Interprofessional Consensus Meeting Report

Weight Management for Children and Youth in BC

March 29, 2012
Granville Island Hotel, Vancouver BC

Final – March 18, 2013

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Table of Contents

EXECUTIVE SUMMARY 3

OVERVIEW OF MEETING 4

- **Background** 4
- **Purpose of the Meeting** 4
- **Presentation: Prevention and Treatment of Child and Adolescent Obesity: Two Sides of the Same Coin?** 5
- **Presentation: Complications of Pediatric Obesity: They Exist and Can be Prevented** 5
- **Presentation: Clinical Management Strategies for Overweight, Obese or At-Risk Children and Adolescents** 6
- **Presentation: Environmental Scan in BC: Existing Resources for the Management of Childhood Obesity** 7
- **Discussion: Proposed Draft Model for a Care Pathway for Overweight and Obese Children and the 3 Stage Approach** 9
- **Pathway for the Identification, Assessment and Management of Overweight and Obese Children & Youth** 10
- **Concluding Remarks and Next Steps** 12

APPENDIX A: 3 STAGE APPROACH 13

APPENDIX B: MEETING AGENDA 19

Executive Summary

It is estimated that more than 150,000 children and youth within BC are overweight or obese. It is well researched that overweight and obese children have a greater risk of being overweight or obese adults. To address this significant health issue, Child Health BC along with key partners worked together to arrive at consensus on the key components of a health focused care pathway for overweight and obese children and youth in BC, and strategies to implement this pathway in the province.

Through presentations and discussions participants acknowledged the importance of both prevention and treatment, determined evidence-based clinical management strategies, identified weight management outcomes, and generated ideas for a more comprehensive structure for childhood weight management in BC. It was recognized that in order for this system to be successful partners, such as primary care, acute care and public health, as well as community-based organizations, social service programs and schools, must work together.

The proposed model, *Clinical Care Pathway for Weight Management of Overweight and Obese Children & Youth*, was introduced. Participants reviewed the model and made revisions based on evidence and what would be realistic to implement and deliver in BC. The revised model "*Pathway for the Identification, Assessment and Management of Overweight and Obese Children and Youth*" includes a lifestyle assessment which providers can use to determine targeted treatment and/or consistent, evidence-based health promotion messages and education.

In addition, a 3 Stage Approach was developed using participant feedback. The elements outlined in the 3 Stage Approach provide health care providers with implementation actions that support the care and management of overweight and obese children.

The meeting generated new ideas regarding the key components and resources in a health focused care pathway and a structured approach for the identification, care and management of overweight and obese children and youth in BC. Multiple perspectives from across the province were brought together and the meeting provided a sound background for moving forward.

Overview of Meeting

Background

In 2006, The World Health Organization (WHO), in conjunction with the United Nations Children's Fund and others, released new international growth charts. In 2010, the Dietitians of Canada, Canadian Paediatric Society, the College of Family Physicians of Canada, and Community Health Nurses of Canada formally recommended the use of the WHO Growth Charts for the assessment of growth of Canadian children and youth. Dietitians of Canada lead a national working group to develop training materials to support the uptake of these growth charts by primary care providers.

On May 30th, 2011, Child Health BC hosted a meeting of general practitioners, pediatricians, nurse practitioners, dietitians, health administrators, and policymakers from across BC to develop a care pathway that focused on the care and management of children and youth above the 85th percentile. Another meeting was held on March 29, 2012 to obtain input and agreement on this care pathway from a wider group of health care professionals. This report outlines the discussion and decisions that were made at the March meeting.

Purpose of the Meeting

The main objectives of the meeting were:

- To arrive at consensus around the key components of a care pathway for overweight or obese children and youth in BC.
- To identify strategies to implement a care pathway in BC.

Participants included:

- Pediatric Endocrinologists; Pediatricians; Family Physicians
- Representatives from the BC College of Family Physicians; BC Pediatric Society; Society of General Practitioners of BC; British Columbia Medical Association; Dietitians of Canada
- Dietitians;
- Representatives from the Healthy Women, Children and Youth Secretariat at the Ministry of Health, and 4 regional health authorities
- Researchers from the University of British Columbia and University of Victoria

See appendix B for the meeting agenda.

Meeting Proceedings
The meeting included presentations, small group discussions and large group decisions. The following areas were covered during the meeting:

1. Evidence for the clinical management of overweight, obese or at-risk children and adolescents
2. Existing resources and services for pediatric overweight/obesity within BC
3. Proposed Clinical Care Pathway for Overweight and Obese Children
4. Proposed Three-Staged Approach, including the components and implementation strategies

Participants were asked to consider the following questions during the meeting:

- What are the evidence-based components for pediatric weight management?
- What are the provincial resources and services currently available to support pediatric weight management?
- What are the opportunities in the province to support a comprehensive approach to pediatric weight management?

