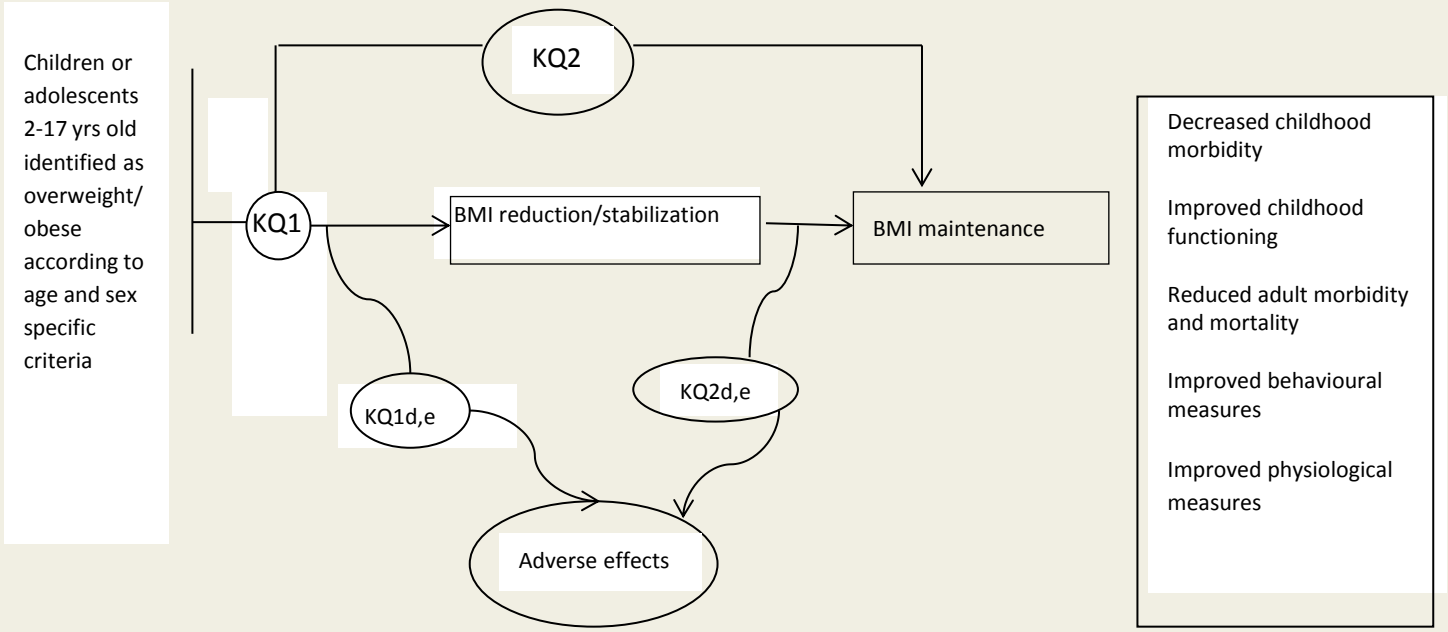
- The systematic review for prevention of obesity in healthy weight children included :
  - (1) key research question with (5) sub-questions
- The systematic review for management of overweight and obesity in children included:
  - (2) key research questions with (5 + 5) sub-questions
- The systematic reviews for both the prevention and management of obesity in children included:
  - (1) supplemental or contextual question with (6) sub-questions

For more detailed information please access the systematic review
www.canadiantaskforce.ca

Analytical Framework Prevention



Analytical Framework Management



Eligible Study Types

- **Population**: Children and adolescents 0 < 18 years who are of mixed weight (prevention) or children and adolescents 2-17 years who are identified as overweight or obese according to age and sex specific criteria (management)

- **Language**: English, French

- **Study type:** Randomized control trials (RCTs)

How is Evidence Graded?

The "**GRADE**" System:

- **G**rading of **R**ecommendations, **A**ssessment, **D**evelopment & **E**valuation

What are we grading?

1. Quality of Evidence

- Degree of confidence that the available evidence correctly reflects the theoretical true effect of the intervention or service.
- high, moderate, low, very low

2. Strength of Recommendation

- the balance between desirable and undesirable effects; the variability or uncertainty in values and preferences of citizens; and whether or not the intervention represents a wise use of resources.
- strong and weak

How is the Strength of Recommendations Determined?

