

BACKGROUND

National

- Obesity affects over 40% of American adults¹
- greater risk for other conditions such as heart disease, type 2 diabetes, stroke, hypertension, sleep apnea, arthritis, gastroesophageal reflux disease, dyslipidemia, and atherosclerosis⁴
- Estimated annual medical cost of obesity in the United States is \$173 billion dollars¹

Local

A retrospective Institutional Review Board (IRB) approved review indicated:

- 82% (n=29 of 35) did not receive nutritional consults
- 98% (n=1 of 39) did not have STOP-BANG screening for sleep apnea

Available Knowledge

- People with obesity are at higher risk for type 2 diabetes, hypertension, depression, cardiovascular disease, dyslipidemia, and sleep apnea. To reduce poor outcomes, screening is recommended⁴.
- Best practice standards for patients with obesity include⁴
 - Documenting an accurate height and weight
 - Documenting and discussing the patient's BMI with them
 - Using the 2-item Patient Health Questionnaire-2 (PHQ2) or 9-item Patient Health Questionnaire-9 (PHQ9) to screen for depression
 - Using the STOP-BANG questionnaire to screen for sleep apnea;
 - Documenting an accurate blood pressure, and if blood pressure is elevated, documenting an atherosclerotic cardiovascular disease score;
 - Placing a nutrition consult
 - Documenting a follow-up plan for any positive screenings

PROJECT AIM

The aim of this quality improvement (QI) project was to implement a standardized process including and obesity screening tool, staff introduction to the tool and a provider tip sheet to improve effective care for patients with a BMI > 30 at a rural family practice clinic to 80% in over an 8-week period.

IMPLEMENTATION

Staff Quality Improvement Process:

- Interdisciplinary collaboration
 - Screening tool and checklist created

October 2022

- Staff education and introduction of tools
- Rapid Plan-Do-Study-Act (PDSA) cycles over 8- weeks with test of change every 2 weeks

Core Interventions	PDSA Cycle 1	PDSA Cycle 2	PDSA Cycle 3	PDSA Cycle 4
Obesity Screening	Implement Obesity Screening tool & tips sheet - Figures 1 & 2	Highlighting the demographics line	Placing reminders on exam room computer to complete screening tools	Adding BMI to daily patient list
Obesity Checklist	Implement Obesity Care Completion Checklist (OCCC) - Figure 3	Printing checklist on back of screening tool	Placing reminders on computers to complete checklist	Create and use checklist "dot phrase"

Post-Implementation Staff Process Evaluation

- Process used to calculate staff completion rate of the obesity screening and checklist tools

Core Intervention and Tool	Operational Definition
	Average number of patients screened + average completion score/2
Obesity Screening	Process: Number of obesity screening tool used/the number of patients with a BMI >30 seen
	Outcome: Number of positive screens/number of patients screened
Obesity Checklist	Process: Number of checklists used/Number positive screen
	Outcome: Mean completion score

Figure 1

Obesity Screening Tool:

Date of service _____ Age _____ Race _____ Ethnicity _____
 Language _____ Gender/identity _____ Primary Payor _____
 If the patient's BMI is ≥30; please complete this screening:

- Is SBP >140?
Yes b) No c) NA
- Is DBP >90?
Yes b) No c) NA
- Does the patient have little interest or pleasure in doing things?
Yes b) No c) NA
- Does the patient feel down, depressed, or hopeless?
Yes b) No c) NA
- Does the patient snore? If yes, complete STOP-BANG screening in EMR
Yes b) No c) NA
- Does the patient eat fast food/fried/processed foods at least 3 times per week?
Yes b) No c) NA
- Does the patient's lifestyle include sitting around more than being active?
Yes b) No c) NA

**If yes to 2 or more questions, then equals a positive screen.
 **If positive screen, then implement the obesity care checklist.
 Positive Screening (circle one): Yes No

Figure 2

Provider Tip Sheets

- A medical assistant tells you a patient has a positive obesity screening; now what?
- Most of these things you complete daily
- These are some helpful tips to be thinking about
- If PHQ 9 positive (>10), place a referral to behavioral health
- If STOP-BANG positive (5-8 is considered "Moderate to Severe Risk for OSA), placed a referral to sleep medicine
- Nutritional consult placed if BMI greater than 30
- BMI was documented and discussed with the patient
- If BP is elevated, Assign ASCVD risk level and document
- Consider referral to Obesity Medicine Clinic

