ACPC Quality Network

BMI: Development of Key Driver Diagram

[December 7, 2016]

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Disclosures

- Nothing to disclose

Development of KDD

BMI metric: Project Team Leads

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BMI Metric

- Metric #002:
  - **Numerator:** Number of patients who received appropriate counseling for elevated BMI during the measurement period or in the 12 months prior to the outpatient visit
  - **Denominator:** Number of patients, 3-18 years old, with a BMI greater than the 85% percentile (within the past 12 months) and at least one pediatric cardiology outpatient visit during the measurement period.

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Metric #002 (BMI Appropriate Counseling)

Proportion of patients, 3-18 years old, with a BMI greater than 85% who received appropriate counseling*

Q4 2015

•Mean Performance: 55%

•Data received from 2 sites

Q1 2016

•Mean Performance: 68%

•Date received from 3 sites

Q2 2016

• Mean Performance: 68%

•Data received from 2 sites

*Note: <6 sites contributed data for the past two quarters so bar graphs were not included in past performance reports

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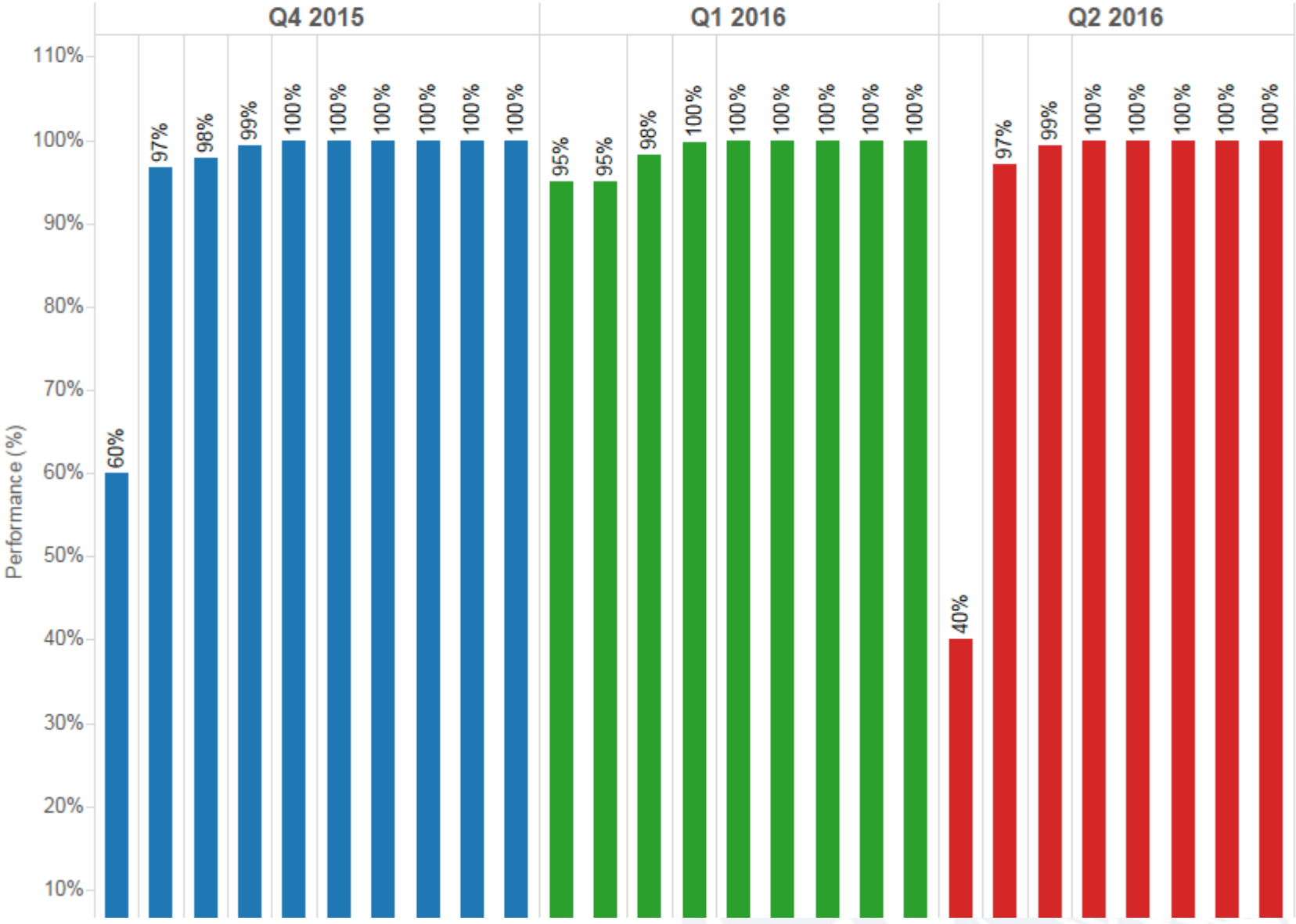
Metric #	Metric Title
003	Proportion of patients, 3-18 years old, who had their BMI measured and BMI percentile calculated.



