



The Wicked Problem of Obesity current progress and future directions for prevention (and management)

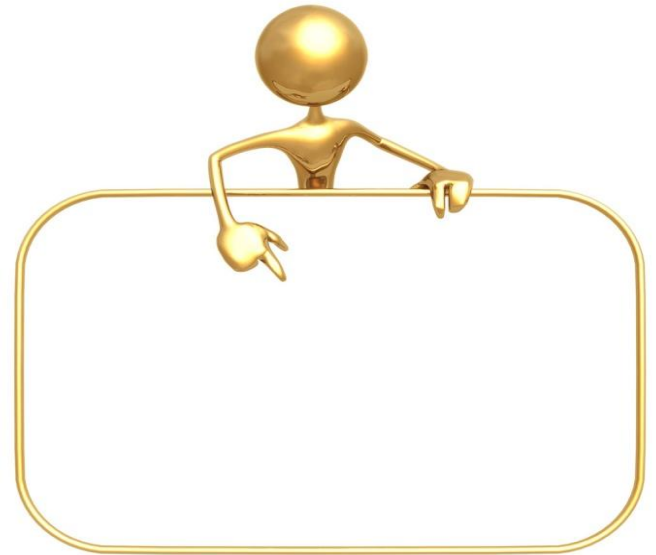
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(ARCH)**

About ARCH

ARCH team Cancer childhood obesity
Community Complexity Early childhood environment
Economic environment Environmental sustainability
evaluation **Food environment**
Food industry Funding Health care health
professional health utilization Knowledge translation
obesity Obesity tax Physical Activity **Physical**
activity **environment** **Policy**
Pregnancy Psychology School environment
School health program Weight bias

Focus of presentation

- Brief overview of obesity as it relates to maternal and child health
- Reflect on the latest evidence around causes, consequences and solutions
- Inspire you to act as change agents to support healthy eating and active living where you live and work



Key Points: Creating a “C” change

- The **Causes** are **Complex**
- It's not about **Choices**, but about our **Conflicting Culture**
- **Change** requires **Commitment**

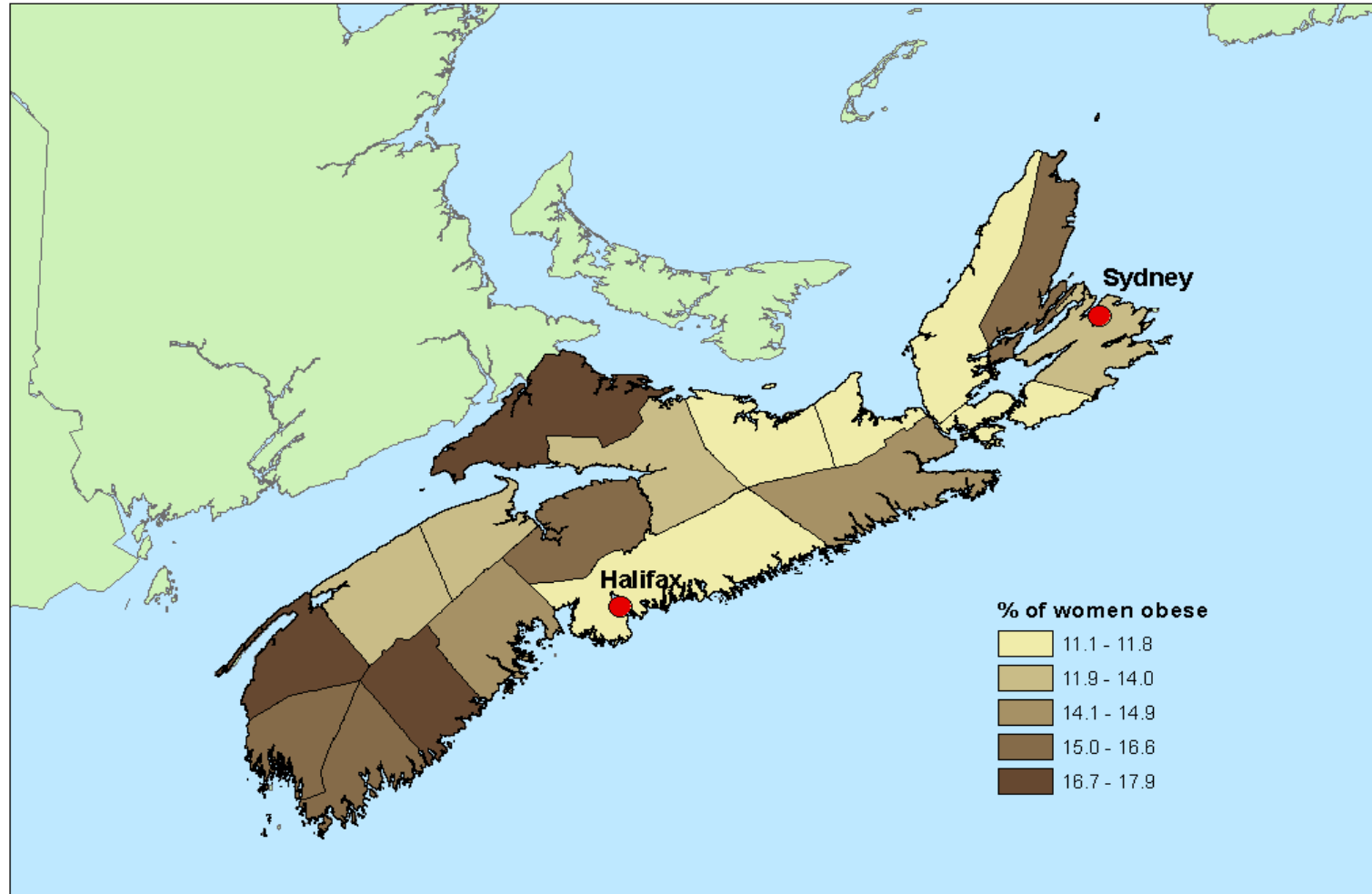


Obesity: A global problem

- Obesity rates have tripled in last few decades (adults and children)
- Children with obese parents are themselves more likely to be obese as adults
- Cost of obesity and associated chronic disease = \$190 billion (2010), from premature deaths due to heart disease, stroke and diabetes

