



# 4Ms for Interdisciplinary Team Weight Management Care

Mechanical, Mental, Metabolic, Social Milieu

## 5AsT Intervention Tools 2013-2014

Key Messaging to support 4Ms assessment  
for multidisciplinary providers



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## Core Messages: Social Milieu Domain Assessment for weight management



### General

- Barriers to behaviour change often involve this component
- The solution has to come from the patient, but motivational interviewing techniques can help them to brainstorm their own solutions
- There are special cases of patients with ADHD where there are additional barriers to scheduling and planning and might involve the help of a professional therapist
- Community healthy living programs and recreational centers can be a resource
- Mindfulness meditation can be a useful tool for them to take control of their life
  - *Consider involving: mental health worker*



- Activity is helpful for lowering cholesterol and together with moderate dose statins can help lower cardiovascular risk in diabetics.
- Many glucose lowering medications can be associated with weight gain in type 2 diabetes (see medication cards)
- Metformin is weight neutral and has demonstrated cardiac benefit.
  - *Consider involving: dietician, family physician, mental health worker, nurse practitioner, exercise specialist, pharmacist, endocrinologist.*

### **Liver Disease**

- The rates of non-alcoholic steatohepatitis (NASH) / non-alcoholic fatty liver disease (NAFLD) is increasingly common in North America
- NASH is associated with liver failure
- Screen for excessive alcohol use
- These patients require medical work-up to screen for other causes of abnormal liver enzymes
  - *Consider involving: dietician, family physician, hepatologist, exercise specialist*

### **Cancer**

- *Consider involving: oncologist, nutritionist and bariatric specialist*

### **PCOS (polycystic ovarian syndrome)**

- Features include obesity (40-85%), hirsutism, irregular menstrual cycles, classic ovarian morphology, associated with NASH
- Insulin resistance is often present even if lean
- Increased risk for diabetes and heart disease
- Weight loss (even 5%) can be helpful in improving insulin resistance and hyperandrogenism
  - *Consider involving: family physician, dietician, gynecologist, endocrinologist*



## **4Ms for Interdisciplinary Team Weight Management Care**

Core Message: Mechanical Domain Assessment for weight management



### **Sleep Apnea & Other Sleep Disorders**

- Sleep affects hormones responsible for feelings of hunger and fullness
- Disrupted sleep has negative effects in terms of our drive to eat
- Treatment of sleep problems results in feeling better, having more energy and eating less — all of which can be important in weight management
  - *Consider involving: family physician, sleep specialist, neurologist*

### **Asthma & Chronic Lung Disease**

- Poorly controlled asthma and other chronic lung diseases cause patients to try to conserve oxygen by limiting physical activity. They can also cause sleep disruption.
- In the case of asthma, there are extensive therapeutic options to improve respiratory function. If a patient notes they are having symptoms requiring a rescue inhaler (ventolin equivalent) three times per week, or at night, they need to be seen by their family physician or pulmonologist for reassessment of their control
- For patients with COPD and other chronic lung disease, increasing physical activity can be helpful for their lung function, well-being and weight control. Consider specialized exercise support options like Breathe Easy
- Smoking cessation is key to improved lung function
  - *Consider involving: family physician, nurse practitioner/ chronic disease nurse, respiratory therapist, pulmonologist, community pharmacist, mental health worker*

## Osteoarthritis & Chronic Pain

- There is a range of severity of OA and chronic pain, with some patients experiencing mild, intermittent symptoms, and some with severe, unremitting symptoms
- Pain can lead to decreased quality of life, stress, reduced mood, all of which can lead to emotional eating
- OA can also affect people's ability to be as physically active as they would like
- Treatment to improve pain and function can help people to feel better, to increase their physical activity, and reduce emotional eating... all of which can be important in weight management
  - *Consider involving: family physician, mental health worker, nurse practitioner, community pharmacist*