Presentation: Prevention and Treatment of Child and Adolescent Obesity: Two Sides of the Same Coin?

Presented by: ***Dr. Shazhan Amed***, *Endocrinology &Diabetes Unit, BC Children's Hospital*

Dr. Amed emphasized the value of, and synergy between, prevention and treatment for pediatric overweight and obesity. Dr. Amed illustrated the need for addressing these two concepts along the continuum of care - from primordial and primary prevention (e.g. health promotion, disease prevention and early intervention) to secondary and tertiary prevention (e.g. diagnosis and treatment of obesity, prevention of obesity related complications, and chronic disease management). While there are major differences between prevention and treatment, there were also opportunities for collaboration and partnership with regards to managing pediatric overweight/obesity and supporting healthy living.

Discussion
Participants recognized the importance of incorporating both prevention and treatment in the management of pediatric overweight/obesity.

Presentation: Complications of Pediatric Obesity: They Exist and Can be Prevented

Presented by: ***Dr. Jean-Pierre Chanoine****, Endocrinology &Diabetes Unit, BC Children's Hospital*

While overweight/obesity in childhood is a health issue that can decrease quality of life, research also indicates that adolescent obesity predicts co-morbidities in adulthood. The issue of metabolic/non-metabolic co-morbidities is not only a concern for the adult population, but many overweight/obese children are also at significant risk for complications.

Dr. Chanoine presented the results from several studies, indicating that existing outcomes of weight management programs sufficiently address co-morbidities, with most of the co-morbidities delayed or reversed by simple, modest weight loss.

- Weiss (2004) looked at changes in metabolic syndrome over two years in a cohort of 77 obese adolescents and found that a smaller weight gain was sufficient to reverse this syndrome and prevent complications later in life.
- Inge (2009), Inge (2010), and Zeller et al. (2010) also showed the positive effects of bariatric surgery on fasting blood glucose, BMI and quality of life at one year follow-up, respectively.
- Chanoine et al. (2005) showed that adolescents taking orlistat, in conjunction with lifestyle modification, had modest but significant BMI changes after one-year, and
- Chanoine and Richard (2010) revealed that adolescents with ≥5% weight loss at 12 weeks had greater BMI reduction after one year.

Dr. Chanoine noted that reasons for high variability in response to obesity treatment outcomes remain unclear and factors predicting treatment completion and successful long-term outcomes need to be identified. While motivational tools have been shown to be important in adults, data in youth are scarce.

Discussion:
Participants discussed the importance of "readiness" as a foundational concept – both parents and children need to be ready to make the necessary changes to support weight loss.

Presentation: Clinical Management Strategies for Overweight, Obese or At-Risk Children and Adolescents

Presented by: ***Emily Rand**, MSc Candidate, University of Victoria*

A systematic review of the evidence from existing reviews, clinical pathways and expert committee recommendations on the management strategies for overweight, obese or at-risk children and adolescents was presented. Although there was limited evidence supporting a particular gold-standard treatment, several key themes and recommendations emerged from the literature:

- All children and adolescents should receive a lifestyle assessment and a BMI at all "well care" visits or at least once per year.
- A 4 stage-care approach should be used for the treatment of overweight/obesity. Stages include:
    - *Stage 1: Prevention Plus*- for any child in the 85th percentile (overweight) or above with risks, and involves family visits with a physician for monitoring and patient education regarding diet and physical activity to normalize or prevent an increase in BMI.
    - *Stage 2: Structured Weight Management*- family visits with a professional specifically trained in weight management, in which a planned diet or daily eating plan is developed by a dietician or trained clinician, and an exercise regime is designed by an exercise specialist or therapist.
    - *Stage 3: Comprehensive Multidisciplinary Intervention*- Involves collaboration with other facilities and specialists with experience in childhood obesity. Can take place in a primary care setting.
    - *Stage 4: Tertiary Care Interventions*- recommended for those who are >11 years old and above the 94th percentile (obese), and involves multidisciplinary teams and the management of co-morbidities.
- A combination of standard behavioural interventions should be provided focusing on: dietary modification; increasing activity levels; and, reducing sedentary behaviours

- Parent/caregiver/family needs to be involved in any treatment program or intervention
- Behavioural modification techniques such as behavioural therapy or cognitive behavioural therapy should only be used once the child's and parent's readiness and motivation to change has been assessed.
- Important to have multidisciplinary settings, referrals, and trained staff for developing and delivering interventions
- Ensure that there are follow-up visits, in which the frequency and duration would be patient-dependent
- Prescribing pharmacological agents (i.e. orlistat) or surgical procedures, in conjunction with lifestyle modification, are only provided to patients that meet the requirements

Overall, it was concluded that health providers should assess and support lifestyle modification for the child/youth and family as a prerequisite for all overweight/obesity treatments, with a focus on achieving health eating and physical activity habits rather than the attainment of an ideal body weight.

