Obesity: What all health professionals need to know

*Duke Community and Family Medicine Grand Rounds*

August 8, 2017

*Don Bradley- Executive Director, The Practical Playbook
Associate Consulting Professor, Duke School of Medicine*
Objectives

1. Briefly describe updated adult and pediatric obesity trends in the United States

2. Discuss the interprofessional competencies developed by the National Academy of Medicine Roundtable on Obesity Solutions ICSSPMO workgroup for Provider Training and Education

3. Cite specific applications of the competencies for health professionals, including:
   a) Framework of obesity as a disease
   b) Integration of clinical and community care for the treatment of obesity
   c) Competencies for interactions with persons with obesity
Disclosures/acknowledgements

- Practical Playbook funded by the deBeaumont Foundation
- Interprofessional Provider Training and Education partially funded by the Robert Wood Johnson Foundation

www.practicalplaybook.org
Changes in the Prevalence of Obesity among Youth 2-19 yo and Adults ≥ 20 yo

Used with permission from Bill Dietz
Ogden 2016
Flegal 2016
Changes in the Prevalence of Severe Obesity* in 2-19 yo Youth

* Severe obesity: BMI ≥120% of 95th Percentile

Used with permission from Bill Dietz
Changes in the Prevalence of Severe Obesity (BMI \(\geq 40\)) in Adults


Used with permission from Bill Dietz
Prevalence of Obesity in Selected Age Groups – NHANES 2011-2014

- 2-5 yo: 9%
- 6-11 yo: 17%
- 20-39 yo: 36%

Ogden CL et al. NCHS Data Brief #219, November 2015

Used with permission from Bill Dietz
Demographics of People Who Gained ≥ 20 kg between 1985-86 and 1995-1996 (CARDIA)


Used with permission from Bill Dietz
Ethnic Distribution of Obesity in 2-19 yo NHANES 2011-2014

Used with permission from Bill Dietz

Ogden CL et al.
NCHS Data Brief
#219, November 2015
Ethnic Distribution of Obesity in Adults
NHANES 2011-2014

Ogden CL et al. NCHS Data Brief #219, November 2015

Used with permission from Bill Dietz
Prevalence of obesity in adults by poverty income ratio, sex, race and ethnicity: US 2005-2008

Ogden 2010

†Significant trend.

NOTES: PIR is poverty income ratio. Persons of other race and ethnicity included in total.
Adults with obesity by PIR, race and ethnicity. US 2005-2008

Ogden 2010

= not “poor”
Epidemiology of obesity

1. While the prevalence of obesity in children and adolescents has stabilized, the rate of severe obesity continues to increase.

2. The prevalence of obesity in adults continues to increase, and the increase in severe obesity is even greater.

3. The prevalence of obesity rises dramatically in early adulthood.
Epidemiology of obesity (2)

4. African American and Hispanic populations are disproportionately impacted by obesity

5. Among men, obesity prevalence is generally similar at all income levels, with a tendency to be slightly higher at higher income levels.

6. Among women, obesity prevalence increases as income decreases.

7. Most people with obesity are NOT poor
Competencies for preventing and managing obesity

• Competency:
  – An observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes.
  – Since competencies are observable, they can be measured and assessed to ensure their acquisition.

Provider Competencies for the Prevention and Management of Obesity

Development framework for interprofessional obesity competencies

Barr interprofessional competencies*

1. Common
2. Complementary
3. Collaborative

Englander health professions competencies**

1. Patient care
2. Knowledge for practice
3. Practice-based learning and improvement
4. Interpersonal and communications skills
5. Professionalism
6. Systems-based practice
7. Interprofessional collaboration
8. Personal and professional development

Interprofessional obesity competencies***

1. Demonstrate a working knowledge of obesity as a disease
2. Demonstrate a working knowledge of the epidemiology of the obesity epidemic
3. Describe the disparate burden of obesity and approaches to mitigate it
4. Describe the benefits of working interprofessionally
5. Apply skills for interprofessional collaboration and clinical-community integration …
6. Use patient-centered communication …
7. Employ strategies to minimize bias towards and discrimination against people with obesity …
8. Implement a range of accommodations and safety measures specific to people with obesity
9. Utilize evidence-based care/services for people with obesity or at risk for obesity
10. Provide evidence-based care/services for people with obesity comorbidities

*Barr 1998
**Englander, et.al 2013
***Bradley, Dietz, et.al 2017
Organizations Engaged in the Development of Obesity Competencies (listed alphabetically)