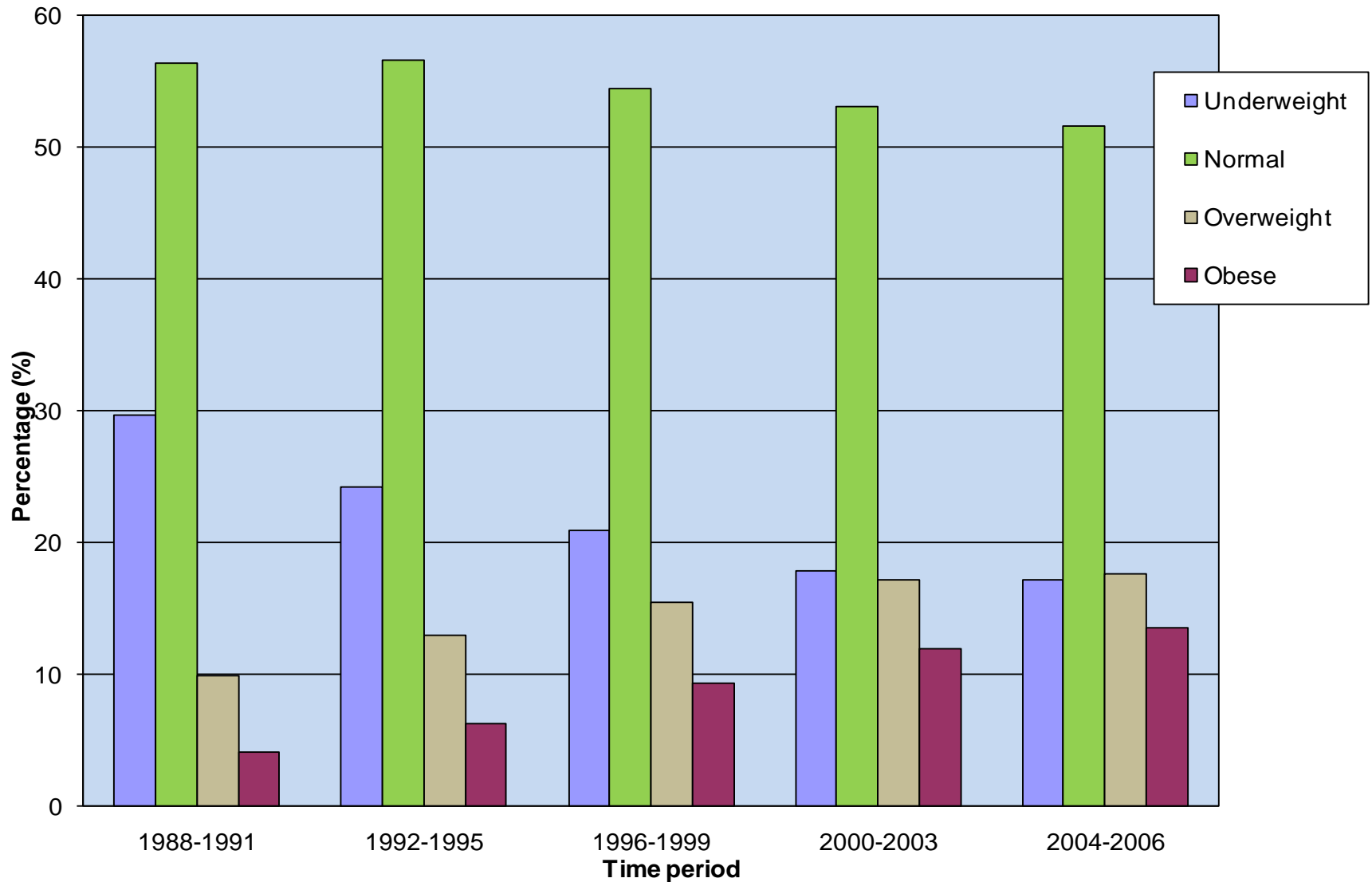


Maternal obesity: A provincial problem

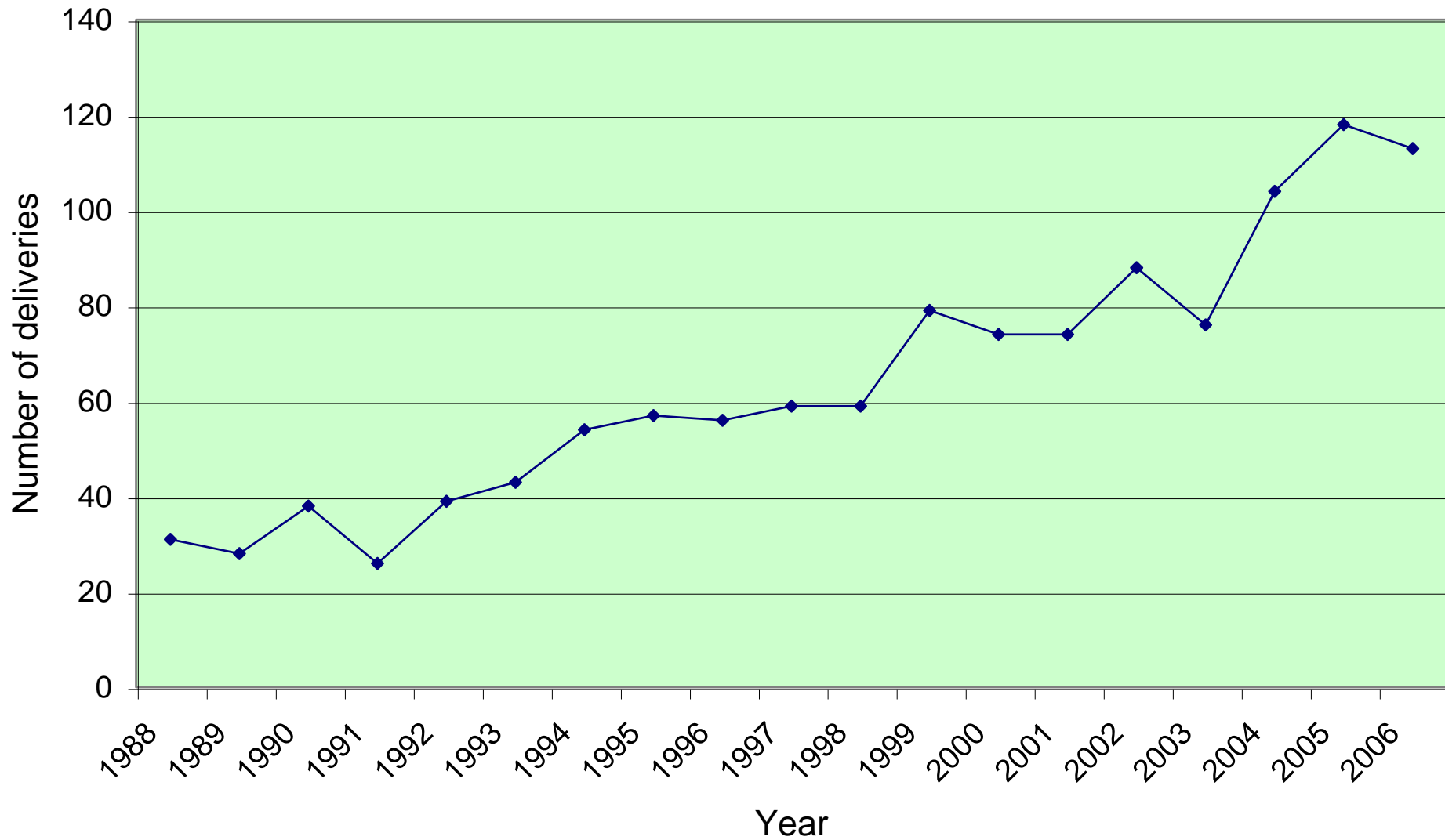


Dummer et al (2012) Targeting policy for obesity prevention: identifying the critical age for weight gain in women. *J Obesity*

% women in NS classified as underweight (<55kg), normal weight (55-75kg), overweight (>75-90kg) and obese (>90kg) by time period



