

How many professionals does it take to steer the sugar ship away from the rocks?

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Objectives

◆ **The Need to Steer a Sugar Ship**

- ◆ The importance of glycemic control for hospitalized patients

◆ **Establishing the Crew of the Ship**

- ◆ Finding the right people to be at the table and to lead the initiative

◆ **Jumping on Board or Jumping Over Board (Walking the Plank)**

- ◆ Leading through change, moving the project forward, and staying focused

◆ **Knowing the Crew is Accomplishing It's Mission**

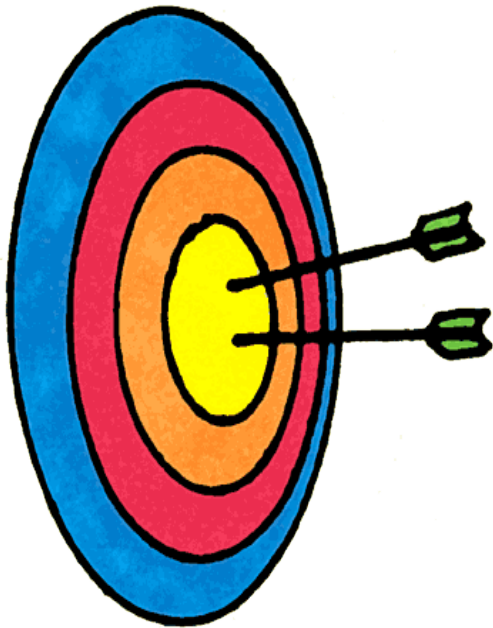
- JC ◆ Tracking progress and identifying success

The Need

Potential Harms of Uncontrolled Blood Glucose Levels in Hospitalized Patients with Type 2 Diabetes

- ◆ **Increased risk of infections** –sepsis, pneumonia, wound infection in postop patients with one blood glucose level >220 on post-op day one
- ◆ **Decreased neurologic recovery** – observational studies show an association between hyperglycemia and worsened outcomes in patients with acute stroke
- ◆ **Higher mortality with acute MI**– 1 year mortality rate 19.3% with admission blood glucose <101 compared to 44% with an admission blood glucose >200
- ◆ **Longer hospitalization**
- ◆ **Delayed procedures**

The Target



- ◆ Literature review for leading practices for glycemic control in hospitalized patients
- ◆ Non DKA Patients
- ◆ Decrease episodes of hyperglycemia
- ◆ Avoid episodes of hypoglycemia
- ◆ Have majority (80%) of blood sugars be within the range of 70-180
- ◆ January 2016
 - ◆ <70 2%
 - ◆ 70-180 49%
 - ◆ >180 49%

The Crew

Finding The Right People to Participate and Lead

- ◆ Subject matter experts
- ◆ Currently doing the work

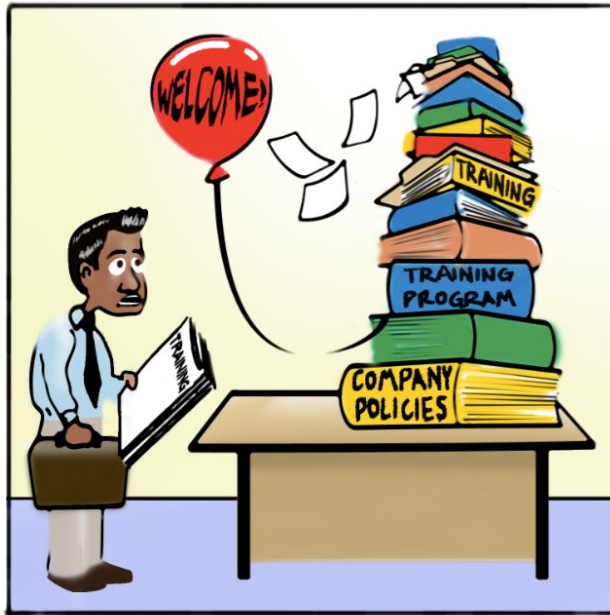
- ◆ Excited and optimistic
- ◆ Willing to share ideas
- ◆ Open minded
- ◆ Committed to the team
- ◆ Willing to trial change
- ◆ Uses critical thinking
- ◆ Active listener
- ◆ Committed to the work



All Aboard!

Jumping on Board or Walking the Plank

LEARNING CURVES
Raytheon Professional Services



DOES YOUR "WELCOME ABOARD"
MAKE FOLKS WANT TO JUMP SHIP?