Discussion
While the project was focused on individual-level interventions, participants discussed the importance of considering population-level actions that would support rural and remote locations that may have limited capacity or resources. Social marketing and other population interventions would require further investigation.

Presentation: Environmental Scan in BC: Existing Resources for the Management of Childhood Obesity

Presented by: ***Ms. Evett Uy***, *Research Assistant, Endocrinology & Diabetes Unit, BC Children's Hospital*

A map of existing resources for the treatment of childhood obesity in BC was presented. The map was developed through key stakeholders interviews and an environmental scan of current resources. Although the list of resources was not exhaustive, it provided a basis for discussion and additional services/resources were identified by meeting participants

Resource Area	Resources Identified in Environmental Scan	Additional Resources Identified During Meeting
Guidelines developed in BC that are available for health professionals working with obese children	○ Medical Guidelines developed by the Centre for Healthy Weights-Shapedown BC. ○ Nutrition Bulletin for Health Professionals developed by the Community Nutritionists' Council of BC and endorsed by the BC Pediatric Society. ○ Guidelines and Protocols for Overweight, Obesity and Physical Inactivity developed by the BCMA and BC Ministry of Health. ○ Guidelines from the Childhood Obesity Foundation and the BC Dairy Association	
Existing services that offer the	*Provincial resources* ○ HealthLink BC ○ Subspecialty care throughout BC	*Provincial resources* ○ The Physical Activity Line

management of childhood obesity in their region	○ Support for programs such as the YMCA by NGOs ○ The Centre for Healthy Weights-Shapedown BC ○ Nutrition, endocrine and diabetes clinics at BC Children's Hospital *Regional Resources:* ○ West Vancouver Community Centre with an outpatient dietician. ○ Lions Gate Hospital with an insulin resistance clinic and outpatient nutrition counselling ○ Family Services North Shore Family FUNdamentals program to promote activity and healthy eating. ○ Hospitals located within the Fraser Health Authority, Interior Health Authority, and Vancouver Island Health Authority. that offer outpatient nutrition counselling, type 2 diabetes clinic ○ Vancouver Island Healthy Authority's Pediatric Ambulatory Health Clinic (located at Nanaimo Regional Hospital).	resource for healthy living info ○ Prescription for Health's Lifestyle Support Services ○ Provincial Mental Health Metabolic Program at BC Children's Hospital *Regional Resources:* ○ Food Skills for Families within some communities (incl First Nations) ○ Northern Health Authority's Diabetes Education Centre in Prince George run by pediatricians, counsellors

Discussion

During the discussion, participants generated strategies/ideas that could be implemented to provide a more comprehensive structure for childhood weight management in BC.

- ☐ Collaborate with community centers to access funding for exercise/accessibility to healthy living programs for families that may not be able to afford it
- ☐ Collaborate with Health Canada to provide funding for Aboriginal children
- ☐ Connect with My Steps project at BC Children's Hospital to understand what factors affect motivation for lifestyle changes.
- ☐ Connect with schools and have policies and an agenda in place to work together on improving children's weight and lifestyle habits (e.g. healthy food choices, having gyms open for after school activities)
- ☐ Involve family physicians by expanding the Prescription for Health Program's Personal Health Risk Assessment and Practice Support Program to include children & youth
- ☐ Incorporate families that have Type 2 diabetes to provide treatment at the Centre for Healthy Weights
- ☐ Increase capacity of hospitals with out-patient counseling to offer targeted treatment programs for children

Discussion: Proposed Draft Model for a Care Pathway for Overweight and Obese Children and the 3 Stage Approach

Model and approach presented by: ***Dr. Jean-Pierre Chanoine***, *Endocrinology &Diabetes Unit, BC Children's Hospital*
Discussion moderated by: ***Dr.Maureen O'Donnell***, *Executive Director, Child Health BC*

The *Proposed Model for a Care Pathway of Weight Management for Overweight and Obese Children & Youth* was presented. Participants were encouraged to consider the evidence presented and a consensus excise was undertaken to make revisions to the model that would be realistic to implement and deliver in BC.