Number of deliveries to severely obese women, 1988-2006

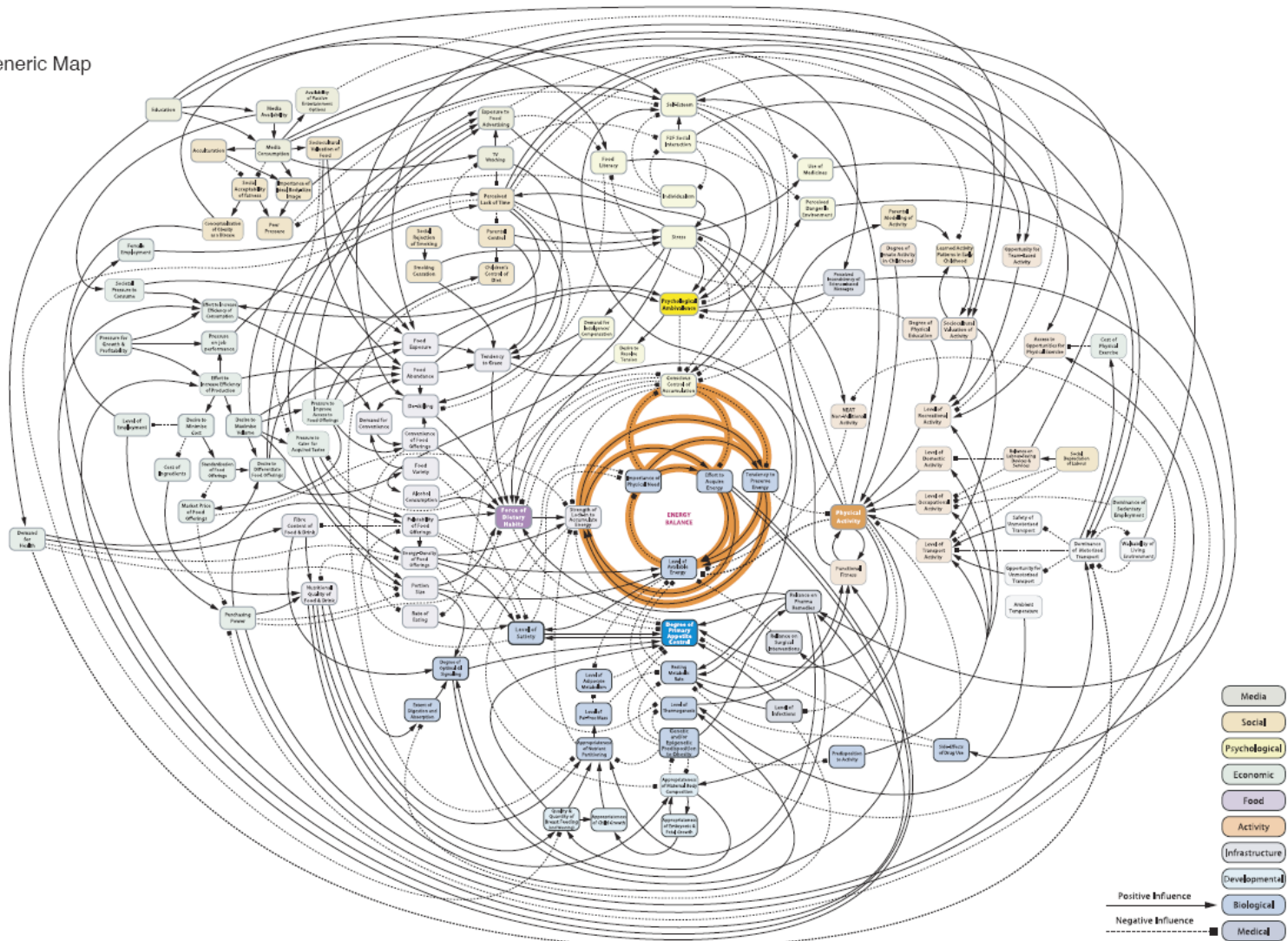


Unpublished data

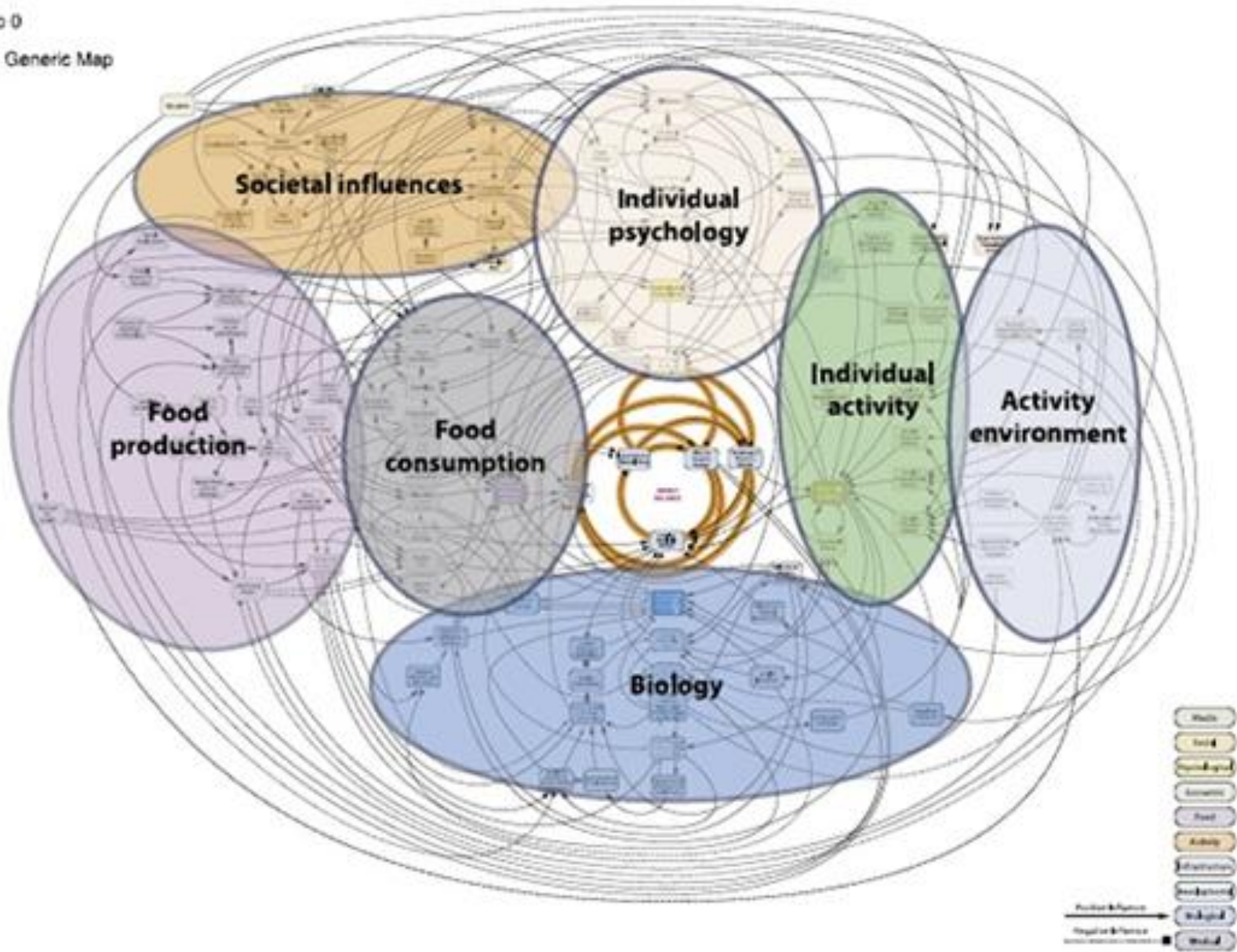
Obesity: a 'wicked problem'

Map 0

Full Generic Map



Map 0
Full Generic Map



Gestational Diabetes

- Affects 1.1-25.5% of pregnancies in US
- Prevalence on increase in last decade
- Linked to short term and long term adverse health outcomes in women and their offspring