The strength of the recommendations (strong or weak) are based on four factors:

- **Quality** of supporting evidence
- Certainty about the **balance between desirable and undesirable** effects
- Certainty / variability in **values and preferences** of individuals
- Certainty about whether the intervention represents a **wise use of resources**

Interpretation of Recommendations

Implications	Strong Recommendation	Weak Recommendations
For patients	• Most individuals would want the recommended course of action; • only a small proportion would not.	• The majority of individuals in this situation would want the suggested course of action but many would not.
For clinicians	• Most individuals should receive the intervention.	• Recognize that different choices will be appropriate for individual patients; • Clinicians must help patients make management decisions consistent with values and preferences.
For policy makers	• The recommendation can be adapted as policy in most situations.	• Policy making will require substantial debate and involvement of various stakeholders.

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RECOMMENDATIONS & KEY FINDINGS

Growth Monitoring

Recommendation: For children and youth 0-17 years of age we recommend growth monitoring at all appropriate primary care visits using the WHO Growth Charts for Canada

- *Strong recommendation; very low quality evidence*

Basis of the recommendation:

- Growth monitoring is a long-standing, feasible, low- cost intervention unlikely to result in harms, and likely to be valued by parents and clinicians in identifying children and youth at risk of developing weight-related health conditions

Growth Monitoring and Appropriate Visits

- **Growth monitoring** consists of measurement of height or length, weight and BMI calculation or weight-for-length according to age.

- **Appropriate primary care visits** include scheduled health supervision visits, visits for immunizations or medication renewal, episodic care or acute illness, and other visits where the primary care practitioner deems it appropriate.

Obesity Prevention

Recommendation: We recommend that primary care practitioners not routinely offer structured interventions aimed at preventing overweight and obesity in healthy weight children and youth 0-17 years of age.

- *Weak recommendation; very low quality evidence*

Basis of the recommendation

- The lack of evidence for clinically important benefits of current interventions to prevent overweight and/or obesity in the target population, the lack of evidence that any benefits are sustained in the long-term, and the lack of evidence for the use of such interventions in primary care settings

Obesity Management

Recommendation 1: For children and youth aged 2 to 17 years who are overweight or obese, we recommend that primary care practitioners offer or refer to structured behavioural interventions aimed at healthy weight management.

- *Weak recommendation, moderate quality evidence*

Basis of the recommendation

- The modest, short-term benefits of weight management interventions and the lack of identified harms
- The recommendation is weak because of the lack of data that such weight loss is sustained or has health benefits over time

Obesity Management

Recommendation 2: For children and youth aged 2 to 11 years who are overweight or obese, we recommend that primary care practitioners not offer Orlistat aimed at healthy weight management.

- *Strong recommendation, very low quality evidence*

Basis of the recommendation

- The lack of studies examining pharmacologic interventions and effectiveness as a treatment in this population

Obesity Management

Recommendation 3: For children and youth aged 12 to 17 years who are overweight or obese, we recommend that primary care practitioners not routinely offer Orlistat aimed at healthy weight management.

- *Weak recommendation, moderate quality evidence*

Basis of the recommendation

- The lack of trials that examine pharmacologic interventions versus control with no behavioural intervention
- Pharmacologic + behavioural interventions and trials were not more effective than the behavioural interventions on their own
- The potential for harm associated with Orlistat treatment (e.g., GI disturbances)

Obesity Management

Recommendation 4: For children and youth aged 2 to 17 years who are overweight or obese, we recommend that primary care practitioners not routinely refer for surgical interventions.

- *Strong recommendation, very low quality evidence*

Basis of the recommendation

- The absence of RCTs comparing with usual care showing that this intervention is effective, the potential for harm and the irreversibility of the procedure
- Primary care practitioners do not normally refer directly to a clinic for bariatric surgery.