A number of suggestions were made with strong support for a lifestyle assessment conducted with all pediatric patients, regardless of weight or BMI percentile. The information generated from this lifestyle assessment would be used to provide targeted treatment and/or consistent, evidence-based health promotion messages and education.

Participants recognized that certain aspects of the pathway needed to be provided by appropriately trained health professionals and some components may only be performed by MDs.

Following the meeting, participant suggestions were incorporated fully into the model. The revised model, entitled *Pathway for the Identification, Assessment and Management of Overweight and Obese Children & Youth*, is shown on the following page.

Building on the "Pathway for the Identification, Assessment and Management of Overweight and Obese Children and Youth", Dr. Chanoine reviewed the 3-Stage Approach, which was drafted from the existing evidence and presented to support discussion. The 3 Stage Approach describes existing or future options for the management of an overweight or obese child or youth, accounting for the presence or absence of co-morbidities as well as a graded approach. This graded approach ensures that children and youth are first managed through minimally intensive interventions close to home (Stage 1), and then referred to more intensive interventions, possibly outside of the community (Stage 2 and 3).

While the 3 Stage Approach closely resembles the 4 stage approach from the literature review, the intent is to provide a tool that identifies ways that the community and healthcare system can respond to the needs of children and youth that have been identified as overweight or obese. Each of the stages was reviewed in detail by the group, with particular emphasis on the need for inclusion of evaluation components to ensure that resources invested were resulting in meaningful outcomes. In addition, participants were encouraged to consider the importance of establishing a model that would be feasible and sustainable from a provincial perspective.

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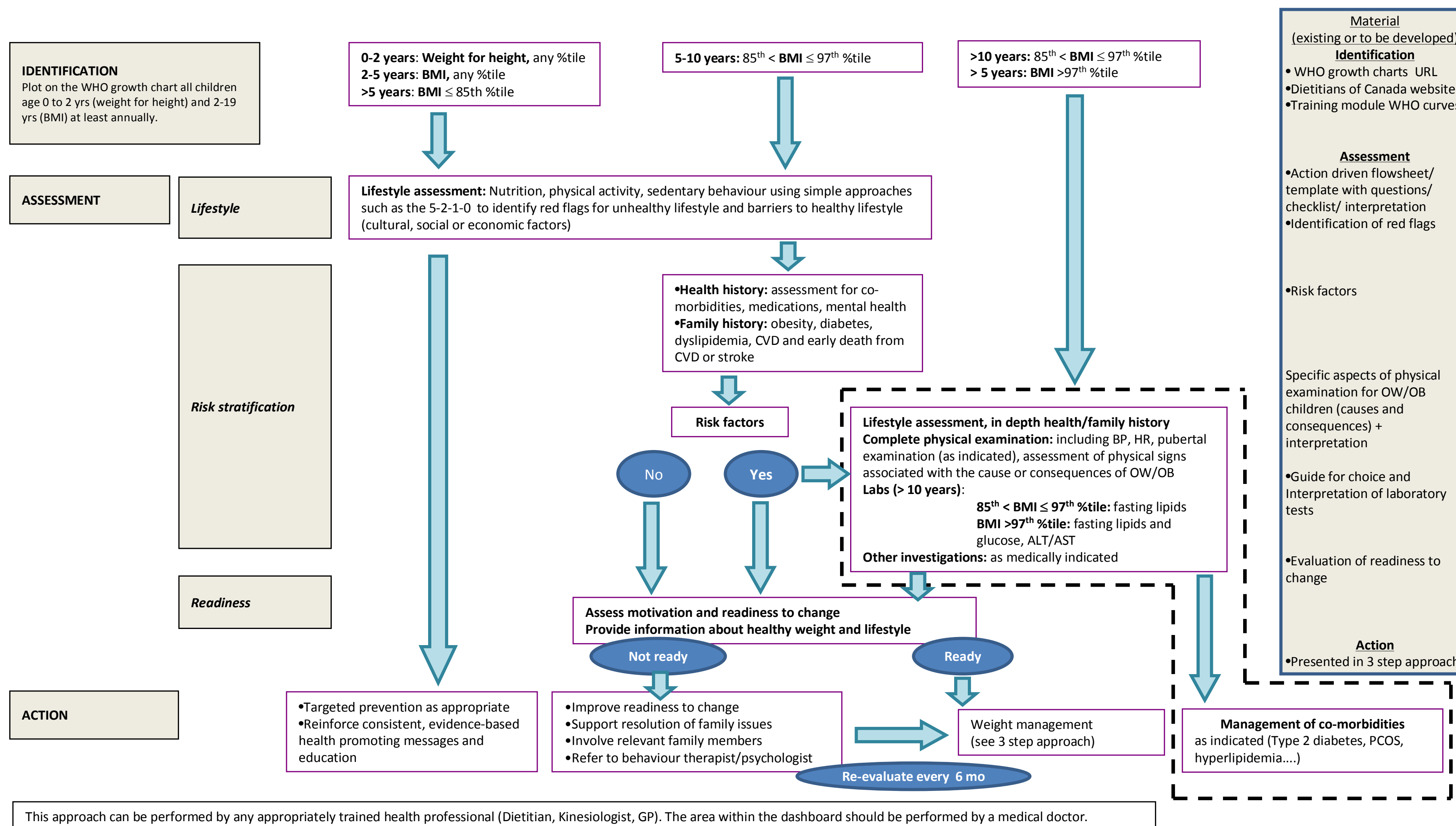
Pathway for the Identification, Assessment and Management of Overweight and Obese Children & Youth