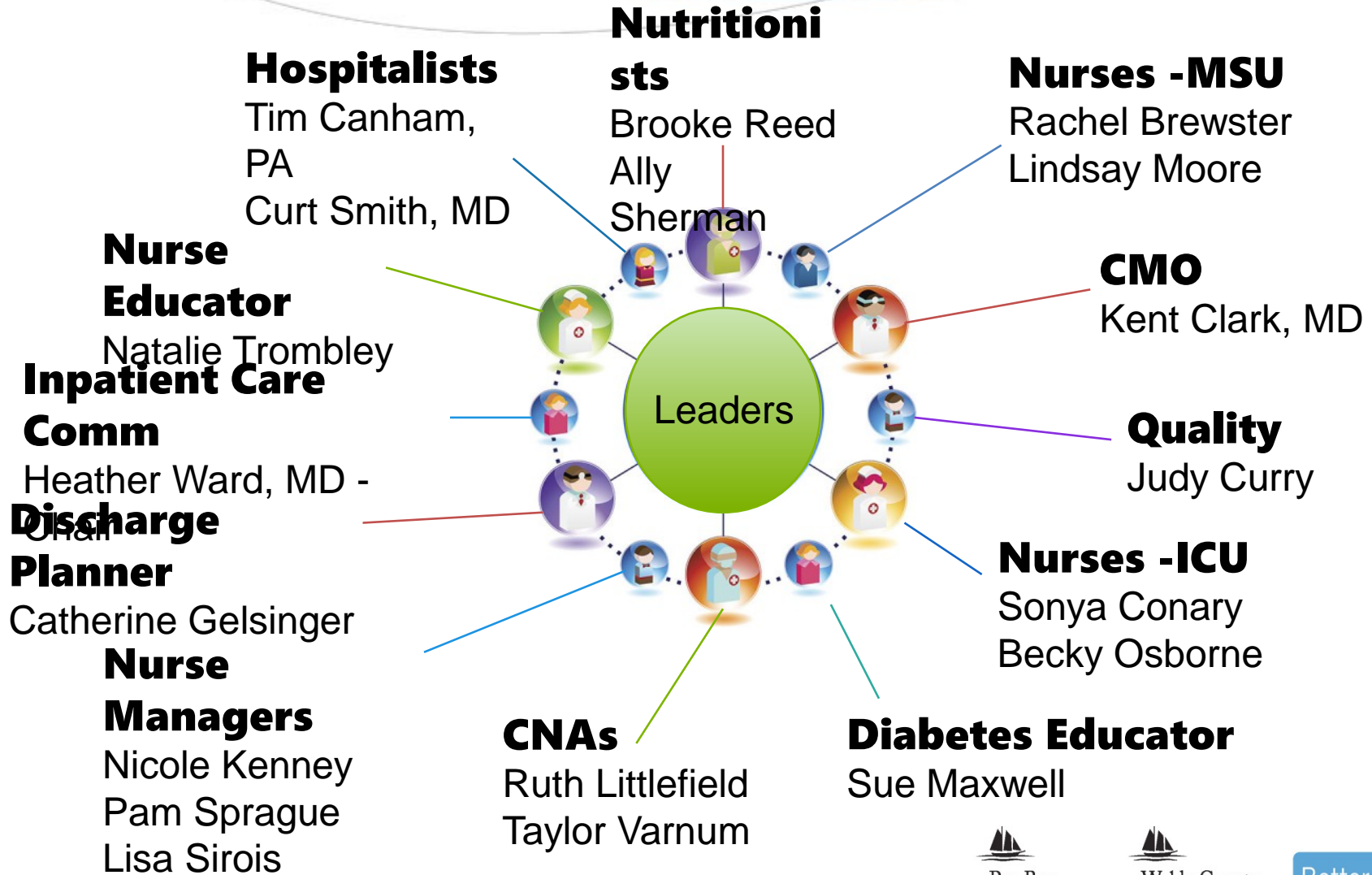
DOES YOUR "WELCOME ABOARD"
MAKE FOLKS WANT TO JUMP SHIP?