Describe the gap in quality

- 16 to 33% of pediatric patients with congenital heart disease were noted to be overweight or obese. (2, 3)

- In addition to long term adverse cardiovascular effects, obesity and its complications presents a threat to the hemodynamic stability of children with congenital heart disease.
  - For example, obstructive sleep apnea, a known complication of obesity, may increase the pulmonary vascular resistance (PVR). Increased PVR impairs passive pulmonary flow needed in children with single ventricle physiology leading to systemic vascular congestion.

- Presence of other co-morbidities that are associated with obesity such as hypertension, hyperlipidemia, diabetes add to the cardiovascular morbidity in children with congenital heart disease. (1)

KEY DRIVER DIAGRAM

Revision Date:
9/12/2016

Project Name:
BMI measured, BMI percentile calculated and appropriate counseling.

Project Leader:
D. Chowdhury, A. Harahsheh, A. Sabati.

SMART AIM

To provide appropriate counseling to 100% of children with BMI ≥ 85%
by December 31, 2017

Population: patients 3-18 years of age seen in the outpatient pediatric cardiology setting.

GLOBAL AIM

Reduce the prevalence of obesity and its complications in children with heart disease.

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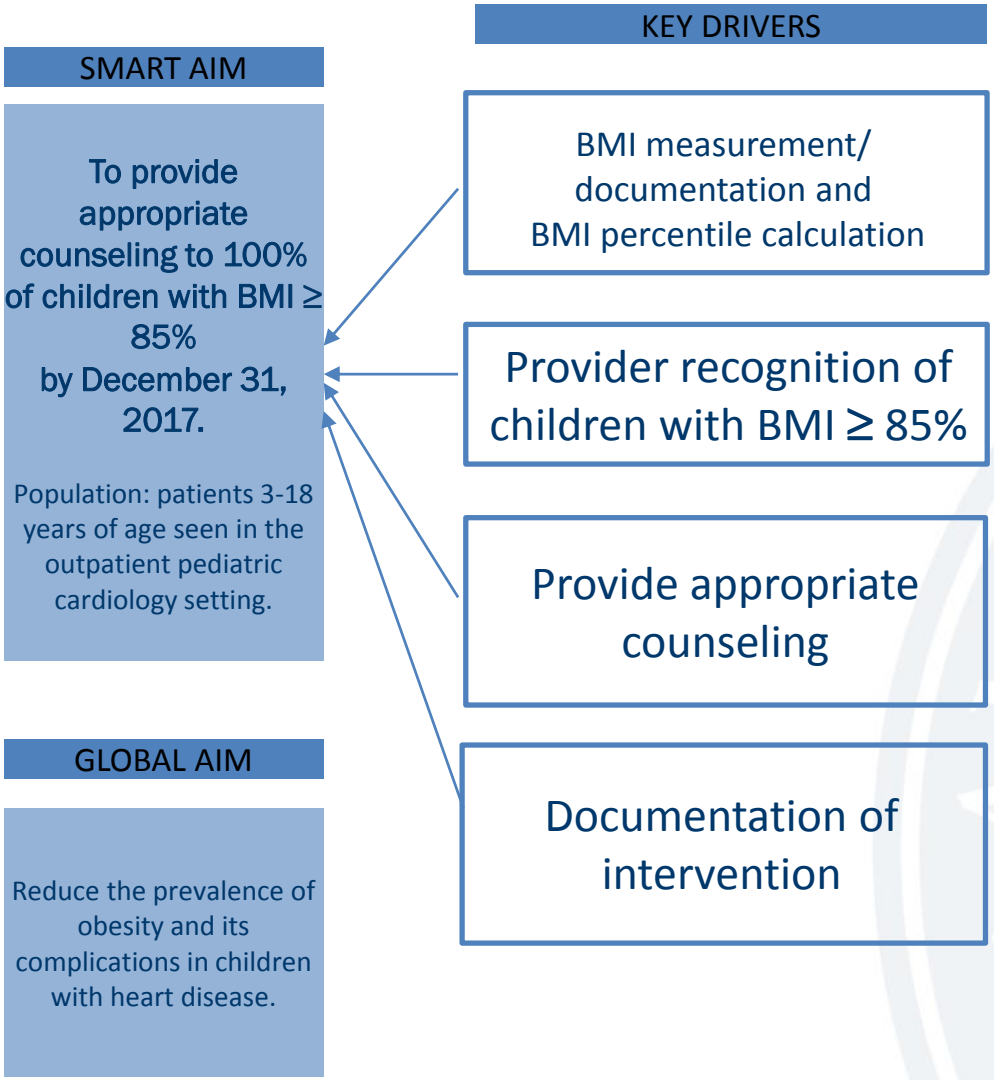

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Population: patients 3-18 years of age seen in the outpatient pediatric cardiology setting.