Participants examined the proposed 3 Stage Approach, with emphasis on the key components/requirements and the implementation strategies/models for BC. It was noted that the list of implementation suggestions was not a set list of components that each community or region would have to follow, but rather should serve as a resource that outlines best practices for weight management for children and youth that could be utilized by communities, regions, or for the province as a whole. Feedback was gathered through small group discussions and large group reporting back. Participants provided the following comments on Stage 1 and 2 of the 3 Stage Approach:

Participant Suggestions for Implementation of Stage 1
• Ensuring that these strategies would focus on the continuum of care from health promotion, prevention and treatment • Continuing to utilize the existing weight management sites (i.e. those that were identified through the environmental scan), but updating them to ensure that the programs are effectively delivered • Asking the patient/family what information they want in terms of healthy living and weight management to ensure that the information provided by the health professional is relevant and useful • Developing ways to enhance the use of phone, web-based and other technological interventions (e.g. Skype counselling, “apps”, YouTube videos, Facebook, etc.), although taking precaution with promoting the use of such technology as it increases screen-time • Thinking of ways to manage the additional non-health complications of overweight/obesity • Developing interventions, programs and strong social policies that respect cultural differences (e.g. in diet, physical activity preferences, access to resources, etc.); must also pay attention to health equity issues as the same strategies may not be the best for everyone and consideration should be given to enhanced services for vulnerable populations • Understanding the effects of social media and how it can be used for weight management, particularly within the older adolescent population • Linking with Public Transit BC to have health promotion signs in buses and at bus stops • Creating health promotion/weight management pamphlets, with consideration given to different literacy levels and those with English as a second language (ESL) • Considering the roles and possible partnerships with schools • Using post-secondary school students as resources for promoting healthy living (e.g. being trainers or mentors for the youth) • Continued support for, and a two-way link with, HealthLink BC as it is evolving to a more high level of care and has over 150 interpretive services • An expansion in training professionals that work with children, youth, and families through programs such as 8-1-1 and Physical Activity Line. • Providing a physician directory through HealthLink BC so that all providers can access information, and to enhance the efficiency of referrals • Having corporate partnerships for implementation strategies, in addition to a menu of evidence-based strategies that are created through active community engagement and problem solving

Participant Suggestions for Implementation of Stage 2

- Having a virtual/telehealth, one-on-one version of a program such as Shapedown BC would be feasible; this could also be done in a group setting and would be particularly useful for rural populations, although it would likely still need to be facilitated by a support provider
- In terms of entirely virtual programs (such as those delivered through websites, smart phones, "apps", etc.), it was noted that it would be important to still have some form of in-person/face-to-face contact at the beginning and throughout the intervention
- Possibly linking with NGOs
- Looking at how weight management programs/interventions could be incorporated into other settings such as GPs' offices, schools, etc.

Participants identified a potential role for telehealth and outreach/follow-up visits, especially for those in remote locations with fewer resources and limited capacity for Stage 3 service.

Following the meeting, the 3 Stage Approach was revised to include participants' comments. The revised Approach is included in Appendix A.

Concluding Remarks and Next Steps

*Closing by: **Dr. Maureen O'Donnell**, Executive Director, Child Health BC*

The meeting generated new ideas regarding the key components and resources of a health focused care pathway and a structured approach for the identification, care and management of overweight and obese children and youth in BC. Multiple perspectives from across the province were brought together and the meeting provided a sound background for moving forward. Participants collectively acknowledged that when the final was circulated, there would be tremendous opportunity to use it in their planning and work.

