

# Obesity in Adults with Intellectual Disabilities

*A Proposed Quality Improvement (QI)/Research Project*

**Philip May MD. FABDM**

Clinical Quality Specialist  
Lee Specialty Clinic

Clinical Associate Professor of Medicine (Gratis)  
University of Louisville School of Medicine  
Louisville, KY

Director of Quality Improvement & Research,  
International Foundation for Chronic Disabilities, Inc

Founding President,  
American Academy of Developmental Medicine & Dentistry, Inc

# Social and Medical Barriers to Optimal Health for Adults with Intellectual Disability

## “Social” Barriers (Alshammari, et al 2018)

1. Communication Skills
2. Patient engagement and Satisfaction
3. Training/Education for persons with ID
4. Attitude/Knowledge of Healthcare Providers
5. Persons with ID being excluded from Health Promotion Research
6. Quality of accessing Healthcare Services

## “Medical” Barriers to Optimal Health for Adults with ID

- Lack of curriculum in Medical Schools
- Few physicians have experience regarding evaluation and management of health conditions that frequently occur in adults with ID.
- Lack of research which addresses how best to evaluate and manage those health conditions (such as obesity) that frequently occur in adult men and women with ID. No “evidence-base”.
- Current health system characterized by “fragmentation” of care delivered by multiple specialists who do not communicate.

# Overcoming Medical Barriers

## American Medical Association

- **Persons with Intellectual Disabilities are a: “Medically Underserved Population” (MUP)**
- **AMA Resolution passed 2010.** Sullivan, T. Designation of the Intellectually Disabled as a Medically Underserved Population (Resolution 805-I-10). Report of the Council on Medical Service, *American Medical Association* CMS Report 3-I-11. 2010.

# Heads-UP Act: H.R. 2417

- Healthcare Extension and Accessibility for Developmentally disabled and Underserved Population Act of 2018. Seth Moulton, U.S. Representative from 6<sup>th</sup> District, Massachusetts. HR 2417
- Governor's Exceptional Medically Underserved Population (EMUP) method: Governor requests change in law from the Secretary HHS.

# The Problem of Obesity



# Obesity is Common in Adults with ID

- Prevalence is 40-50% in various surveys, both men and women who live in the community.
- Associated with higher mortality rates, shorter life expectancy, and higher rate of unmet health needs (Melville, 2006).
- Increased rate of diabetes, dyslipidemia, hypertension, sleep apnea, arthritis.
- Increased Cardiovascular Disease (Heart attacks, Strokes, PVD)
- Increased Gallbladder Disease and Gallstones
- Increased incidence of Gout
- Increased Periodontal Disease
- Increase risk for Cancer
- Associated with abnormalities of brain structure (Atrophy) and function (Cognition, Mood, Behavior)
- Increased risk of mortality for COVID-19 infection.

**Conclusion: Many unmet health needs in adults with ID, often related to obesity, and correctable by treating obesity alone, without medication or surgery.**