Effect of Prevention Programs: Changes in Key Outcomes

Outcome	Meta-analysis (95% CI)	P-Value	No. Participants	No. Studies
Overall change in BMI/BMIz scores (Standardized mean difference)	-0.07 (-0.10, -0.03)	<0.00001	56,342	76
Overall change in BMI (kg/m^2; Mean Difference)	-0.09 (-0.16, -0.03)	<0.00001	40,214	57
Overall change in Total Cholesterol (mmol/L; Mean Difference)	-0.10 (-0.20, 0.01)	<0.00001	2,815	5
Overall change in Triglycerides (mmol/L; Mean Difference)	-0.01 (-0.05, 0.03)	<0.00001	3,097	4

Effect of Prevention Programs: Changes in Prevalence

Outcome	RRi-RRc* (95% CI)	Absolute Number per Million (Range)	ARR	No. Participants	No. Studies
Overall change in Prevalence of Overweight/Obesity	0.94 (0.89, 0.99)	19,641 fewer (3,462 to 35,002 fewer)	1.96%	31,896	30

Note: * The pooled estimate is based on differences in the risk ratio of intervention and control groups (RRi=ratio of pre-post prevalence in intervention arm, RRc=ratio of pre-post prevalence in control arm).

Effect of Management Programs: Changes in Standard Mean Difference of BMI/BMIz scores

Treatment Intervention	Effect Standard Mean Difference (95% CI)	P-Value (p≤0.05)	No. Participants Intervention	No. Participants Control	No. Studies	Quality
Overall Effect	0.5263 lower (0.6949 to 0.3578 lower)	0.067	2156	1752	30	Moderate
Behavioural Only	0.5446 lower (0.7298 to 0.3594 lower)	0.023*	1792	1554	28	Low
Pharmacological* + Behavioural	0.4287 lower (0.6044 to 0.2529 lower)	N/A (n<10)	364	198	2	Moderate

***Note: Pharmacological treatment included Orlistat 120mg 3x/day**

Effect of Behavioural Programs: Changes in Mean Difference of BMI/BMIz scores

Treatment Intervention	**Effect** Mean Difference BMI	**95% CI**	**Effect Mean Difference zBMI**	**95% CI**
Overall Effect	-0.97	-1.29 to -0.66	-0.26	-0.34 to -0.18
Behavioural Only	-1.01	-1.34 to -0.66	-0.27	-0.36 to 0.18

Comparison of Obesity Prevention Recommendations

- Few organizations have systematically examined the effectiveness of preventive interventions or developed evidence-based recommendations for implementation in primary care
- Some groups focus on screening:
    - USPSTF (2010)
- Others groups discuss the importance of multisectoral approaches to preventing obesity:
    - NICE (2006)
    - Obesity Canada (2007)

Comparison of Obesity Management Recommendations

- Our recommendations on management are consistent with those of other international guideline groups who recommend that behavioural interventions be used to address overweight and obesity in children and adolescents:
    - USPSTF (2006)
    - NICE (2006)
    - SIGN (2010)
    - Obesity Canada (2007)
    - NHMRC (2013)

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IMPLEMENTATION OF RECOMMENDATIONS

Values and Preferences

- Limited evidence available
- Understanding the barriers to participation in physical activities or healthy weight management programs can help practitioners identify effective strategies for engaging children, youth and their families
- The importance of supportive relationships between practitioners and families in attaining health weight amongst children and youth

Knowledge Translation Tools

- The CTFPHC creates KT tools to support the implementation of guidelines into clinical practice
- A clinician recommendation table and FAQ has been developed for the child obesity prevention and management guidelines
- After the public release, these tools will be freely available for download in both French and English on the website: www.canadiantaskforce.ca

Update: CTFPHC Mobile App Now Available

- The app contains guideline and recommendation summaries, knowledge translation tools, and links to additional resources.
- Key features include the ability to bookmark sections for easy access, display content in either English or French, and change the font size of text.

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CONCLUSIONS

Conclusions

- The task force recognizes the importance of growth monitoring in early childhood
- The first 5 years of a child's life, and in particular the first 12 months, may provide an opportunity for targeted obesity prevention interventions, although further research is needed
- Emphasis should be placed on the delivery of comprehensive weight management programs by a specialized inter-disciplinary team
- The implementation of these recommendations is in part dependent upon the availability of formal, structured behavioural interventions for weight management in children and youth in Canadian settings

More Information

For more information on the details of this guideline please see:

- Canadian Task Force for Preventive Health Care website: http://canadiantaskforce.ca/?content=pcp

Questions & Answers

Thank you