Child Health BC suggested the following next steps:

1. The ideas for singular strategies and implementation suggestions will be integrated into a comprehensive implementation approach including a care pathway for BC.
2. Meeting participants will receive a final report capturing these components above
3. Meeting participants will also be invited to attend a follow-up meeting to discuss the next steps for the implementation model.

Appendix A: 3 Stage Approach

Stage 1 - *Prevention Plus Structured Weight Management*

- Any child or adolescent recognized as being OW or OB, with or without co-morbidities
- Children who are crossing BMI percentiles upward and who are at risk of becoming OW.
- Children and adolescents with metabolic and non-metabolic co-morbidities of obesity who can be managed in an ambulatory setting

WEIGHT MANAGEMENT	
KEY COMPONENTS	PROPOSED IMPLEMENTATION ACTIONS
1. Presence of a supporting community	
• Community engagement with healthy active living, promoting a supportive communit y • Peer support	• Build on existing actions occurring in communities and schools for the promotion of healthy weights and healthy living.
2. Development of materials for children and families that provide information about OW/OB and its possible co-morbidities	
• General resources/materials which can be obtained directly by the family or through the health professional • Enhanced resources for the family regarding family and self-management	• Work with HealthLink BC, BC Children's Hospital and other sources to provide organized and credible sources of information • Create one collaborative BC plan regarding the development of resources with prioritization of topics and with clear leadership • Engage health professionals in BC in the development and review of materials and creation of dissemination strategy.
3. Availability of a variety of intervention approaches which recognize the differing needs of families and provide choice (e.g. e-based programs, programs based out of community centers)	
• Self-directed approaches and Led/Directed approaches • Web-based programs and community based opportunities	• Web-based intervention programs. Two programs are being developed and currently being evaluated in BC: o My Step o LiGHT (Living Green, Healthy and Thrifty) • Evidence-based community programs based in recreation/leisure centres with focus on supporting children, youth and families to build skills, knowledge and opportunities for healthy eating and physical activity.
4. Health professional and provider education	
• Provision of structured general information regarding obesity causes and consequences for children and youth • Provision of general/structured information regarding healthy nutrition and physical	• Increase awareness and use of recently endorsed WHO growth curves • Development of continuing professional education centered on a global and practical approach of OW/OB in youth

WEIGHT MANAGEMENT	
KEY COMPONENTS	**PROPOSED IMPLEMENTATION ACTIONS**
activity to promote appropriate weight • Compilation of knowledge about locally available, community-based health living resources • Provision of training regarding involving families to improve or maintain readiness to change • Training regarding cultural beliefs and attitudes on weight bias and on the healthy weights philosophy.	• Explore an adaptation of the 5A model for use with children • Development of simple and effective tools for the assessment and promotion of readiness to change, with practical workshop for demonstration/continuing professional education. • Ensure that the information available to the families and the health professionals is coherent.
5. Outcome evaluation	
• Components are evaluated to determine whether they represent an appropriate approach and desirable outcomes	• With identified responsibility/leadership/resources (but through collaboration), undertake process and outcome evaluation with a focus on BC children and youth's needs

CO-MORBIDITIES	
KEY COMPONENTS	**PROPOSED IMPLEMENTATION ACTIONS**
Develop multi-pronged strategy to ensure appropriate assessment and management of children and adolescents with metabolic and non-metabolic co-morbidities of obesity	
• Recognition of complications and assessment of complications by GP according to appropriate guidelines • Treatment of complications by GP • Referral to community pediatricians if required using appropriate guidelines • Shared or independent management and follow-up as appropriate between GP and community paediatrician • Consultation with/advice from sub-specialist if required • Integration of issues/strategy with other members of the child's 'team"	• Development of Continuing Professional Education centered on a global and practical approach of OW/OB co-morbidities in youth • Distribution of or development/distribution of appropriate tools for the screening and assessment of co-morbidities in children and youth who are OW/OB • Availability of evidence regarding up-to-date first line approaches to assessment and management • Identification of appropriate reasons for referral to paediatrician • Identification of appropriate reasons for referral to subspecialist • Facilitation of access to specialist/subspecialist advice

Stage 2 - ***Comprehensive Multidisciplinary Intervention***
• Children or adolescents with OW or OB without co-morbidities who may be in need of more motivational intervention then available in Stage 1. • Children and adolescents with obesity co-morbidities who require specialist/ subspecialist care not available locally • OW or OB children with severe co-morbidities that require multidisciplinary care