Figure 3

Obesity Care Completion Checklist:

Date: _____

*Only Complete if positive screening of yes to 2 or more questions on the screening tool

Invention:	Yes	No	NA
1) Weight and height documented			
2) BMI documented and discussed with patient			
3) If PHQ2 positive, complete PHQ9			
4) If PHQ 9 positive, refer to behavioral health			
5) If yes to question 6 on the screening tool, Complete STOP BANG			
6) If StopBANG positive, refer to sleep medicine			
7) BP measured and Documented			
8) If BP elevated, Assign ASCVD risk level and document			
9) Follow up scheduled and discussed with patient			
10) Nutritional consult completed			



Staff Participants

- Rural Midwestern Family Practice Clinic Staff
 - Medical Assistants, Registered Nurses, Nurse Practitioners, Certified Nurse Midwives, & Family Practice Medical Doctors

Core interventions			Baseline			PDSA 4			Project total		
Intervention	Tool	Operational definitions	N	n	%	N	n	%	N	n	%
Screening for obesity	Obesity Screening	Process: No. of obesity screening tools used/No. of patients with a BMI >30 seen	-	-	-	75	21	28	561	157	28
		Outcome: No. of positive screens/No. of patients screened	-	-	-	21	12	57	157	80	53
Effective care checklist for obesity	Obesity Care Checklist	Process: No. of checklists used/No. positive screen	-	-	-	12	11	92	80	55	66
		Outcome: Mean completion score	-	-	25	-	-	79	-	-	69

Summary of Results: Core Inventions

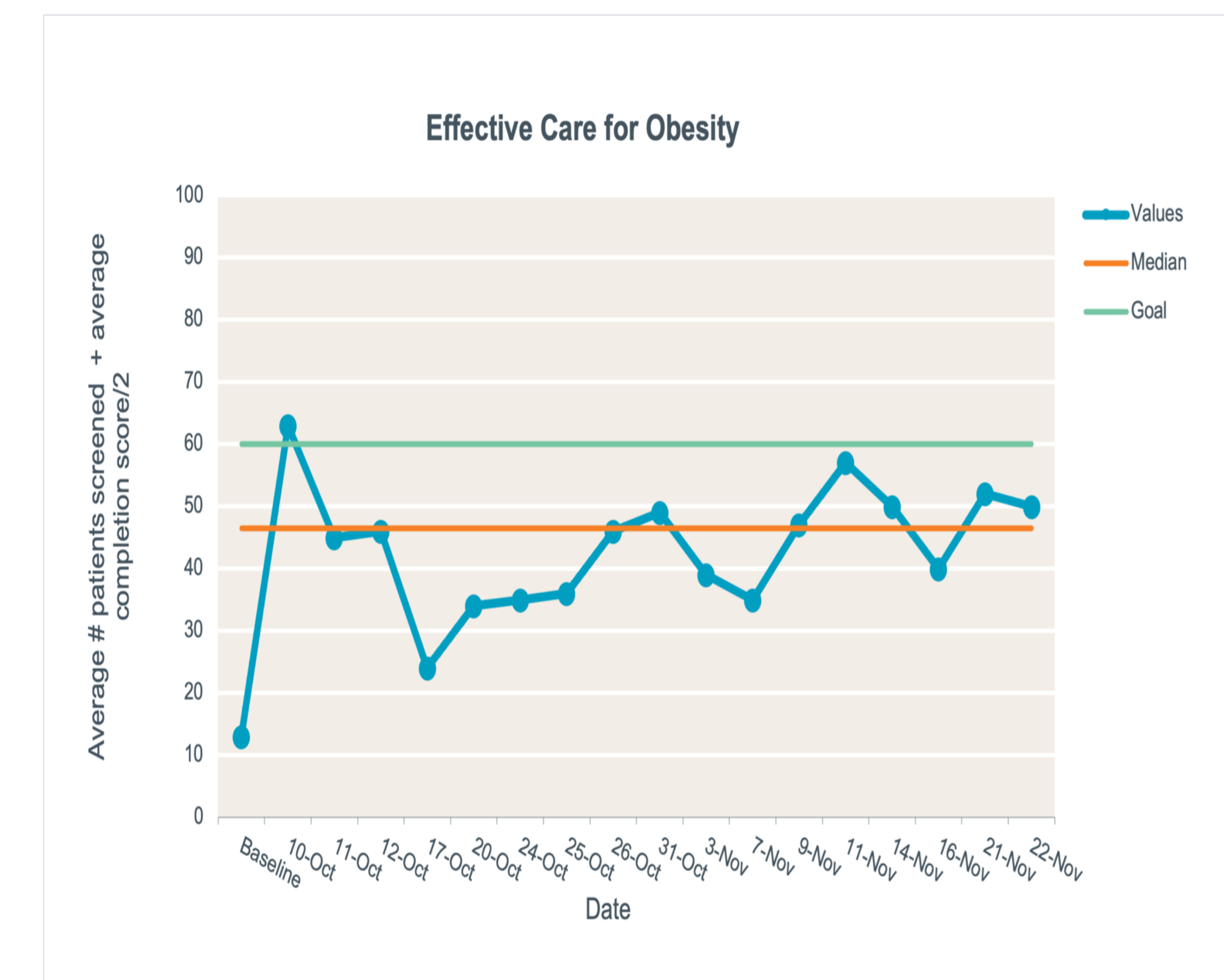
- Overall, 561 patients had a BMI > 30 and met criteria for obesity screening
- Screening tool utilization was 28% (157/561) with 53% (80/157) of patient screening positive
- Checklist utilization was 66% (55/80)
- Note that the OCCC was fully completed 69% (38/55) of the time