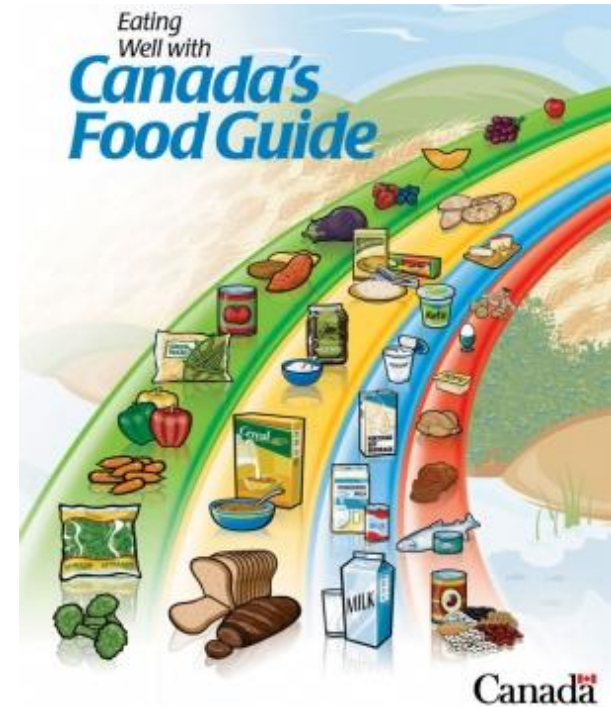
Stand up....

- Don't smoke?
- Do 150 minutes or more of moderate to vigorous physical activity each week?
- Eat according to Canada's Food Guide?
- Maintain a healthy body weight?



Are we practicing what we preach?

- Women adhering to all 4 factors had 83% lower risk of gestational diabetes
- In only 16% of pregnancies did mothers meet all 4 criteria
- Combination of 3 low risk behavioral factors associated with a 41% lower risk of gestational diabetes
- If BMI also in normal range before pregnancy - 52% lower risk of gestational diabetes



It's not just about obesity...

- Society as a whole not eating healthily, sitting around too much, not being physically active enough
- Lack of investment in upstream actions to address the social determinants of health
- Culture that conflicts with the behaviors needed to reduce the burden of ill health in NS



Data sees N.S. at forefront of obesity trend

Study finds need for national strategy to tackle problem

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More Nova Scotia adults are overweight than not and the problem is getting worse, says a new Memorial University of Newfoundland study.

It found that obesity has tripled across Canada from 1985 to 2011 and almost one in five Canadian adults are now obese.

But while the results are startling across the country, Atlantic Canada fares particularly poorly.

Nova Scotia men are among the largest in the country, but women in the province are rapidly catching up.

The number of overweight women in Nova Scotia rose 18 per cent from 2000 to 2011, the study said. One-third of women in the

ages do not have to reveal what percentage of the recommended daily intake of sugar they contain, despite sugar being a major contributor to obesity.

Ogilvie is chairman of the Senate's social affairs, science and technology committee, which will be launching a study into obesity this year, with the hopes of issuing a final report early next year. Food labelling will be one factor it will study.

NDP Leader Thomas Mulcair cast blame on the federal government Tuesday in the House of Commons. He told reporters Prime Minister Stephen Harper has been unwilling to sit down with the provinces and work out a co-ordinated plan.

The Public Health Agency of Canada says it is already working with the provinces and has launched several campaigns to encourage Canadians, especially young people, to be more phys-

Mmmmm, pancakes

Photo by TIM KROCHAK • Staff



Volunteer server Sonya Basler delivers some of the several hundred pancakes and sausage rounds at the annual Shrove Tuesday all-you-can-eat supper at St. Mark's Community Centre in Halifax.

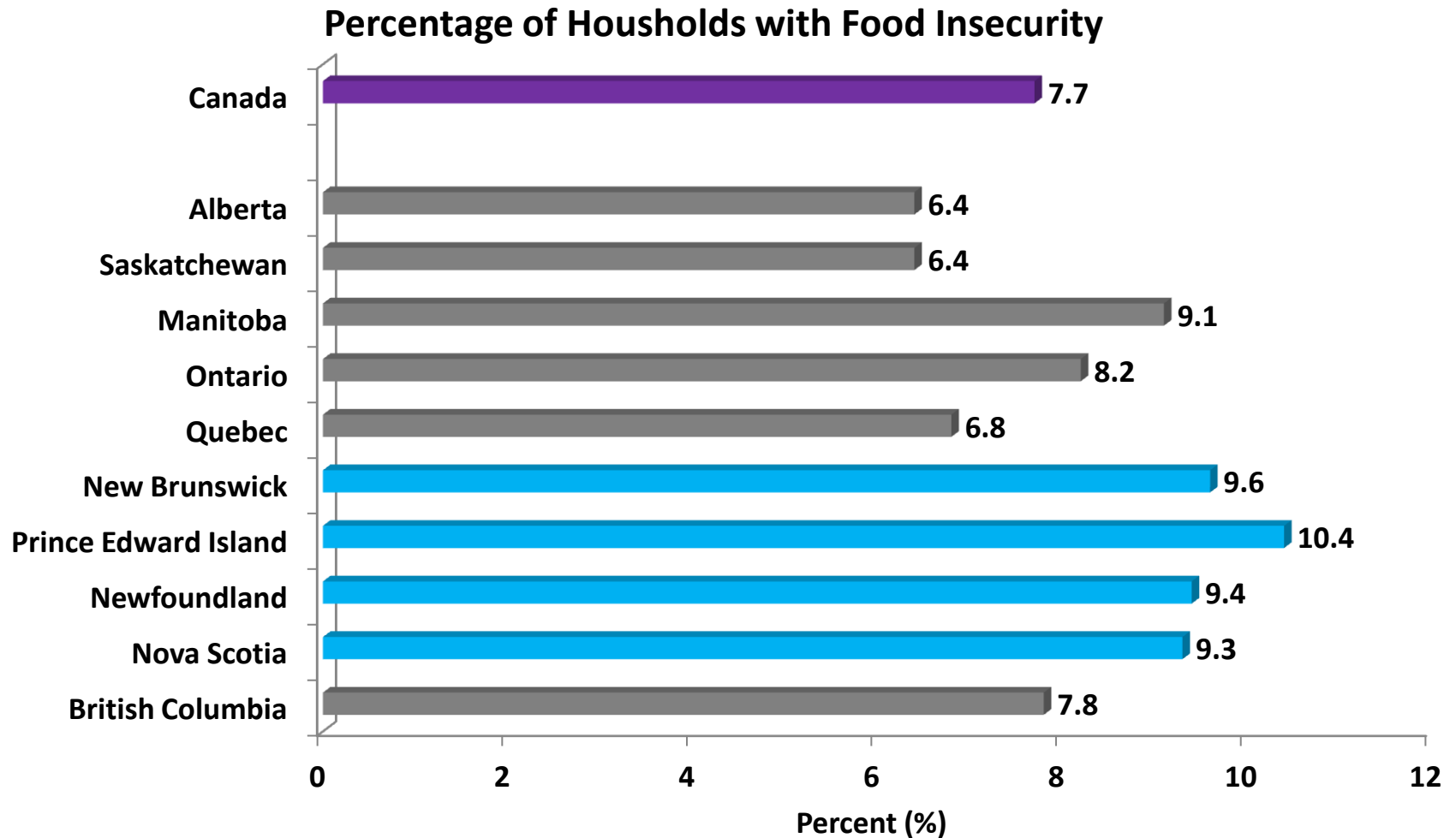
Competing priorities...