- Academy for Eating Disorders
- Academy of Nutrition and Dietetics
- Accreditation Council for Graduate Medical Education
- American Academy of Family Physicians
- American Academy of Pediatrics
- American Association of Colleges of Nursing
- American Association of Colleges of Osteopathic Medicine
- American Association of Colleges of Pharmacy
- American Board of Obesity Medicine
- American Council of Academic Physical Therapy
- American Dental Education Association
- American Kinesiology Association
- American Psychological Association
- Association for Prevention Teaching and Research
- Association of American Medical Colleges
- Association of Schools and Programs of Public Health
- Centers for Medicare and Medicaid Services
- Interprofessional Education Collaborative
- National Organization of Nurse Practitioner Faculties
- Physician Assistant Education Association
- Society for Public Health Education
- Society of Teachers of Family Medicine
- The Obesity Society
- YMCA of the USA
The Competency Development Process

- Step 1: Define terms, scope, application
- Step 2: Identify and engage diverse stakeholders
- Step 3: Collect health professions’ competencies
- Step 4: Draft common competencies; iterative stakeholder review
- Step 5: Disseminate and pilot/incorporate competencies
- Step 6: Identify curricular resources
- Step 7: Periodic review and updates
Obesity Care Competencies

• **Core Obesity Knowledge:**
  – **1.0** Demonstrate a working knowledge of obesity as a disease
  – **2.0** Demonstrate a working knowledge of the epidemiology of the obesity epidemic
  – **3.0** Describe the disparate burden of obesity and approaches to mitigate it

• **Interprofessional Obesity Care:**
  – **4.0** Describe the benefits of working interprofessionally to address obesity to achieve results that cannot be achieved by a single health professional
  – **5.0** Apply skills necessary for interprofessional collaboration and integration of clinical and community care for obesity
Obesity Care Competencies (2)

- **Patient interactions related to obesity care:**
  - **6.0** Use patient-centered communication when working with individuals with obesity and others
  - **7.0** Employ strategies to minimize bias towards and discrimination against people with obesity, including weight, body habitus, and the causes of obesity
  - **8.0** Implement a range of accommodations and safety measures specific to people with obesity
  - **9.0** Utilize evidence-based care/services for people with obesity or at risk for obesity
  - **10.0** Provide evidence-based care/services for people with obesity comorbidities
Competency 5.0: Apply the skills necessary for effective interprofessional collaboration and integration of clinical and community care of obesity

- 5.1 Perform effectively in an interprofessional team
- 5.2 Promote the development and use of an integrated clinical-community care plan
- 5.3 Collaborate with community organizations to advocate for nutrition and physical activity services, programs, and/or policies that address obesity
National Academy of Medicine (IOM)
Roundtable on Obesity Solutions, 2017

Food-insecure households are uncertain of having, or unable to acquire, at some time during the year, enough food to meet the needs of all their members because they had insufficient money or other resources for food.
The BUILD Health Challenge

Awardees

Implementation Applicants

Planning Applicants

Interim Community Development Association
Seattle

East Bay Asian Local Development Corporation
Oakland

Partners for Better Health
Los Angeles

National Health Foundation
Los Angeles

Oregon Public Health Institute
Portland

Together Colorado
Denver

The Civic Canopy
Denver

YMCA of the Pikes Peak Region
Colorado Springs

Eastside Community Network
Detroit

Polk County Housing Trust Fund
Des Moines

Environmental Health Watch
Cleveland

HAPHousing
Springfield

Northwest Bronx Community & Clergy Coalition
New York

Druid Heights Community Development Center
Baltimore

Florida Institute for Health Innovation
Miami

Houston Food Bank
Houston

PRACTICAL PLAYBOOK
North Pasadena, Texas

Mission is to eliminate the conditions that cause food insecurity in north Pasadena.

1. Produce a sustainable, publicly accessible source of healthy food in the form of north Pasadena’s first Community-Supported Agriculture (CSA) program and research campus;

2. Expand a local network of innovative healthy food suppliers and distributors in north Pasadena (e.g., corner stores, non-franchise restaurants, and school-based food co-ops); and

3. Launch the community-clinical linkage initiatives of a Fruit and Vegetable Prescription Policy (FVRx), Food FARMacies, and a Food Scholarship Program that help residents access food and make healthy choices.

Key Partners:
- Houston Food Bank
- Harris County Public Health and Environmental Services
- The University of Texas MD Anderson Cancer Center

http://buildhealthchallenge.org/communities/awardee-harris-county-texas/
Competency 6.0: Use patient-centered communication when working with individuals with obesity and others

- **6.1**: Discuss obesity in a non-judgmental manner using people first language in all communications

- **6.2**: Incorporate the environmental, social, emotional and cultural context of obesity into conversations with people with obesity

- **6.3**: Use person- and family-centered communication (e.g. using active listening, empathy, autonomy support/shared decision making) to engage the patient and others
People First Language

- Overweight is a description
- An “obese person” is an identity – he or she is obese, not a father, mother, or a person characterized by their achievements
- An “obese person” is more likely to be held responsible for their weight
- Obesity is a disease
- Describing a person with obesity focuses attention on cause