OUTCOMES



Patients Screened

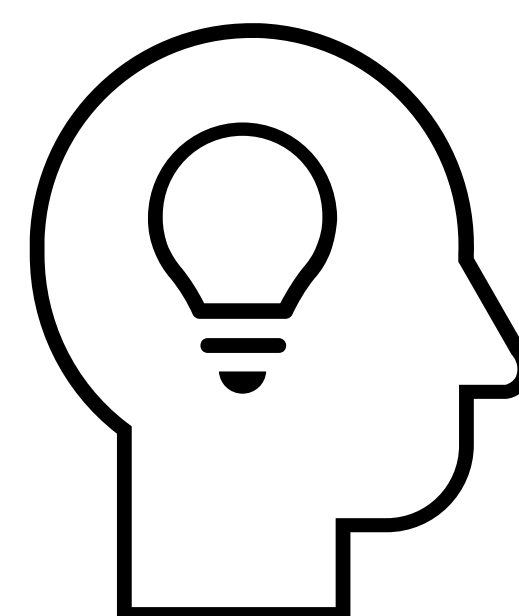
- Rural Midwestern Family Practice Clinic patients
- Mostly Medicaid and Private Insurance
- Mostly White, ≥ 18 years of age with even distribution of male/female patients



Effective Care for Patients with Obesity

- Effective care for adult patients with obesity was defined as care meeting best practice standards per IOM
- Increased during from a baseline of 13% to 46.5%
- Goal of 60% was not met, but an increase was noted (33.5%)

LEARNINGS



- Standardization** increased completion of the OCCC but further staff engagement in the process is needed
- Checklist** implementation assisted with identifying areas for improvement in the ordering and referral process
 - Checklists positive impact on health outcome and can help improve patient care by including items that are needed at a specific time
 - Checklists provided clear goals, timeliness, and specific interventions
 - The obesity care compliance checklist helped improve care delivery
 - Patients received evidence-based inventions when needed that may have been missed
- Simplifying** a process or framework assisted with avoiding common barriers when introducing the new process
 - A simple design or process can assist healthcare team members
- Share** a purpose of the why behind the process
 - Identify what is essential while involving patients and patients' support people to improve care for this group⁵

IMPLICATIONS

Summary of Key Findings

- Aim improved from 13% to 46.5%
- Standardization to improve clinic workflows

Implications for practice

- Established process for screening and provided effective care
- Decrease healthcare cost and reduce the burden on our healthcare system by improving effective care for patients with obesity
- If patients receive the evidence-based and quality care they deserve, we decrease costs to our healthcare system and improve the quality of life and outcomes for our patients and our community

Limitations/Generalizability

- Small sample size
- Limited timeframe of implementation
- Screening tool not valid
- May not be adaptable to specialty clinic areas

Sustainability/Next Steps

- Incorporating the screening tool and care compliance checklist into the EMR system can improve its use and provide ease of access.
- Spread to other parts of healthcare system to improve patient outcomes

REFERENCES & ACKNOWLEDGEMENTS