“The” Captain

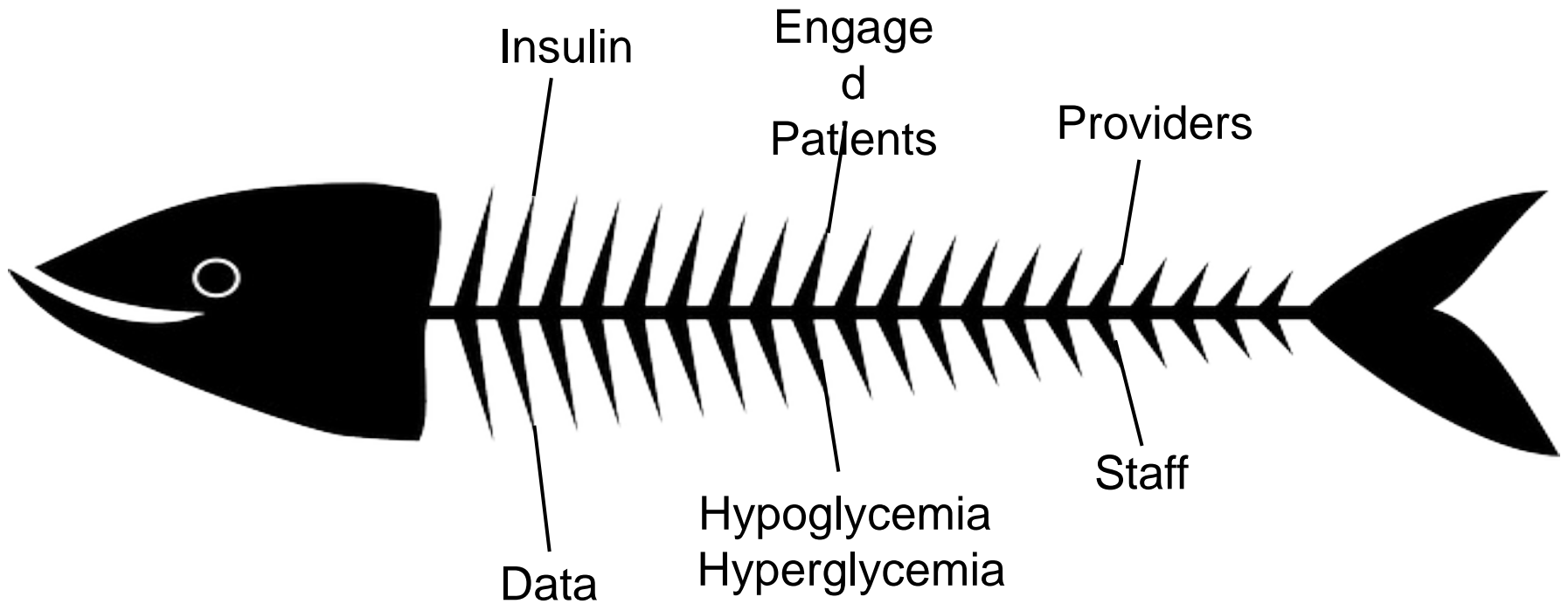


ALL

Ship Mates



How To Avoid The Rocks



Embrace the Fish

Insulin

Fast Acting
Basal
Pre Meal
Correction
Optimization

Orders Used
Insulin Timing
Documentation
Blood Sugars
Correction
Basal
Steroids

Data

Patient

S Steroids
Illness
Education
New Dx
Outside Food

Rule of 15
Symptoms
Education
**Hypo-
and
Hyper-
glycemia**

Providers

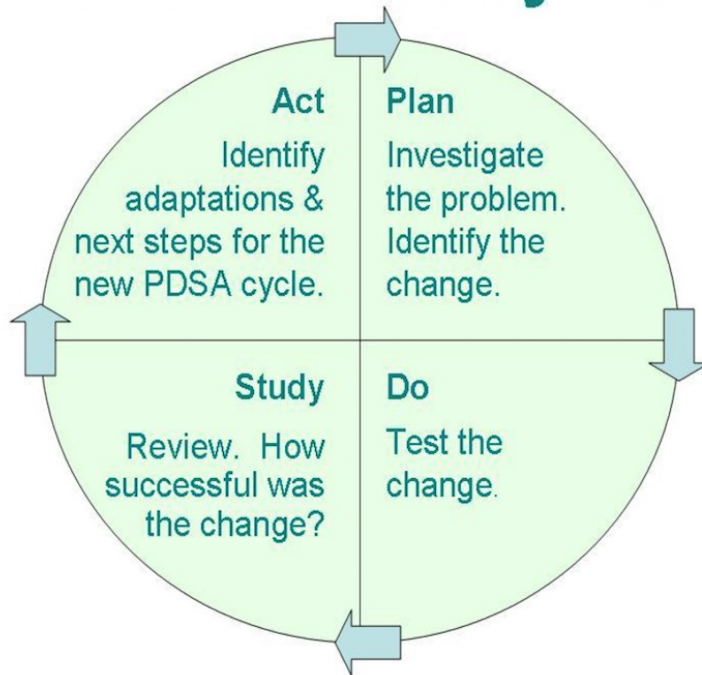
Education
Real Time Review
Consistency
Basal Calculation
Feedback

