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# **The Chickasaw Nation's Empowered Living Clinic**

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# Disclosures

In the past 24 months, Stephanie Schofield and Kayla Dewitt have no relevant financial relationships with the manufacturer(s) of commercial services discussed in this CME activity.

We do not intend to discuss and unapproved/investigative use of a commercial product/device in our presentation.



# Learning Objectives

1. Recognize how best practices for pediatric obesity management can be applied in an Indian Health Service setting.
2. Identify strengths of a team-based approach to pediatric obesity management.
3. Be informed on how to integrate these principles of care into their daily practice.



# Background Information

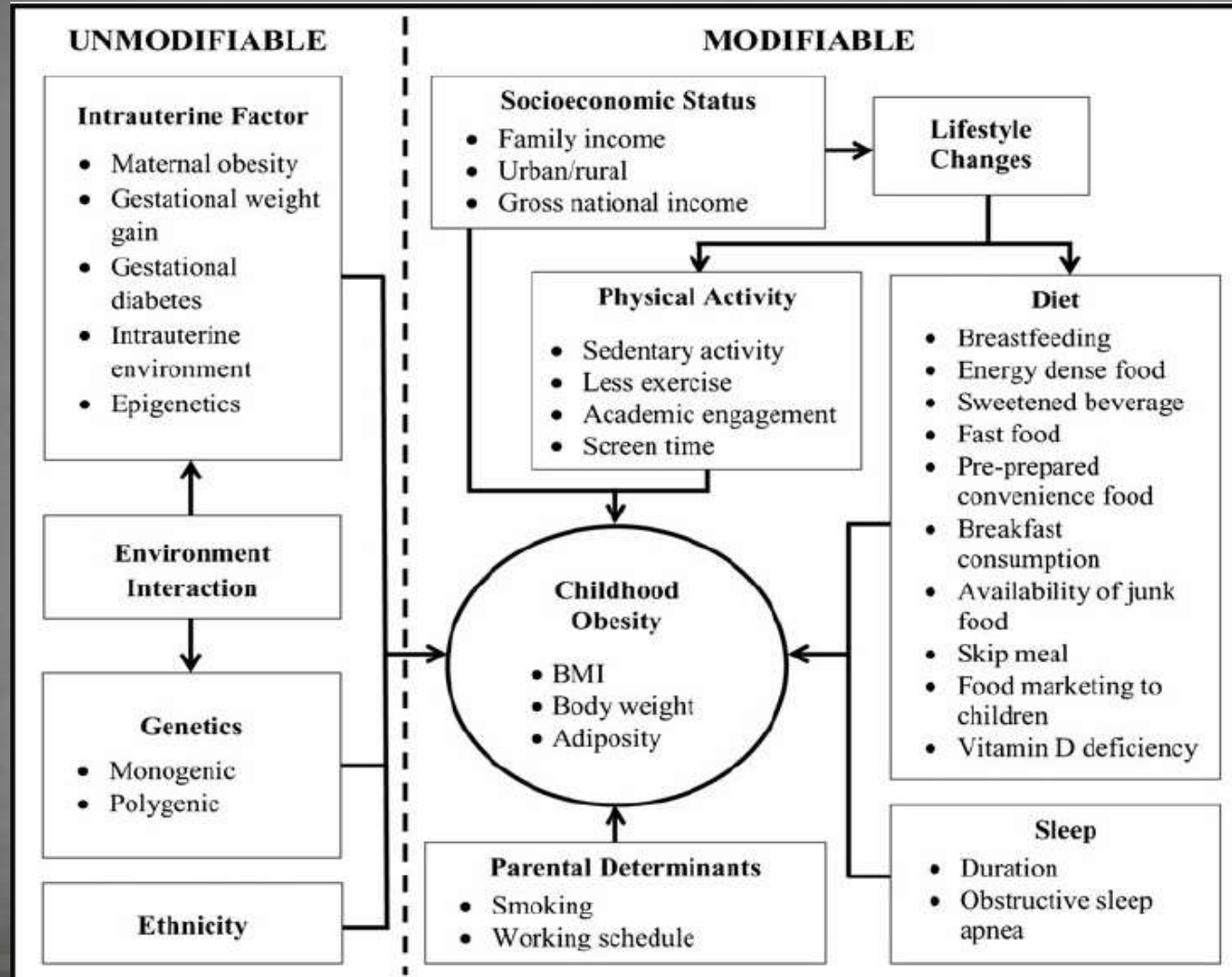
- Pediatric obesity statistics
- Our population statistics



Trends in obesity and severe obesity... (Hales et al 2018)  
Longitudinal trends in body mass index...(Lange et al 2021)



# Social determinants of health factors



Multifactorial Influences of Childhood Obesity (Ang et al 2012)