# Complications of Obesity: 2 Specific Examples

- Cancer
- Brain Dysfunction

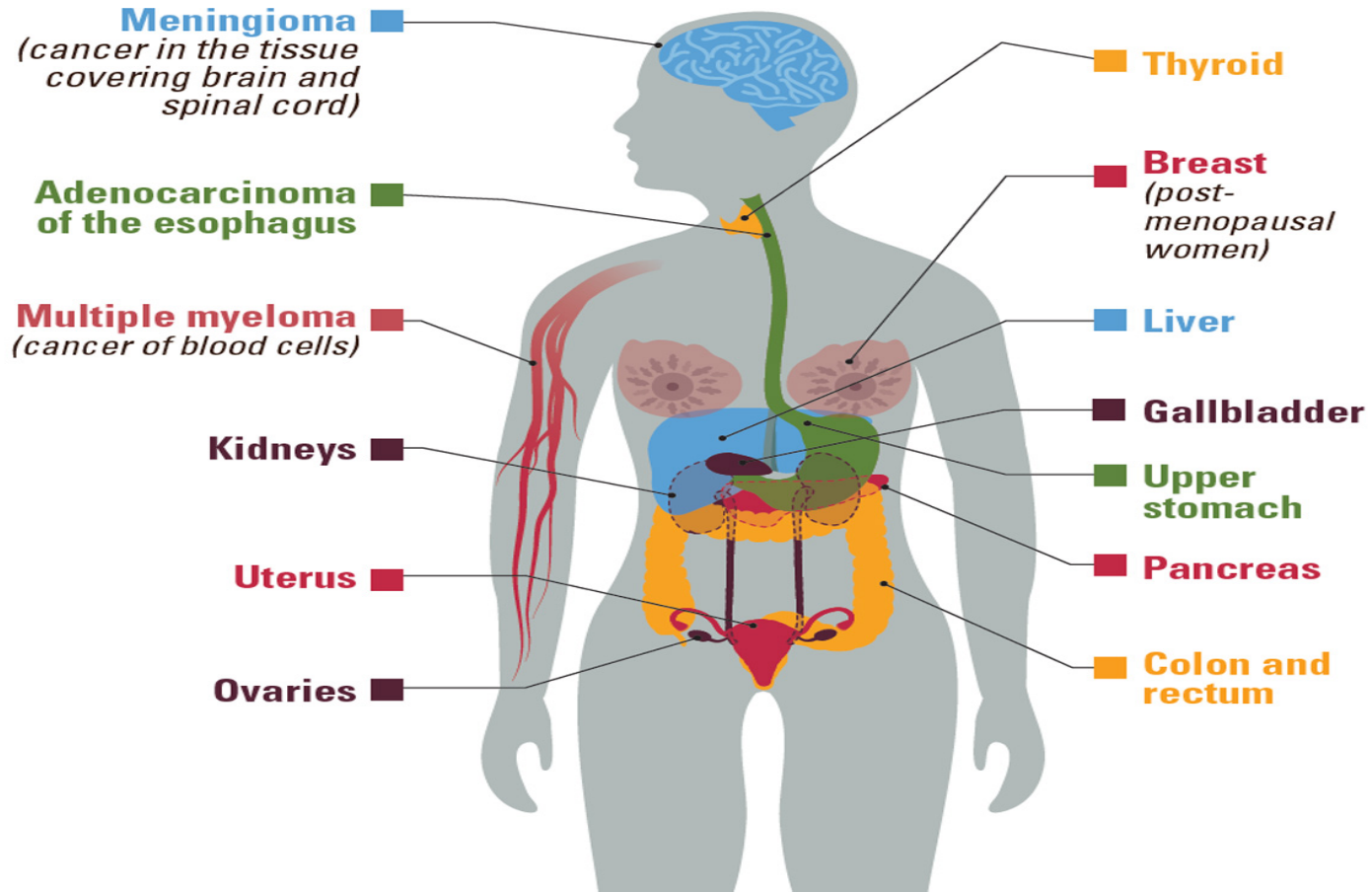


## Obesity and CANCER

Cancers Associated with Overweight and Obesity Make up 40 percent of Cancers Diagnosed in the United States:

*More than 630,000 in the U.S. affected (Report from CDC)*

## 13 cancers are associated with overweight and obesity



# Obesity and Brain Dysfunction

# Obesity associated with Brain Dysfunction

- Shown in many studies in adults and children **without** ID. Reduced size of frontal and temporal lobes. ? Improved with weight loss?
- Since all individuals with ID already have some type of brain dysfunction it is important to provide treatments which both improve and prevent worsening of brain function.
- It is likely that Improved Fitness in adults with ID will lead to improved metabolic disorders as well as brain function, both of which would result in reduced polypharmacy and drug toxicities.

# Treating Obesity

Reducing risk for Cancer, Brain Dysfunction, Metabolic Disorders, Dental Disorders, Mortality from COVID-19 Infection by Promotion of Physical Fitness

# Essential Components of Effective *Quality Improvement* “Fitness” Program

1. “Meaningful” **Daily** Physical Exercise Program. (Includes tooth brushing).
2. Dietary: Reduced caloric intake & composition issues such as increased protein.
3. Supportive and Trained Staff and Caregivers.
4. Close Medical and Administrative Supervision.
5. Documentation of Benefit by Statistical Analysis

# Proposed Methodology for Quality Improvement Project

- Body Composition Analysis (with InBody 570) at Lee Specialty Clinic, Southwest Center, and other sites.
- Routine metabolic tests from Primary Care Physician
- Baseline and Follow-up Psychometric Testing by Psychologist at Southwest Center.
- Individualized Exercise Program prescribed and monitored by Lee Specialty Clinic, Southwest Center, and other sites.
- Interventions include Activity Monitor, Monitoring of Body Composition, Counseling by Physician, Nurse, Dietitian, and Psychologist,
- Individualized diet developed by Licensed Dietitian.
- Statistical Analysis by UofL School of Public Health, to determine efficacy of interventions.