Feedback
Real Time Review
Documentation
Education

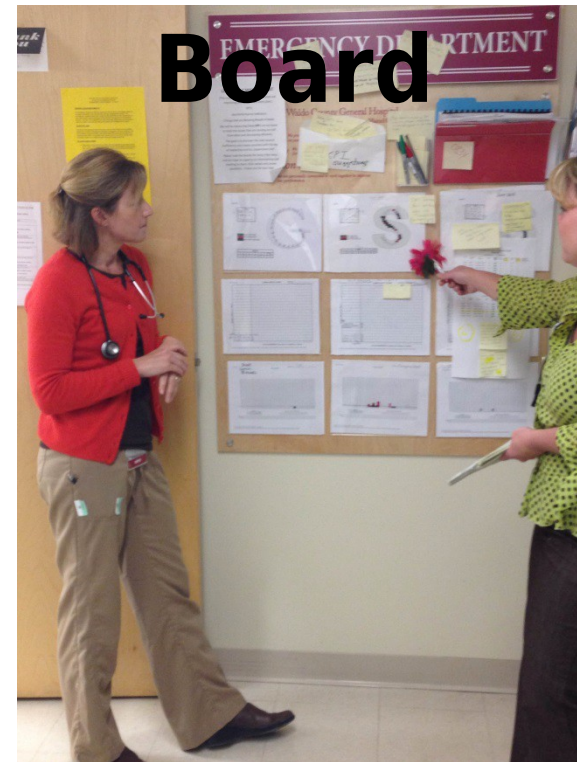
Staff

Steering the Ship

The PDSA cycle



Gemba Board



Anchors Aweigh



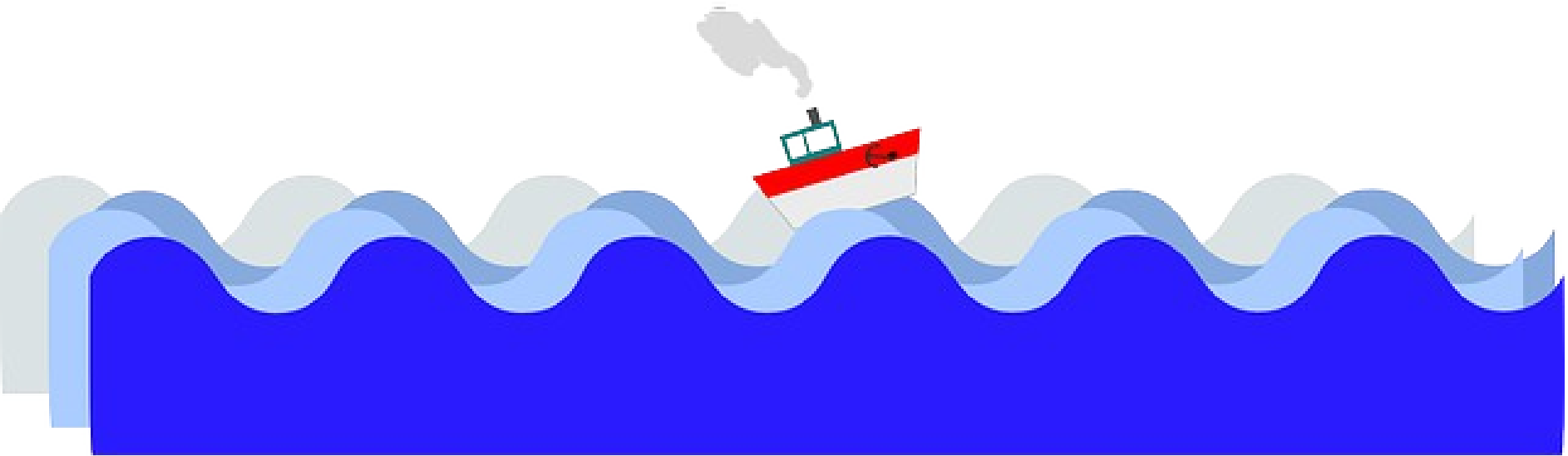
Any

The Voyage

Just Some of the Many Changes Tried!


- 💧 Hospitalist chart review process
- 💧 CHO meal menu in grams
- 💧 CHO in the MAR
- 💧 Real time chart review
- 💧 Sliding scale and basal insulin orders
- 💧 New calculation for basal insulin dose
- 💧 Red tray delivery of meals
- 💧 Signs in patient rooms re: guest food
- 💧 Insulin drip for non DKA ICU patient

The Voyage



RL

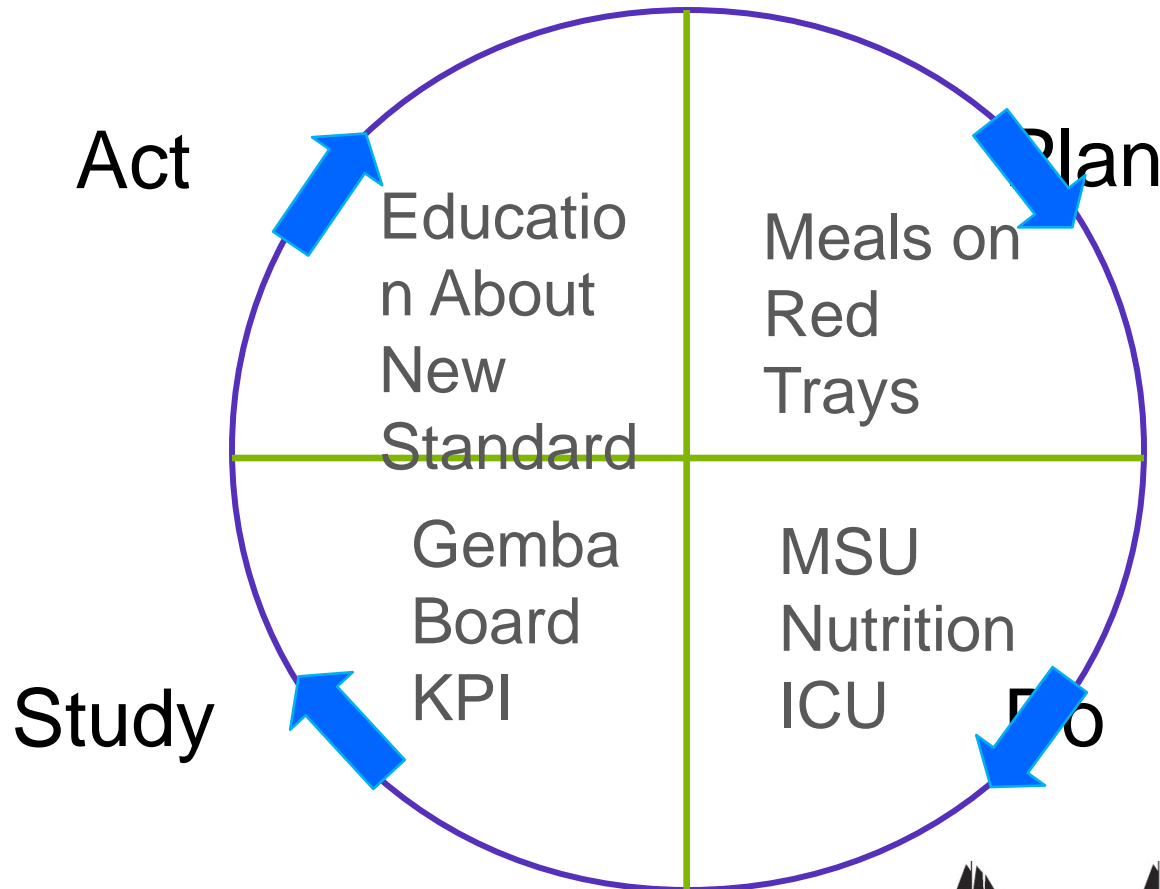

Pen Bay
Medical Center
MaineHealth


Waldo County
General Hospital
MaineHealth

Better. Together.