# History of Empowered Living

2015

- Empowered Living established
- ½ day per week
- Ardmore Health Clinic

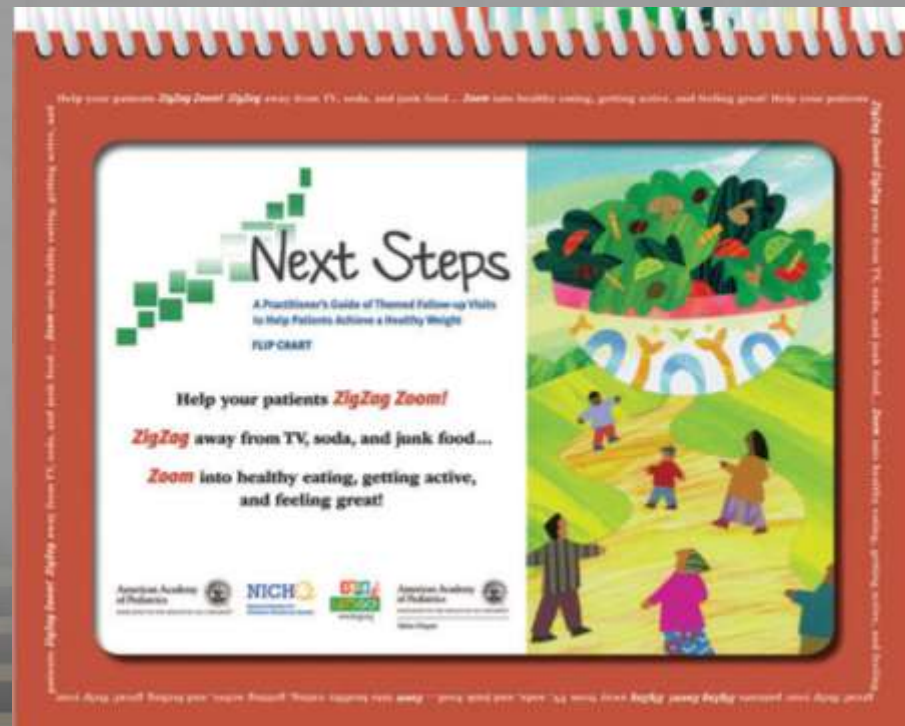
2022

- Full time Empowered Living Team established
- Ardmore Health Clinic and Chickasaw Nation Medical Center
- Expanded day/times



# Pediatric Obesity Management

- Collaboration from multiple departments
- Guidance from experts in the field
  - Facilitation trainings and collaboration
- Journal Clubs
- Pediatric Integration Plan
  - Chart Reviews



# Pediatric Obesity Management

- Staged approach and consult system

SUPPLEMENT ARTICLE

## Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report

Sarah E. Barlow, MD, MPH and the Expert Committee

Division of Pediatric Gastroenterology, Nutrition, and Hepatology, Department of Pediatrics, Baylor College of Medicine, Texas Children's Hospital, Houston, Texas

The authors indicated no financial relationships relevant to this article.

**ABSTRACT**

To revise 1998 recommendations on childhood obesity, an Expert Committee, comprised of representatives from 15 professional organizations, appointed experienced scientists and clinicians to 3 writing groups to review the literature and recommend approaches to prevention, assessment, and treatment. Because effective strategies remain poorly defined, the writing groups used both available evidence and expert opinion to develop the recommendations. Primary care providers should universally assess children for obesity risk to improve early identification of elevated BMI, medical risks, and unhealthy eating and physical activity habits. Providers can provide obesity prevention messages for most children and suggest weight control interventions for those with excess weight. The writing groups also recommend changing office systems so that they support efforts to address the problem. BMI should be calculated and plotted at least annually, and the classification should be integrated with other information such as growth pattern, familial obesity, and medical risks to assess the child's obesity risk. For prevention, the recommendations include both specific eating and physical activity behaviors, which are likely to promote maintenance of healthy weight, but also the use of patient-centered counseling techniques such as motivational interviewing, which helps families identify their own motivation for making change. For assessment, the recommendations include methods to screen for current medical conditions and for future risks, and methods to assess diet and physical activity behaviors. For treatment, the recommendations propose 4 stages of obesity care; the first is brief counseling that can be delivered in a health care office, and subsequent stages require more time and resources. The appropriate-

[www.pediatrics.com/cgi/content/full/114/2/parts.2007-2026C](http://www.pediatrics.com/cgi/content/full/114/2/parts.2007-2026C)  
doi:10.1142/peds.2007-2026C

**Key Words**  
obesity, prevention, assessment, treatment, clinical practice patterns, disease surveillance, office management, motivational interviewing, counseling, patient education, nutrition, assessment

**Abbreviations**  
AC—American Academy of Child and Adolescent Psychiatry  
CDC—Centers for Disease Control and Prevention  
NHLBI—National Heart, Lung, and Blood Institute  
USDA—US Department of Agriculture  
US—United States  
NE—medical history