WEIGHT MANAGEMENT	
KEY COMPONENTS	PROPOSED IMPLEMENTATION ACTIONS
1. Comprehensive multi-disciplinary intervention with individualization of goal setting and involvement of the family	
• Comprehensive structured multi-disciplinary intervention with individualization of goal setting and monitoring • Involvement of the family • Frequent reinforcement and long-term follow up <u>Motivation and behaviour</u> • Motivating modification of behaviour with respect to eating habits, and behavioral modification of sedentary and physical activity (PA) behaviours • Parental participation in behaviour modification techniques (in particular for younger children) and training on modification of home environment to be more conducive to healthy active living <u>Healthy eating</u> • Understanding of basic healthy food concepts • Promotion of healthy eating behaviours with focus on quality (e.g. fruit and vegetables,) and quantity (2nd servings, take out food) • Addressing barriers to healthy eating <u>Physical activity</u> • Evaluation of physical activity at baseline • Focus on increase in physical activity and decrease in sedentary behaviours • Addressing barriers to being physically active <u>Other health related components</u> • Mental health factors (e.g. self-esteem, anxiety, depression) • Address sleep-related issues and sleep hygiene with child/family • Treatment of complications through referral to provincial resource as required using appropriate guidelines	All the key components identified in adjacent column (motivation and behaviour, nutrition, physical activity, other health related components including mental health, sleep and treatment of complication) can be addressed through the following potential actions: <u>On-site comprehensive multi-disciplinary program:</u> • Shapedown BC program is an example of such a program. • This comprehensive multidisciplinary program is group-based and involves youth and their family. • The program has been adapted for BC and evaluated (Panagiotopoulos et al, 2012) <u>Combined On-site and distance/virtual multi-disciplinary program:</u> • Explore the feasibility of a partial onsite multi-disciplinary program complemented by distance (telephone or video-conference) or online additional professionals/team members. This approach could be considered for communities not capable of providing local human resources. • Consider alternate locations for such services, such as schools and community centres (e.g. YMCA), while recognizing the need for standardization and quality for the overarching program, its design and evaluation. • Consider enhanced use of telephone consultation (e.g. through Health Link BC) or telehealth video consultation (e.g. with Shapedown or BC Children's or other relevant resources) as a means of complementing local/regional human resources.

WEIGHT MANAGEMENT	
KEY COMPONENTS	PROPOSED IMPLEMENTATION ACTIONS
2. Health professional and provider education	
• Training of the health professional for the provision of individualized weight management, including: - Use of motivational interviewing for child/family behaviour change and goal setting - Increased (individualized) support regarding goal setting and behaviour change (e.g. PA and nutrition logs) - Equip child/family with positive reinforcement methods - Provide counselling skills to assist families who require assistance with parenting skills/behaviour - Provide child/youth (and family) with individualized healthy eating and physical activity advice	• Develop overarching provincial education and training strategy which involves community and regional partners in providing a unified training package/curriculum
3. Outcome Evaluation	
• Components are evaluated to determine whether they represent an appropriate approach and desirable outcomes	• With identified responsibility/leadership/resources (but through collaboration), undertake process and outcome evaluation with a focus on BC children and youth's needs

CO-MORBIDITIES	
KEY COMPONENTS	PROPOSED IMPLEMENTATION ACTIONS
Develop multi-pronged strategy to ensure appropriate assessment and management of children and adolescents with obesity complications who require specialist/subspecialist care not available locally	
• Capacity for assessment and treatment of co-morbidities such as type 2 diabetes, polycystic ovarian syndrome (PCOS), high cholesterol, elevated ALT • Availability of pediatric or pediatric subspecialist care as appropriate • Identification of severe or life-threatening complications • Availability of multidisciplinary care where pediatricians and pediatric subspecialists work with specialized allied health professionals (for example, exercise physiologists, dietitians, psychologists, social worker) • Close collaboration with tertiary care center where bariatric surgery is performed to promote an integrated care approach • Recognize need for long term support and care.	• Consider a Practice Support Program (PSP) module that would support GPs or others who would become the local experts • Travelling or Telehealth subspecialty clinics for enhanced access to subspecialists • Develop pediatric training of existing community allied health professionals • Develop or review clear specific criteria for referral to subspecialists • Finalize a business plan for a pilot program of bariatric surgery in adolescents. Establish criteria for pre and post surgery follow up shared between tertiary care center and close to home care

Stage 3 - *Tertiary Care Intervention*

- OW or OB children with severe co-morbidities or life-threatening complications that require multidisciplinary care;
- Children who require the care of subspecialists not available in the community (sleep specialist, geneticist, gastroenterologist, etc.);
- OB children with severe co-morbidities or life-threatening complications who are being considered for bariatric surgery.