## Gastroesophageal Reflux Disease (GERD)

- GERD can be unpleasant and disrupt sleep, leading to the same effects as above
- If present during the day or escalating, especially on treatment, it is important to have the patient reassessed with their physician to assess for HPylori, or non-GI etiology
- If patients are on PPI medication make sure they are taking it 30 minutes before their evening meal
- Be aware that patients may eat to relieve symptoms
  - *Consider involving: family physician, gastroenterologist, community pharmacist*

## Incontinence

- Urinary incontinence is extremely common in post-menopausal women, and in men post-prostate surgery
- Fecal incontinence is fortunately uncommon
- Both represent a barrier to physical activity as soiling is intensely embarrassing for the patient
- Treatment can range from exercises to strengthen the pelvic floor, incontinence products, pessaries, estrogen creams and surgery
  - *Consider involving: family physician, gynecologists & nurse practitioners at the urogynecology clinic, urologist, gastroenterologist, mental health worker*

## Core Messages: Metabolic Domain Assessment for weight management



### General

- For many of these conditions, therapeutic regimens can have an impact on weight. Consult the medication weight cards for ideas.
- Additional chronic medical conditions not listed here can also have negative impacts on weight. It is important to individually assess and try to tailor therapy to the individual.
- There are strong associations between chronic disease and depression, with attendant implications for weight. Consider screening for depression in your patients with chronic disease.

### Heart Disease

- Primary and secondary prevention of heart disease are positively affected by lifestyle change in activity and nutrition, irrespective of the weight on the scale.
- Check out the physical activity cards for recommendations for stable patients with heart disease; patients should have completed cardiac rehabilitation and been cleared by their cardiologist prior to starting a personal exercise routine.
  - *Consider involving: cardiologist, family physician, cardiac rehab, mental health worker*

### Diabetes & Metabolic Syndrome

- For people with pre-diabetes, walking briskly 150 minutes a week has been shown to reduce the risk of progression to diabetes by 50%
- Controlling pregnancy weight gain will have a positive effect on gestational diabetes, post-partum excess weight, and ultimately on risk of developing diabetes
- Activity is the mainstay of treatment of blood glucose for patients with type 2 diabetes, with appropriate modification of diet and as needed medications.
- Activity is helpful for lowering blood pressure and hypertension control has been shown to be more important than glycemic control in preventing vascular complications of diabetes.

- A study in Edmonton, Alberta found that almost a third of mentally ill individuals also had a substance use problem, almost a third of those with alcohol dependency also had a psychiatric diagnosis, and among illicit drug users, almost half had a mental illness.
  - *Consider involving: family physician, mental health worker, addictions counselor.*

### **Emotional Eating**

- Over the course of a lifetime, we each internalize our own unique experiences in which food provided some sort of emotional as well as physical nurturing.
- Eating sugars and fats releases opioids in our brains arousing pleasure and satisfying the reward centers in our brains.
- When the body is hungry or tired, it not only sends strong messages to its brain that signal it to eat, but leaves people less equipped to fight off cravings or urges.

### **Binge Eating Disorder**

DSM 5 Criteria for Binge Eating Disorder:

- A. Recurrent episodes of binge eating (same as bulimia nervosa)
- B. Binge eating episodes are associated with three (or more) of the following...
  1. Eating much more rapidly than normal.
  2. Eating until feeling uncomfortably full.
  3. Eating large amounts of food when not feeling physically hungry.
  4. Eating alone because of embarrassment.
  5. Feeling disgusted with oneself, depressed, or very guilty after overeating.
- C. Marked distress regarding binge eating is present.
- D. At least once a week for 3 months.
- E. The binge eating is not associated with the recurrent use of inappropriate compensatory behavior.