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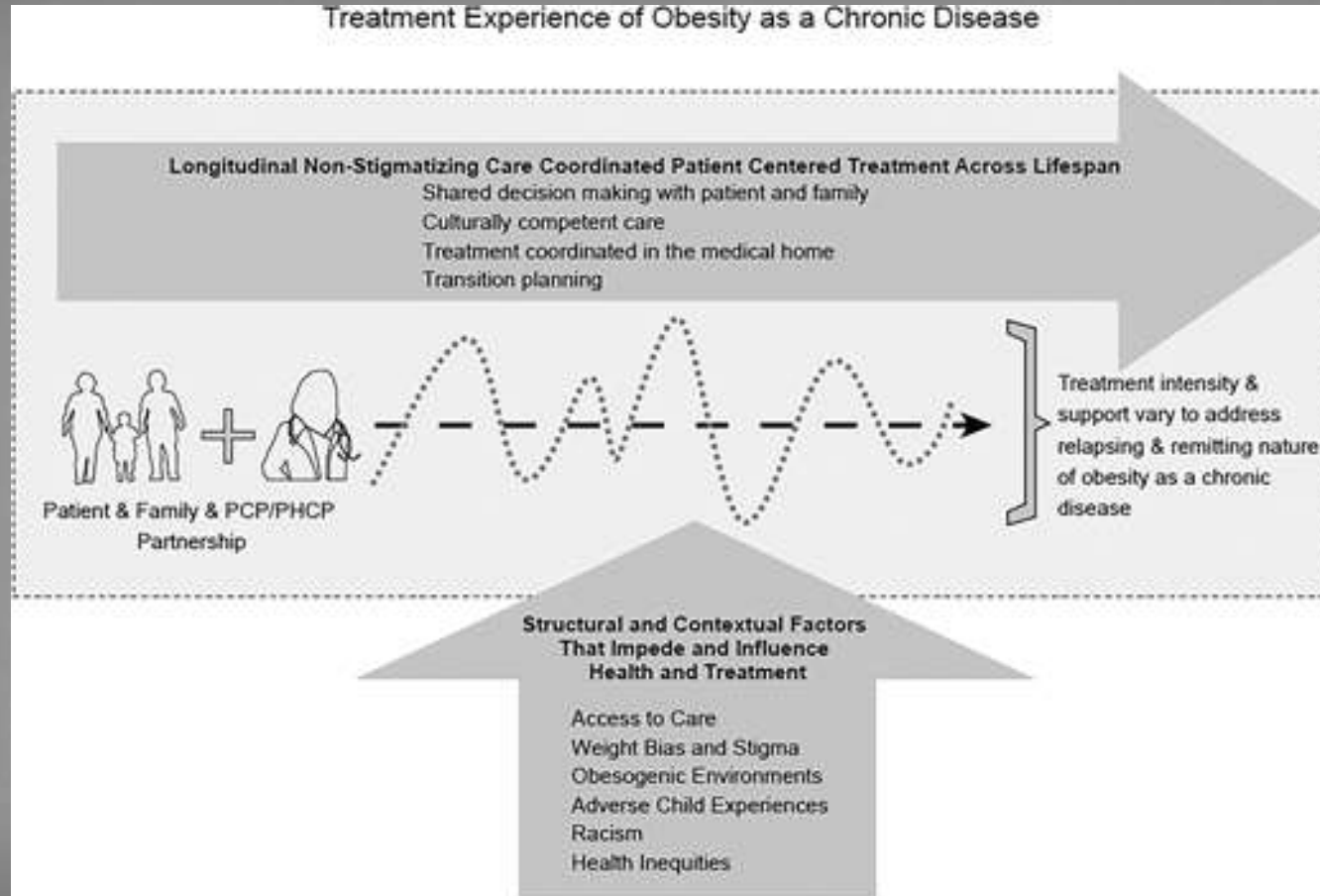
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Expert committee recommendations regarding..(Barlow et al 2007)



# Current Guidelines



Treatment experience of obesity as a chronic disease (this figure illustrates how longitudinal care is important to help address this chronicity and to address and buffer the social and contextual factors that influence a person's health).



# Pediatric Obesity Management

- Adapting to our practice setting
- Incorporating telehealth visits to improve access
- Expansion of services



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# Health Equity Considerations

- Variety of cultures and socioeconomic backgrounds
  - Look at the patient, family, and environment as a whole
- Resources
  - Tribal
  - State
  - Federal



# Team Based Approach

- Patient visits involve a high level of collaboration before, during, and after the visit.
  - Leads to a higher level of care.
  - Leads to addressing concerns from multiple angles.
  - Helps our team to reinforce patient goals that may be outside our areas of expertise.



# Weight Bias and Stigma

- What to focus on
  - Health and growth
  - Overall wellness
  - Terms and words that children/families prefer to use
  - Clear communication and clarification
  - An optimistic, strength-based approach
  - Acknowledgement that both height and weight are the result of the interaction of genetics/heredity and the environment
  - Body diversity



# Weight Bias and Stigma

- What to avoid
  - Unclear language
  - Blaming language or focusing on what the child can't do or should stop doing
  - Labeling children according to body type terminology
  - Using growth charts to shock or shame
  - Solely focusing upon weight, size, or BMI
  - Comparing children with norms where little normative data exists



# Comprehensive Obesity Treatment

- What to avoid
  - Unclear language
  - Blaming language or focusing on what the child can't do or should stop doing
  - Labeling children according to body type terminology
  - Using growth charts to shock or shame
  - Solely focusing upon weight, size, or BMI
  - Comparing children with norms where little normative data exists



# Integrate Into Daily Practice

- Motivational interviewing



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# Integrate Into Daily Practice

- Goal setting



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# Integrate Into Daily Practice

- Ask 7 questions
  - What does the patient want to do?
  - What small steps could help them accomplish their goal?
  - What could make it easier?
  - What might make it harder?
  - When will you do this?
  - How will they keep track of what they do?
  - When will they review how it's going?



# Integrate Into Daily Practice

- Collaborate with your patient's team
  - Quick email
  - Phone call
  - Tag in a note in your electronic medical record to ensure that they stay up to date on patient's care





# Case Example



# Patient

- 6-year-old female patient
- Initial family concerns
  - Activity level
  - Is she just “big boned”?
  - Why is she not active?
  - Worry about changing family diet
- Strengths
  - Equipment for activities
  - “Social Butterfly”
  - Change is important to family



# Further History

- Nutrition
  - Not a picky eater
  - Described as “always hungry”
- Activity
  - Easily fatigued when running
  - Good at bike riding.
- Sleep and Screen time
  - Gets 1-2 hours screen time daily
  - Gets 11 hours of sleep at night
    - Reports snoring