Used with permission from Bill Dietz
Mean ratings of the 11 terms to describe excess weight

**Full Sample (N=390)**

- Weight: a
- BMI: b
- Weight Problem: b
- Excess Weight: b
- Unhealthy Body Weight: b,c
- Unhealthy BMI: c
- Heaviness: d
- Obesity: d
- Large Size: d
- Excess Fat: d
- Fatness: e

---

**Heavy [Puhl]**

**Chubby [Puhl]**

**Morbidly obese [Puhl]**

---

Volger 2012

Puhl 2013
Competency 9.0: Utilize evidence-based care/services for people with obesity or at risk for obesity

- 9.1 Identify credible information to support obesity care
- 9.2 Evaluate BMI and other anthropometric measures routinely
- 9.3 Identify physical and psychosocial comorbidities and their potential impact on the health of the individual
- 9.4 Engage relevant health professionals to initiate a comprehensive care plan using shared decision-making within the person’s context
- 9.5 Identify access-to-care barriers for patients with obesity and solutions to mitigate those barriers
- 9.6 Employ evidence-based individual and family behavioral-change strategies such as motivational interviewing and cognitive behavioral therapy
Measurement of Obesity

• Body mass index (wt in kg/height in m$^2$)
  – Overweight: BMI = 25-29.9
  – Obesity: BMI $\geq$ 30
  – Severe obesity: BMI $\geq$ 40

• Fat distribution - waist circumference

• Children and adolescents – percentiles
  – Overweight: BMI = 85$^{th}$-95$^{th}$ %tile
  – Obesity: $\geq$ 95$^{th}$ %tile

• Severe obesity: 120% of 95$^{th}$ percentile

BMI as a vital sign?
Experiencing a Developmental Approach to Childhood Obesity: The Fetal and Early Childhood Years—Workshop in Brief

EARLY ORIGINS OF OBESITY
The Role of Epigenetics and Opportunities for Intervention

The model presented is intended to highlight the workshop objectives, rather than to be fully comprehensive. All levels of the internal and external environment interact with each other in a dynamic manner.
Medical Complications of Obesity

- Pulmonary disease
  - asthma
  - obstructive sleep apnea
  - hypoventilation syndrome
- Nonalcoholic fatty liver disease
  - steatosis
  - steatohepatitis
  - cirrhosis
- Gall bladder disease
- Gynecologic abnormalities
  - abnormal menses
  - infertility
  - polycystic ovarian syndrome
- Osteoarthritis
- Skin
- Gout
- Idiopathic intracranial hypertension
- Stroke
- Cataracts
- Coronary heart disease
- Diabetes
- Dyslipidemia
- Hypertension
- Severe pancreatitis
- Cancer
  - breast, uterus, cervix
  - colon, esophagus, pancreas
  - kidney, prostate
- Phlebitis
  - venous stasis

Source: Rudd Center for Food Policy and Obesity
USPSTF guidelines related to obesity

Children/adolescents

• Screen for obesity for those 6 years and above
• Offer or refer for interventions for those with obesity
• Comprehensive, intensive behavioral interventions (26 + contact hours)
• B recommendation
• USPSTF. JAMA 2017

Adults

• Screen for obesity for adults
• Offer or refer for interventions for those with obesity (BMI >/= 30)
• Intensive, multicomponent behavioral interventions (12-26 sessions)
• B recommendation
• USPSTF. Annals IM 2012
Take home messages

1. Obesity is a chronic disease and a major health issue in the US
2. Obesity reflects the inequities in the US health system
3. Obesity requires a cross sector, interprofessional prevention and treatment approach
4. We have an evidence base for what works and multiple resources for implementation
5. Bias and stigma are a major issue in dealing with obesity
Durham resources

• **ShapeNC**: [http://www.smartstart.org/shape-nc-home/](http://www.smartstart.org/shape-nc-home/)

• **Partnership for a Healthy Durham**: [http://healthydurham.org/](http://healthydurham.org/)
  – Obesity and Chronic Disease Committee: [http://healthydurham.org/committees/obesity-and-chronic-illness-committee](http://healthydurham.org/committees/obesity-and-chronic-illness-committee)

Duke Resources

- Duke Diet and Fitness Center: https://www.dukedietandfitness.org/
- Duke Department of Pediatrics: https://pediatrics.duke.edu/divisions/healthy-lifestyles
- Duke World Food Policy Center: https://sanford.duke.edu/articles/planning-food-policy-center-duke-university
- Duke Obesity Prevention Program: http://chpir.org/_homepage-content/research/dopp/
- Duke Global Heath: http://globalhealth.duke.edu/topics/obesity
- DCRI: https://dcri.org/aha-childhood-obesity/
References for obesity


References for obesity (2)


References for competencies