### **Thrombosis & Claudication**

- Patients with narrowing of the arteries to the legs find that they get muscular pain with a certain exercise load. This can result in progressive reduction of their activity to avoid pain.
- Walking and physical activity are very helpful to maximize function. Patients need to be encouraged to pace themselves and rest as needed to maximize their work, and minimize pain.
- Smoking cessation can be tremendously helpful.
- Thrombosis is when there is a clot in a vein, most commonly in the legs. This can be acute, or chronic in nature, and can contribute to venous stasis and swelling. It can be associated with local pain. Following the acute treatment phase (about 3 months), patients often do not require medication. At that point symptomatic management to maximize function is indicated.
  - *Consider involving: family physician, nurse practitioner, hematologist, vascular surgeon, smoking cessation program or chronic disease RN/ mental health*

### **Intertrigo or Skin disorders**

- Skin rashes, yeast infections and other dermatologic conditions can be painful, aggravated by sweat or wetness and itchy. This can limit physical activity.
- Large people have a hard time drying skin folds and caring for localized yeast or skin breakdown.
- People can be embarrassed by the appearance of their skin.
- Strategies for skin care: moisturizing, yeast treatment, other therapies can help to minimize problems. Proper work out clothing which helps to minimize wetness can help.
- This may get worse as skin folds deepen with weight loss
  - *Consider involving: family physician, dermatologist, wound care nursing, wound clinic, occupational therapy*

### **Plantar fasciitis**

- Plantar fasciitis is a painful condition in the heel and arch of the foot caused by stretching of the fibrous sheet (plantar fascia) on the bottom of the foot, and pulling against the insertion on the calcaneus. It can be debilitating, resulting in casting and surgery. It can be prevented by proper footwear, and early intervention with stretching and nighttime bracing.

- Proper footwear is incredibly important for all, but especially overweight or obese persons aiming to increase physical activity.
  - *Consider involving: family physician, podiatrist, orthotist, physical therapy*

## Core Messages: Mental Domain Assessment for weight management



### Mood

- 1/10 people in Canada will experience an episode of major depressive disorder
- Extreme fatigued and lack of energy or hyperactive and irritable
- Feelings of guilt, sadness, hopelessness and helplessness and emptiness
- Social withdraw and isolation
- Difficulty concentrating and making decisions
- Suicidal – expressing thoughts and making plans
  - *Consider involving: family physician, mental health worker, psychiatrist*

### Poor Sleep

- Sleeping little or sleeping too much
- Disrupted sleep has negative effects in terms of our drive to eat
- Depression and anhedonia (loss of interest in the pleasures of life) can also affect people's ability to be physically active which can affect sleep architecture
- Treatment of sleep problems results in feeling better, having more energy and eating less --- all of which can be important in weight management
- Sleep also affects physical activity. Intermittent hypoxia may affect glucose homeostasis and promote insulin resistance.
  - *Consider involving: family physician, sleep specialist, neurologist, mental health worker*

### Stress (negative consequences)

- Mood symptoms lead directly to consequences at work – reduced concentration, inability to make decisions, increased number of work days, coming in late or leaving early, irritability with co-

workers or customers, decrease in productivity.

- 75% of short term disabilities and 79% of long term disability claims are due to a mental health injury.
- Severe clinical depression may modestly increase the risk for type 2 diabetes.
- Research has suggested an increased background risk of diabetes among people with schizophrenia.
- Depression and other mental health disorders are both outcomes and predictors of overall health. People with depression are 2.6 times more likely to have a stroke and 1.88 times more likely to develop cancer.
- Researchers believe that there is a shared neural pathway for pain and depression with serotonin and norepinephrine involved in both pain and mood.
- Depression is thought to increase a person's sensitivity to pain. Headaches, back pain, muscle and joint pain, chest pain, digestive problems are common to mood disorders
- Studies show that of those reporting nine or more physical symptoms, 60% had a mood disorder. A high number of physical pain symptoms are also predictive of a relapse even after mood has lifted.
- Treatment to improve pain and function can help people to feel better, to increase their physical activity, and reduce emotional eating... all of which can be important in weight management
  - *Consider involving: family physician, mental health worker, nurse practitioner, exercise specialist, physiotherapist.*

### Medications

- Many new generation antipsychotic medications increase blood glucose levels.
- Weight gain is often associated with psychotropic medications (SSRIs and NNRI) to treat mood disorders as a common side effect is increased appetite.
  - *Consider involving: family physician, mental health worker, nurse practitioner, exercise specialist, dietician.*

### Addictions

- People with mental illness have much higher rates of addiction than people in the general population