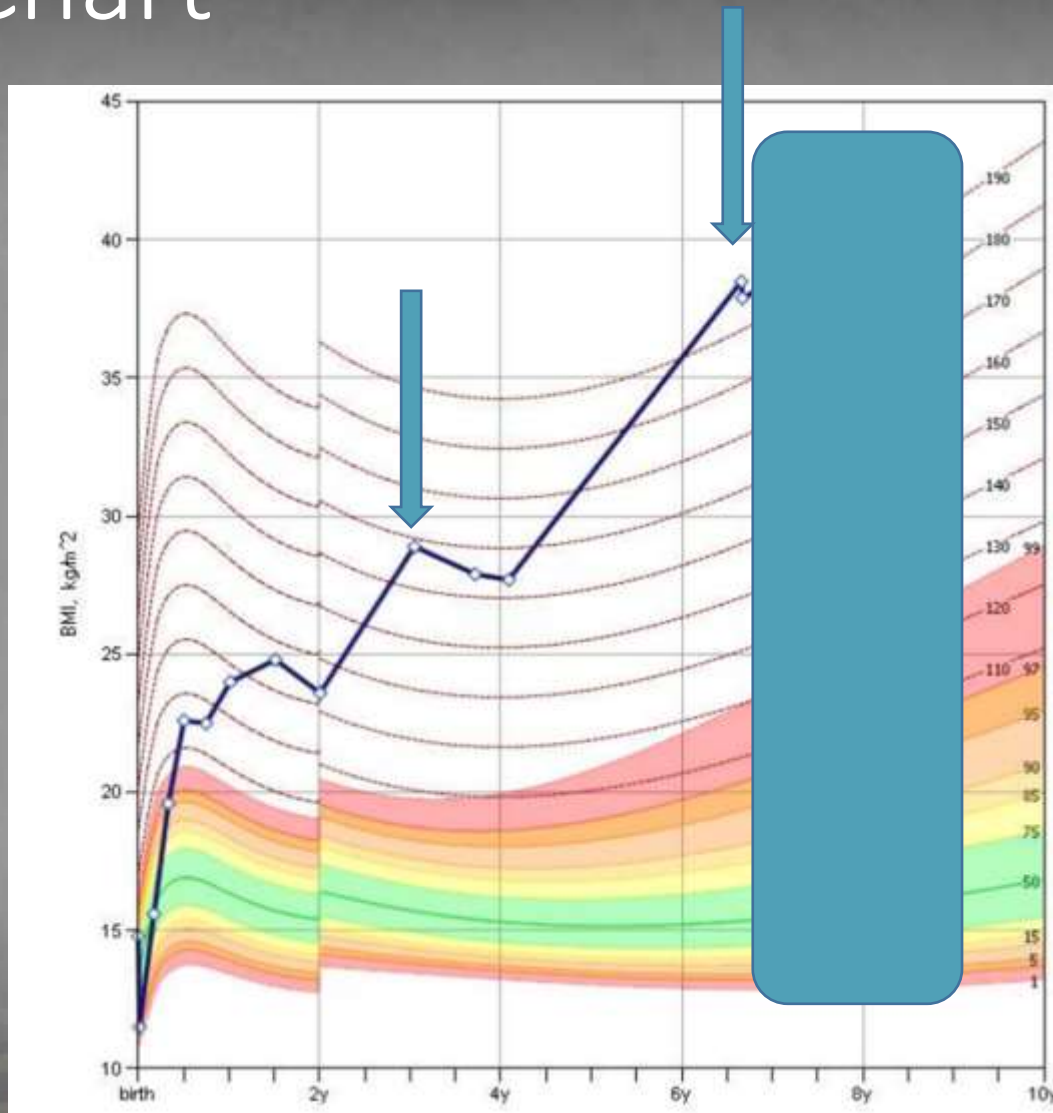


# Medical and Surgical History

- Risk factors
  - Maternal obesity
  - Early antibiotics
  - C-section
- Protective factors
  - Breastfeeding
- ADHD
  - Stimulant medication



# Growth Chart





# Family and Social History

- Family History: Obesity, history of bariatric surgery, gallbladder disease, mental health concerns, and type 2 diabetes.
- Social History:
  - Lives with parents and older brother
  - Attends public school
  - Culture
    - First American
      - Chickasaw and Apache



# ROS

- General
  - Denies fevers or recent illness
- ENT
  - Reports snoring
- Resp
  - Short of breath with activity
- Skin
  - Positive for darkening of skin around neck and underarms
- MSK
  - Will complain of pain with activity – unsure if pain or “boredom”
- Sleep
  - Snoring, denies pauses in breathing
- Neuro, Pysch, GU, GI, CV, and Endo systems negative.



# Vital Signs and Physical Exam

- Weight - 62.46 kg (137.57 lbs)
- Height - 128.27 cm (50.5 in)
- BMI - 37.96, 197% of the 95th percentile
- BP 115/51
  - Stage 1 HTN for age, sex, and height
- Exam findings
  - Acanthosis noted on neck
  - Sexual Maturity Rating - I
  - No hepatomegaly palpable
    - Difficult exam due to habitus
  - Lungs clear, normal S1, S2 no murmur
  - Full ROM of major joints



# Laboratory Results

<i>Labs</i>	
Glucose	98
A1C	5.1
ALT	33
TC	132
TG	85
LDL	89
HDL	39
<i>Visit</i>	Initial

- Genetic Testing through uncovering rare obesity program - indeterminate



# Management

- Obesity, Elevated blood pressure, Insulin resistance, Hypertriglyceridemia, Hypoalphalipoproteinemia, Exercise
  - Motivational Interviewing
  - SMART Goal Setting Techniques
- Initial Goals based on family response to education
  - Eat the colors of the rainbow over the next two weeks
  - Trial a 10-minute kids exercise video as a family
- Strengths Identified
  - Strong family support
- Follow up in 2 weeks, then every 4-6 weeks
- During follow ups, early adrenarche found



# Progress

- Goals

- Using reminder signs to work on a routine (picture schedule)
- 30 minutes of moderate physical activity 5 times a week
- Continue to focus on eating colors of the rainbow, trying a new fruit or vegetable every 1-2 weeks
- Ride bike 3 times per week for at least 10 minutes
- Stretches and dance work outs (online) 3 x per week