GLOBAL AIM

Reduce the prevalence of obesity and its complications in children with heart disease.

KEY DRIVERS

- BMI measurement/ documentation and BMI percentile calculation
- Provider recognition of children with BMI ≥ 85%
- Provide appropriate counseling
- Documentation of intervention

INTERVENTIONS

- Standard vital forms on paper charts/EMR
- BMI included in paper chart, Automatic EMR calculation
- Restructuring of medical record to include notifications, flags or popups for BMI > 85%
- Identify a person in the program to ensure recognition of children with BMI>85%
- Patient education and counseling (any health care personnel)
- Educational Handouts (weight reduction, diet, exercise)
- Referral to dietician or any specialized clinic focused on obesity or co-morbidities
- EMR smart phrases, standard documentation templates to allow collection of data

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What is the specific aim of the quality improvement effort?

- The aim is to increase the percentage of pediatric patients, with a BMI $\geq 85^{th}$ percentile, who receive appropriate counseling (i.e. patient education or a referral to a registered dietician) to 100% by December 2017

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Classify the types of interventions used in the QI effort

- Children with BMI ≥ 85%: Education by health care personnel or referral to a dietician

Describe the interventions related to achieving the QI aim

Participating centers will develop:

- Process for measuring the BMI
- Calculating the %
- Flagging the patients with BMI ≥ 85%
- Preparation of educational materials for the patients as either handouts or smart phrases in the EMR.
- Development of “smart phrases” in EMR to facilitate documentation of counseling provided
- Education of health care professional so they can provide counseling to the families and children with BMI ≥ 85%.
- Education of health care professional about the resources available for management of children with BMI ≥85% like obesity clinics
- Restructuring of the EMR to include notification, flags, pop-ups
- Develop a process for documentation of QI and data collection. Programs to restructure EMR to provide the data, identify a key person in the program.

How are the interventions expected to improve patient care?

- Through participating in the Qnet BMI metric we expect to see an increase in the number of patients receiving counseling with regard to overweight and obese status. Such counseling is important in the fight against obesity as the literature reveals that parents who recall a provider's concern about their child's weight were more likely to be concerned themselves. The overall expectation would be that it would decrease the number of children who are overweight and obese.

How will improvements from the interventions be sustained and spread?

- Sites will collaborate, identify/develop materials and/or tools to implement site-specific changes in current clinical workflows and processes of care. Successful centers will be invited to share best practices with other participating sites and the college will facilitate opportunities for publications in a variety or peer-reviewed and non-peer reviewed communications. Best practices used to achieve desired performance rates on relevant quality metrics will be also be documented in change packages that can be used to sustain and spread interventions.

In the Sprit of Collaboration!

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KEY DRIVER DIAGRAM

Project Name:
BMI measured, BMI percentile calculated and appropriate counseling.

Project Leader: _____

Revision Date: _8/22/2016 Version 1__

SMART AIM

By 10/01/2017, to increase BMI documentation and appropriate counseling among ACC QNet participants from 55% to 100%

GLOBAL AIM

To improve wellbeing of children with congenital heart disease

KEY DRIVERS (**WHAT** to change to achieve the aim)	INTERVENTIONS (**HOW** to make the change)	ACOUNTBILITY (**WHO** will lead the change)
BMI measurement		Nurse/PCT
BMI percentile calculation		Electronic Health care system
Determining Overweight/obese status		Nurse/PCT/MD
Counseling of overweight/obese children	1- Limit screen time to no more than 2 hours per day 2- Remove electronics from bedroom 3- Heart healthy nutrition (upgrade protein, fat and carbohydrate) 4- 300 minutes/week of moderate physical activity 5- Empowering parent as a role model	Nurse/PCT/MD
BMI ≥ 95%: Screen for at least one of the following co-morbid conditions:	Hypertension, Fasting insulin, Fasting blood glucose, Lipid profile, ALT, AST, gamma GT, complete metabolic panel, TSH, and urinalysis	Nurse/PCT/MD
Documentation of counseling in the medical record		Nurse/PCT/MD
Convincing cardiologist of importance of counseling such patients		

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Comments / Questions

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THANK YOU

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