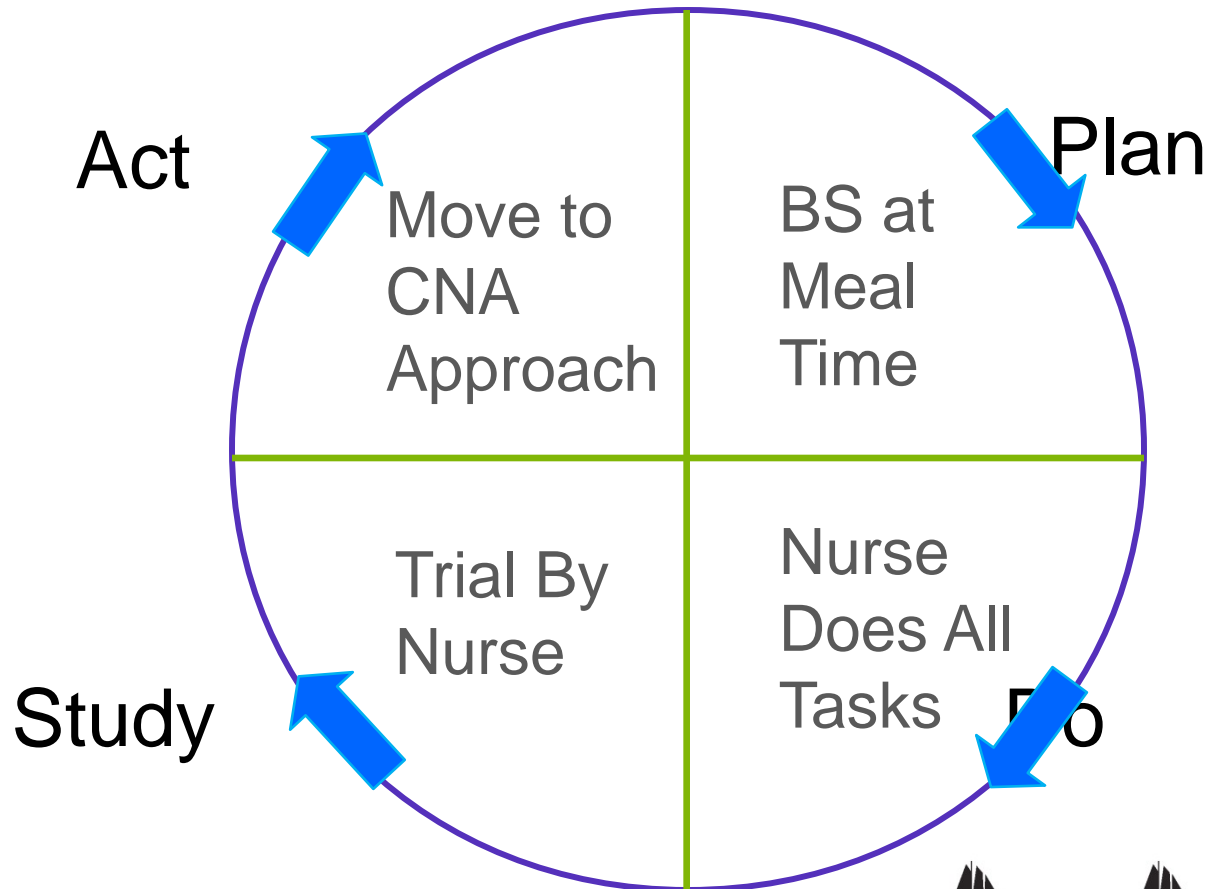
The Voyage

Timely Administration of Prandial Coverage



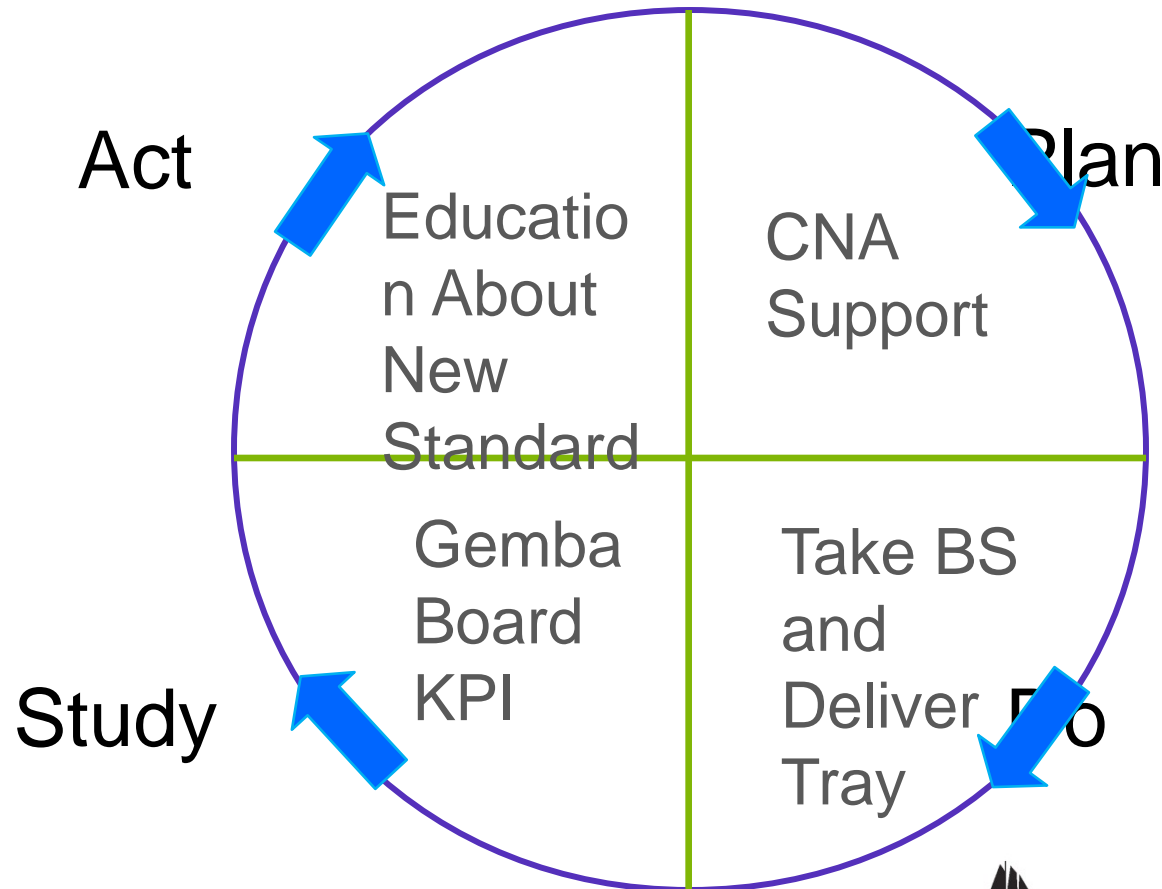
The Voyage

Simultaneous BS and Insulin Administration



The Voyage

Delivery of Meals



Fleet Collaboration

Nutrition Services: Red Trays

Nurse Educator: Skills/Knowledge