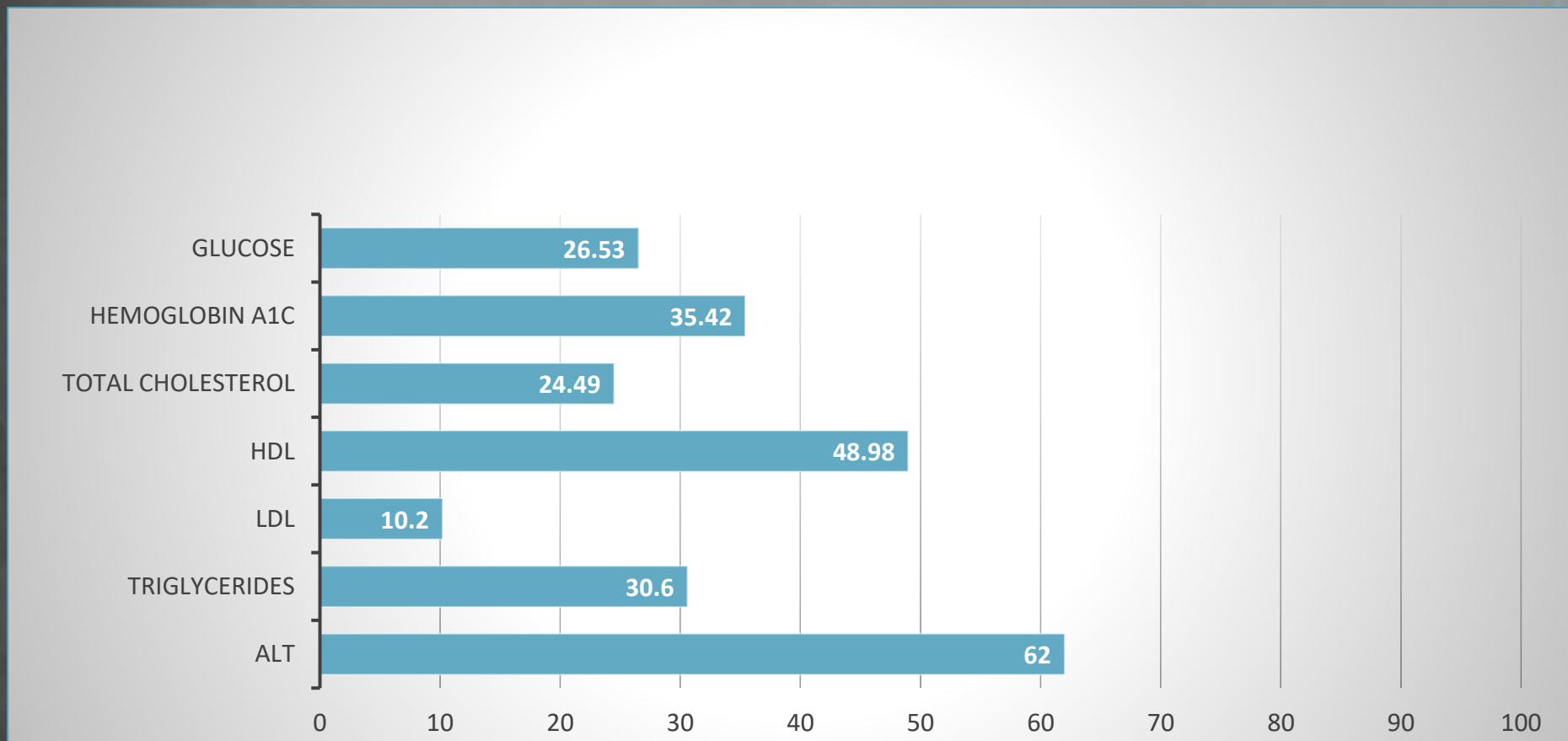
# Progress in Labs



<i>Labs</i>					
Glucose	98	91	93	91	92
A1C	5.1	5.1	5.3	5.2	5.1
ALT	33	34	30	19	21
TC	132	144	138	149	141
TG	85	94	107	65	79
LDL	89	93	81	91	82
HDL	39	46	46	53	50
<b>Visit</b>	Initial	6 months	12 months	18 months	24 months