ENACT Study:

- Parents and youth reported being over-scheduled in ways that limited options for healthy meal preparation
- Ironically, healthy eating was often sacrificed due to the scheduling of leisure-time physical activities



Income-related food insecurity in Canada



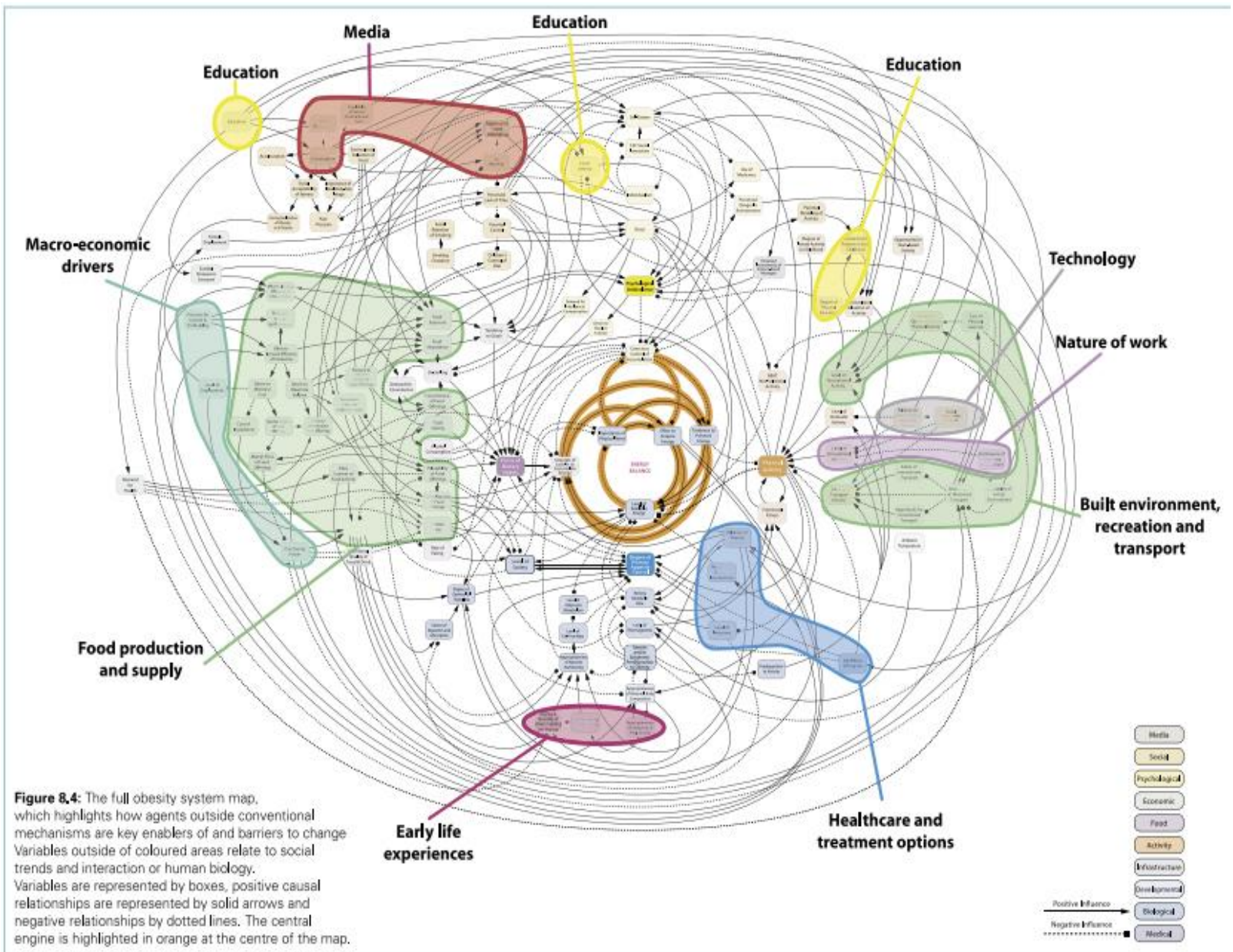


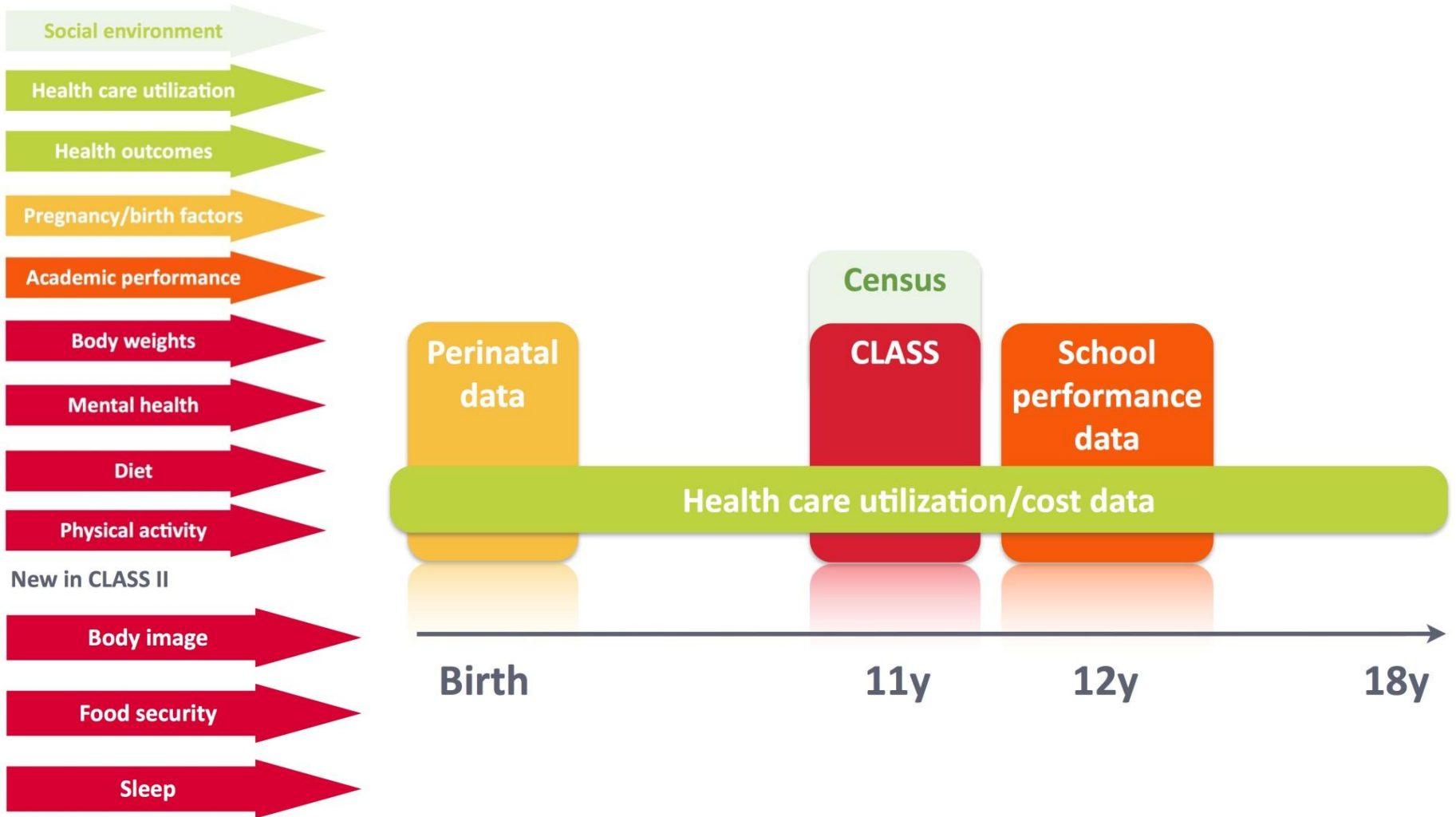
Figure 8.4: The full obesity system map, which highlights how agents outside conventional mechanisms are key enablers of and barriers to change. Variables outside of coloured areas relate to social trends and interaction or human biology. Variables are represented by boxes, positive causal relationships are represented by solid arrows and negative relationships by dotted lines. The central engine is highlighted in orange at the centre of the map.

Children's Lifestyle And School performance Study (CLASS)

- CLASS I (2003) and II (2011)
- Schools with Grade 5 students (10-11 years)
- Parents/guardians completed home survey
- Students completed survey and FFQ, had growth and development privately measured
- Schools completed audit of school environment, policies and practices (CLASS II only)
- Data linkage – health care use and academic attainment



Scope of CLASS



Importance of early prevention

- Children of obese mothers had a 4-fold higher risk of obesity relative to children of normal weight mothers
- Mothers who smoked during pregnancy had an 80% higher risk of having an obese child