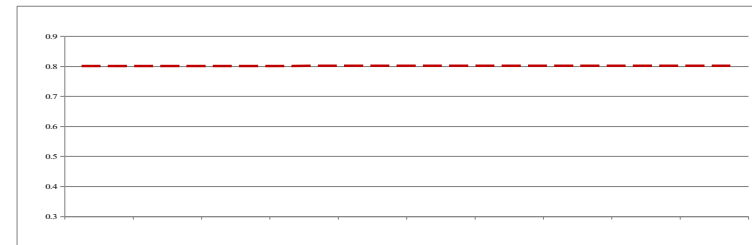
Providers: Order Consistency




Beyond the Rocks

Overall - Blood Glucose Samples 70-180

Goal




Pen Bay
Medical Center
MaineHealth


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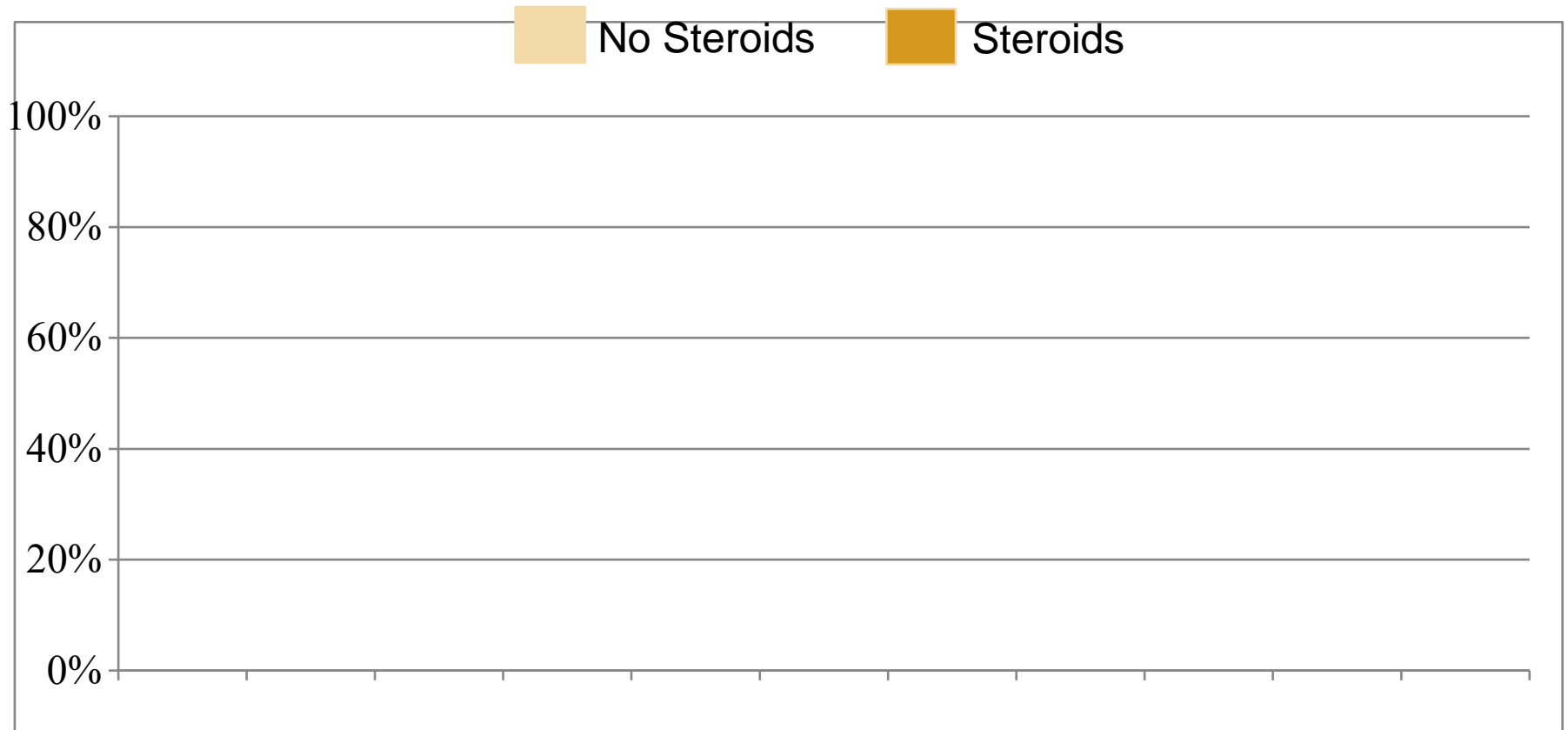
Beyond the Rocks