WEIGHT MANAGEMENT & CO-MORBIDITIES	
KEY COMPONENTS	PROPOSED IMPLEMENTATION ACTIONS
1. Weight and co-morbidity management	
• Expect children and youth to also be partaking in Stage 2 intervention	• Stage 2 intervention as outlined in this document
• Establish strong collaboration between provincial resource and child's health region and local community for integrated approach for the child and family.	• Establish strong collaboration between provincial resource and child's health region and local community for integrated approach for the child and family.
• Increased opportunities for one-to-one counselling for selected families	• Identify appropriate staffing needs and define criteria for individual counselling
• Weight-loss medications, to be prescribed in conjunction with diet and exercise	• Maintain expertise in use of medications
• Bariatric surgery program with appropriate follow-up regarding procedure	• Finalize a business plan for a pilot program of bariatric surgery in adolescents. • Establish criteria for pre and post surgery follow up shared between tertiary care center and close to home care
• Recognize need for long term support and care	• Establish mechanism and resources for long-term support in collaboration with local community
• Co-morbidity management including o Access to subspecialists o Access to hospital admission as needed o Access to specialized and subspecialized investigations such as sleep studies, cardiovascular investigations	• Co-morbidity management including: o Develop or review specific criteria for referral to subspecialists o Streamline referral process with focus on multidisciplinary clinics

WEIGHT MANAGEMENT & CO-MORBIDITIES	
KEY COMPONENTS	PROPOSED IMPLEMENTATION ACTIONS
2. Provincial resource	
Availability of provincial resource that provide a common framework for pediatric weight management approach	• Identify single entity/ centralized health provider team with responsibility for and leadership of Pediatric Weight Management that will work in collaboration with all provincial stakeholders to progressively develop/update/compile resources for patient assessment, referral and management
3. Outcome evaluation	
Process and outcome evaluation plan at the provincial level for three staged approach	Centralization of evaluation plan in pediatric tertiary care centre • Identify leadership of and responsibility for centralized , single framework for evaluation of initiatives across the three stages in collaboration with partners in the community across all stages • Evaluate staffing and funding needs for evaluation process • Define responsibilities
4. Health Professional Education	
Ensure training of health professionals for care of child and youth with co-morbidities	• Develop overarching provincial education and training strategy which involve community and regional partners in providing a unified training package/curriculum

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Appendix B: Meeting Agenda

Agenda

Thursday March 29, 2012 | Full Day		
8:00 am - 8:30 am	**Breakfast |Quarter Deck Bridge Room**	**Presenters**
8:30 am – 8:40 am	**Welcome & Introductions**	Maureen O'Donnell
8:40 am – 9:15 am	**Context: Obesity and Overweight Why Does It Matter?** • Prevention and treatment of child and adolescent obesity: two sides of the same coin • Complications of pediatric obesity: they exist and can be prevented	Shazhan Amed Jean-Pierre Chanoine
9:15 am – 10:10 am	**Presentation of Evidence on Weight Management Models** • What we know about existing models and what other jurisdictions have done • A look at algorithms and consideration of framework	Lauren Wallace Emily Rand
10:10 am – 10:30 am	**Break | Quarter Deck Bridge Room**	
10:30 am – 11:00 am	**Environmental Scan of BC** • Existing resources for the management of childhood obesity	Evett Uy Jean-Pierre Chanoine
11:00 am – 11:30 am	**Small Group Discussion** • Are you aware of other regional or provincial resources that have not been mentioned?	Moderator: Jean-Pierre Chanoine
11:30 am - 12:00 pm	**Presentation of the Proposed Model**	Jean-Pierre Chanoine
12:00 pm – 1:00 pm	**Lunch | Dockside Restaurant**	
1:00 pm – 2:45 pm	**Reaching Consensus: Key Components of the Clinical Care Pathway and Three Staged Approach**	Moderator: Maureen O'Donnell
2:45 pm – 3:00 pm	**Break | Quarter Deck Bridge Room**	
3:00 pm – 4:30 pm	**Discussion: Implementation Plan of Model for BC**	Moderator: Maureen O'Donnell
4:30 pm – 5:00 pm	**Summary of Discussion & Next Steps**	Jean-Pierre Chanoine Maureen O'Donnell
5:00 pm - 7:00 pm	**Reception | Large Restaurant Bar**	