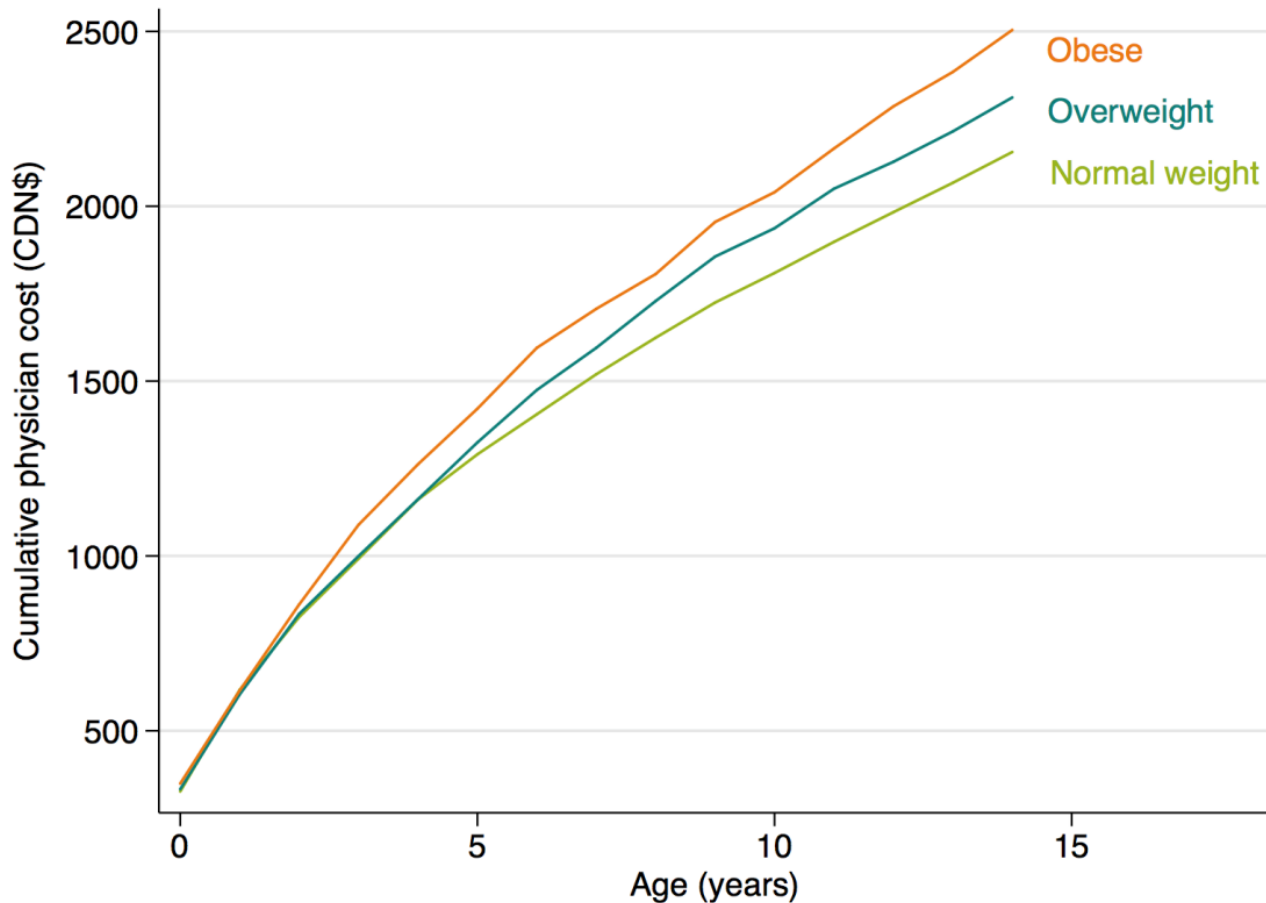
Prenatal/early childhood nutrition

From CLASS II:

- 34% of children were breastfed for <1 week or never
- 32% breastfed for at least 6m, 12% combination fed at 6m
- Breastfeeding conferred greatest protection against obesity
- Combination feeding conferred greater protection than formula only



Childhood obesity and health care use



By the age of 14, obese children have incurred \$400 higher physician costs than normal weight children

Data are for children age 10-14 years (2006 Dollar values)

Economic challenges prevent healthy eating

- 8.3% of children experienced marginal and 17.3% moderate to severe food insecurity
- Moderate to severe FI associated with poorer diet quality, higher BMI and poorer psychosocial outcomes
- Findings provide compelling case for actions to address poverty and ubiquity of cheap, energy dense, nutrient-poor foods



“Natural Experiment”



Increased government investment in health promotion policies



Changes in school environments (NS Nutrition Policy)



CLASS II



Children's Lifestyle And School-performance Study

Potential opportunity to intervene



Implementing a free vegetable or fruit snack program could double the percentage of students meeting recommendations

The opportunity for change

“Workplaces and Institutions are settings in which behaviour is at least to some extent constrained, and in which healthy choices can be encouraged...”

“Employers have a duty of care to their staff and also act as examples...”



Thrive! A Plan for a Healthier Nova Scotia

Policy and environmental approach to healthy eating and physical activity:

- Guiding principles - Healthy Public Policy, Best and Promising Practices, Shared Responsibility and Partnership, Comprehensiveness and Equity – to...
 - Support a Healthy Start for Children and Families
 - Equip People with Skills and Knowledge for Lifelong Health
 - Create More Opportunities to Eat Well and Be Active
 - Plan and Build Healthier Communities



Thrive! Action examples

- World Health Organization (WHO) growth charts for Canada included in provincial electronic medical records
- Nova Scotia Provincial Breastfeeding Policy actions
- Nutrition Standards for Regulated child care settings
- Healthy eating guidelines for public institutions



Back to that “C” change...

- The **Causes** of obesity are **Complex** – not one cause and not one solution
- The **Choices** we make are dictated by the **Choices** we have
- We are surrounded by a **Culture** that **Conflicts** with health messages and is strongly influenced by the social determinants of health
- Be advocates - **Change** requires **Commitment** from us all



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Thank you...

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