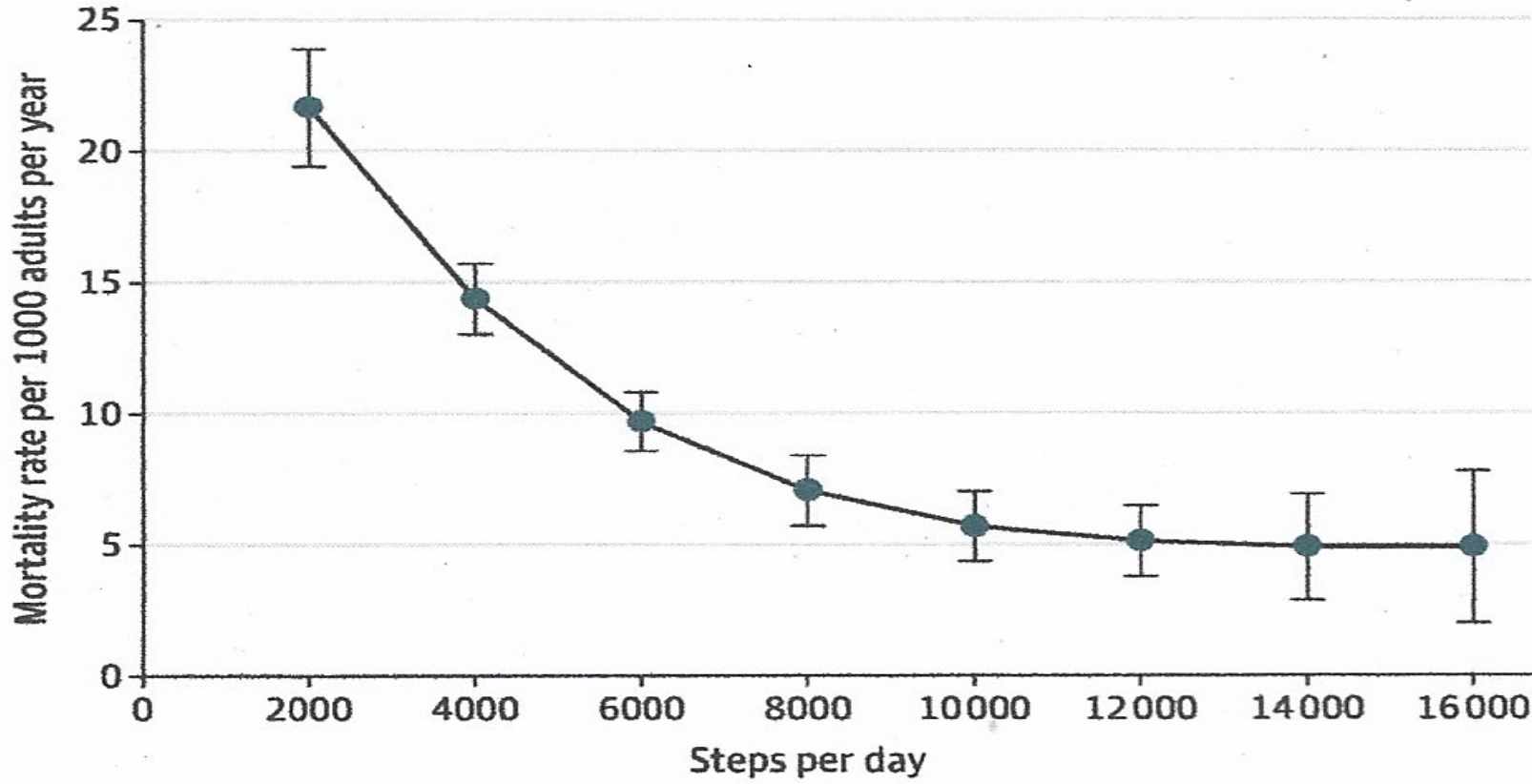
# Anticipated Benefits of Effective Health and “Fitness” Program

- Reduced incidence of metabolic problems (diabetes, dyslipidemia)
- Improved muscle mass and function (treatment of sarcopenia)
- Correction of hypertension
- Correction of Sleep Apnea
- Reduced risk for cardiovascular Disease
- Reduced risk for cancer
- Improved cognition
- Improved mood and behavior
- Reduced polypharmacy
- Production of new Health Guidelines for Patients with ID



# Effect of Exercise on all-Cause Mortality

**Figure 1. Steps per Day and All-Cause Mortality in a Study of the Association of Daily Step Count and Step Intensity With Mortality Among US Adults Aged at Least 40 Years**



Thank You