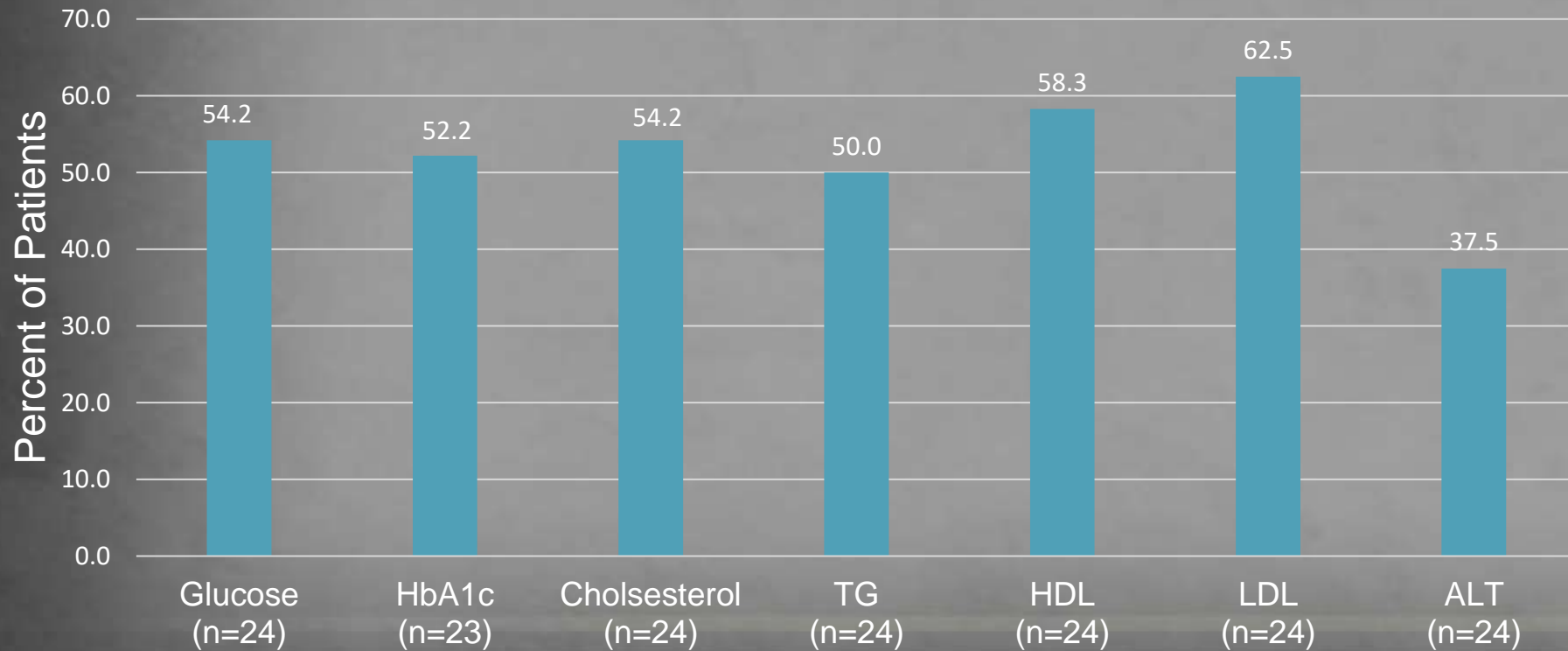


# Abnormal Labs at Baseline Visit

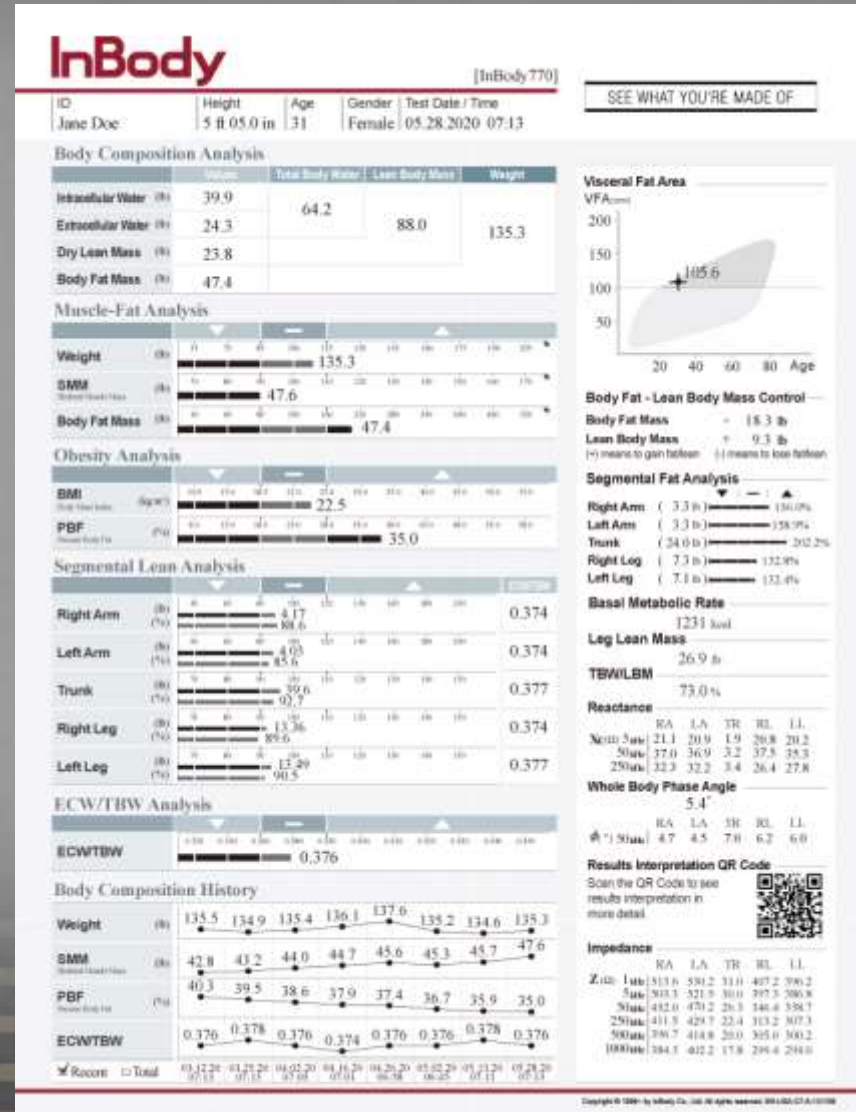




# Patients with Stable or Improved Labs Over 6 Months



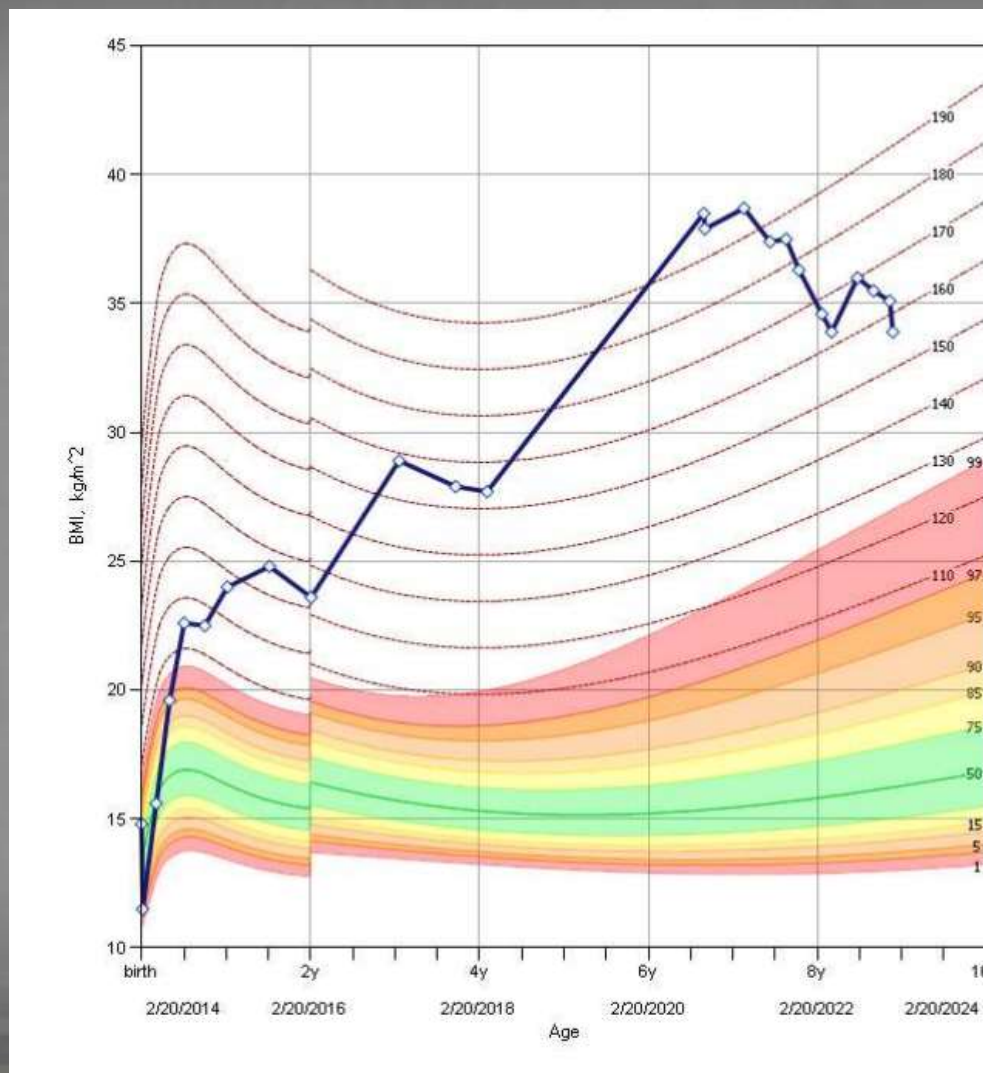
# Progress in InBody



# Progress in Treadmill Test



# Growth Chart



# Areas for continued improvement

- Blood pressure remains in stage I-II HTN zone for age and height



For Children Aged 1-<13 y	For Children Aged ≥13 y
Normal BP: <90th percentile	Normal BP: <120/<80 mm Hg
Elevated BP: ≥90th percentile to <95th percentile or 120/80 mm Hg to <95th percentile (whichever is lower)	Elevated BP: 120/<80 to 129/<80 mm Hg
Stage 1 HTN: ≥95th percentile to <95th percentile + 12 mmHg, or 130/80 to 139/89 mm Hg (whichever is lower)	Stage 1 HTN: 130/80 to 139/89 mm Hg
Stage 2 HTN: ≥95th percentile + 12 mm Hg, or ≥140/90 mm Hg (whichever is lower)	Stage 2 HTN: ≥140/90 mm Hg





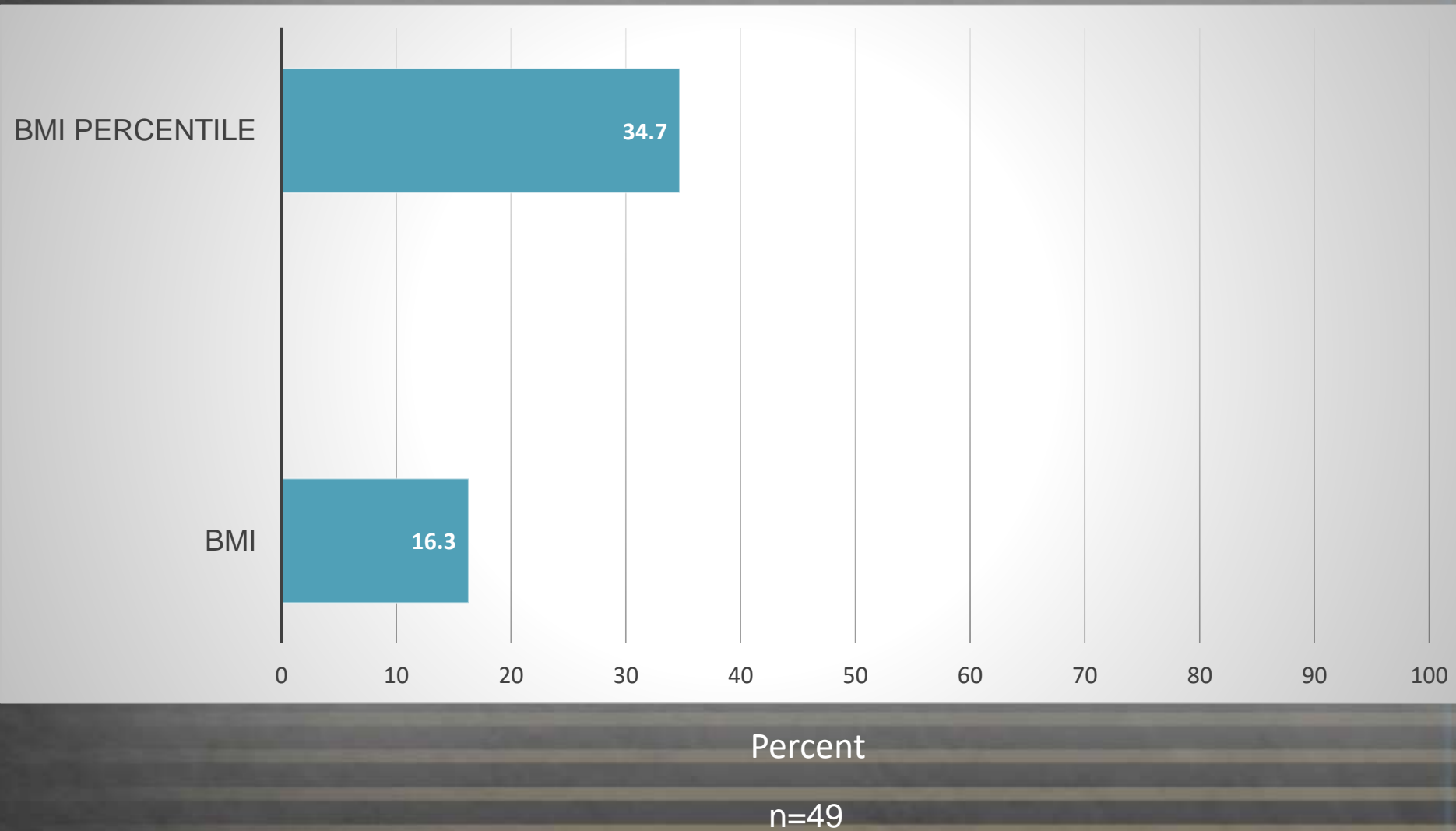
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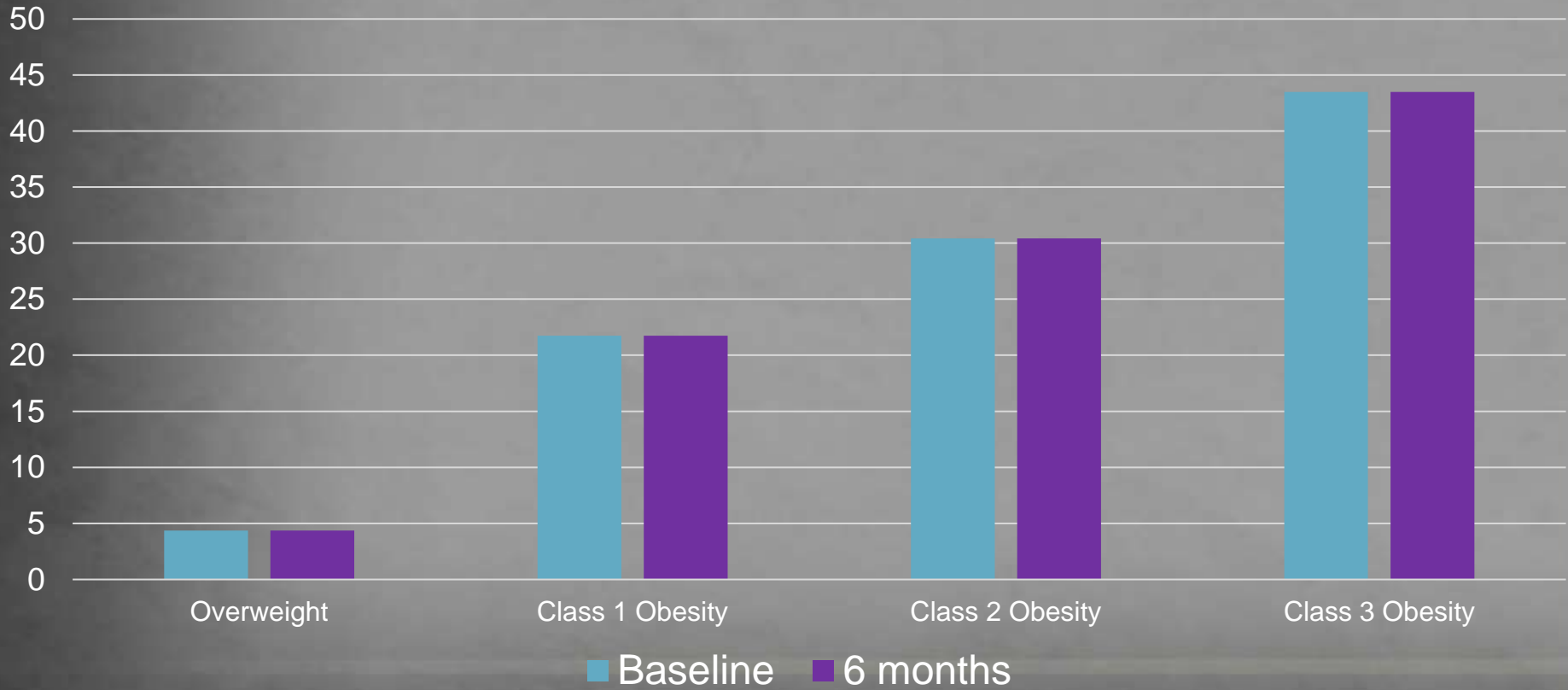
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# Improvements in BMI and BMI Percentile



# BMI at Baseline and 6 Months



n = 23