Overall - Blood Glucose Samples < 70



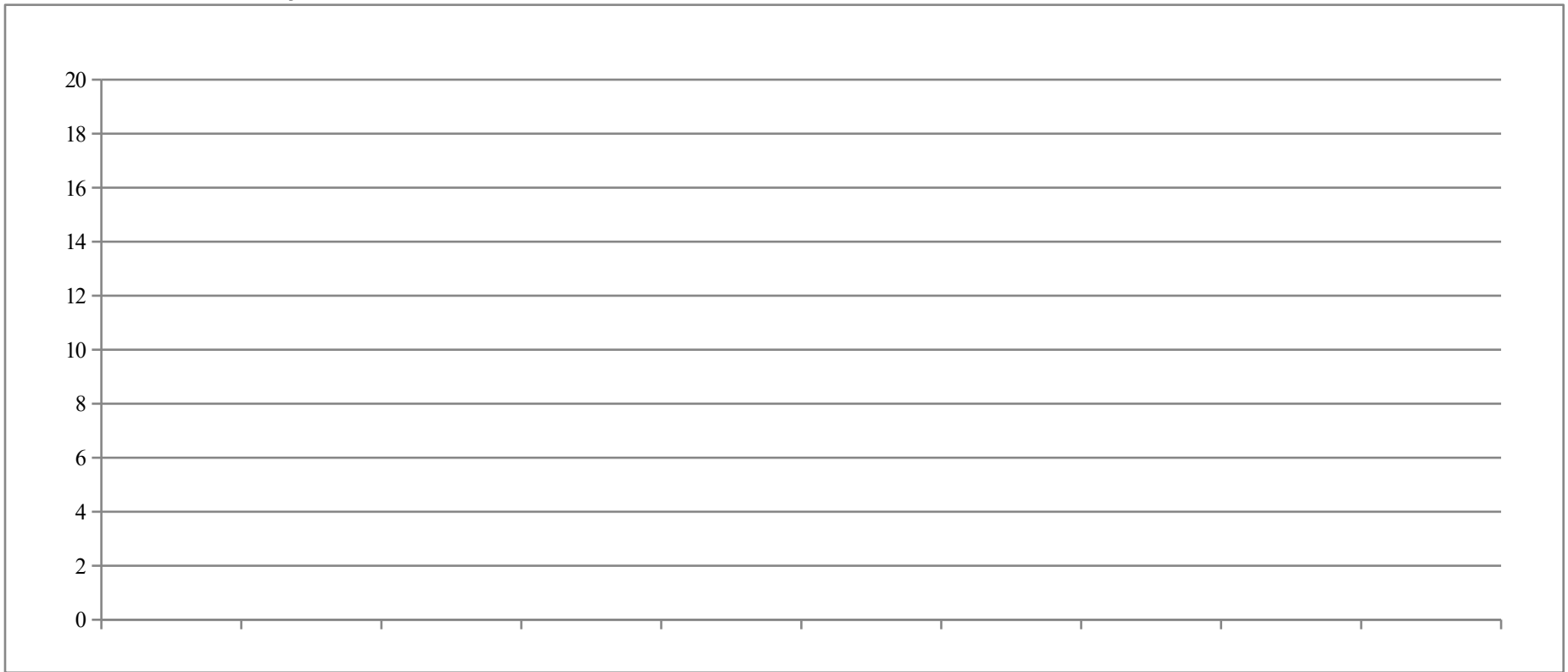
Beyond the Rocks

Of the Blood Sugars Greater >180



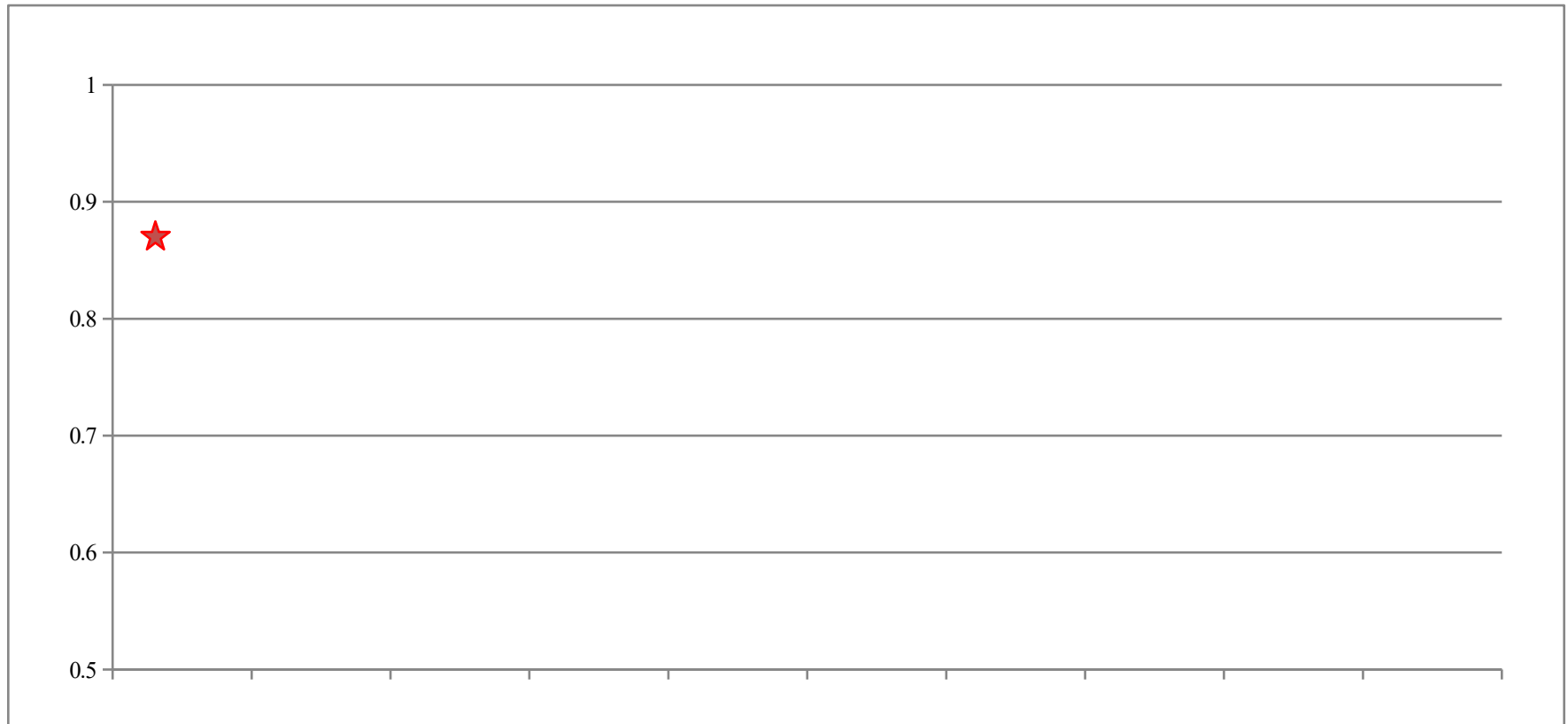
Beyond the Rocks

Total Times Correction Insulin Given in the Month
Divided by the Total Number of Patients in the Month



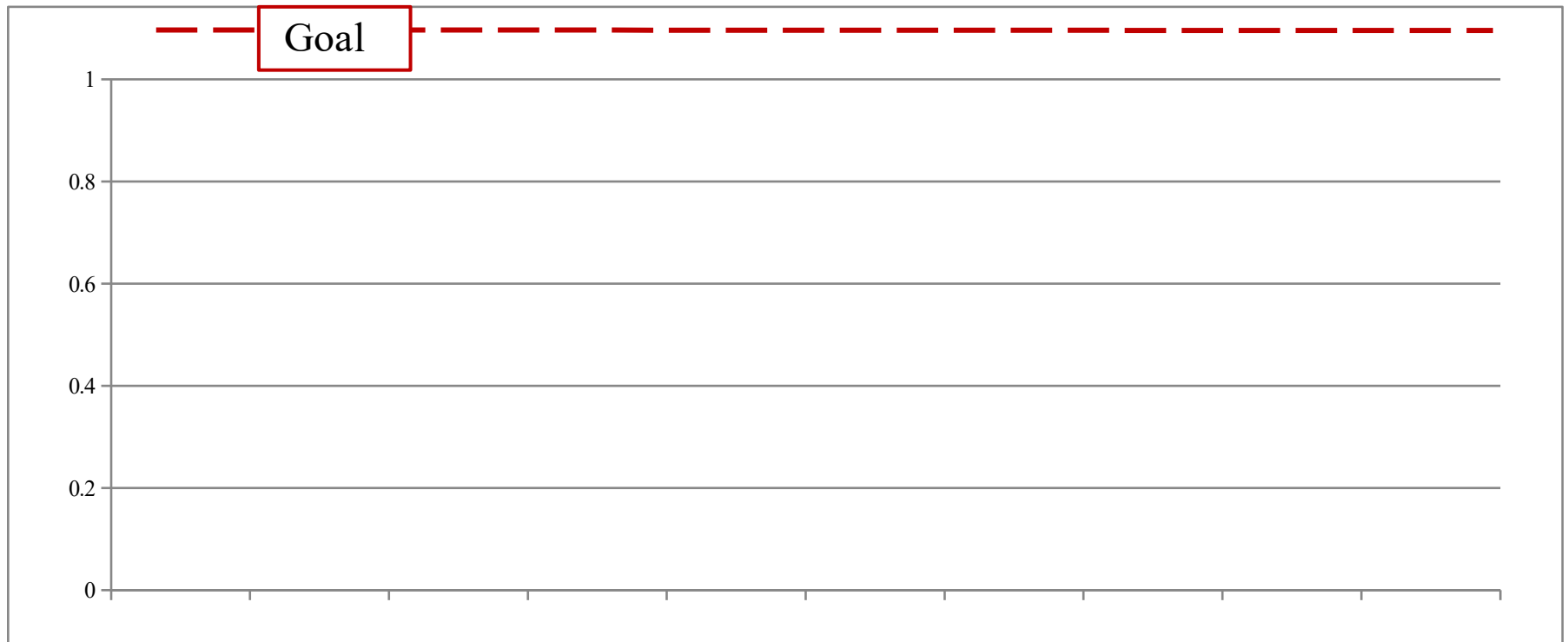
Beyond the Rocks

CHO Coverage Insulin Given Within 30 Minutes



Beyond the Rocks

Correction Insulin Given Within 30 minutes



So....How Many?



166 People / 1178 Days

Workgroup (19)

- ◆ Nutritionists (2)
- ◆ Hospitalists (2)
- ◆ Nurse Managers (3)
- ◆ Diabetes Educator (1)
- ◆ Nurse Educator (1)
- ◆ Quality (1)
- ◆ CMO (1)
- ◆ Bedside Nurse (4)

In Addition to Workgroup (147)

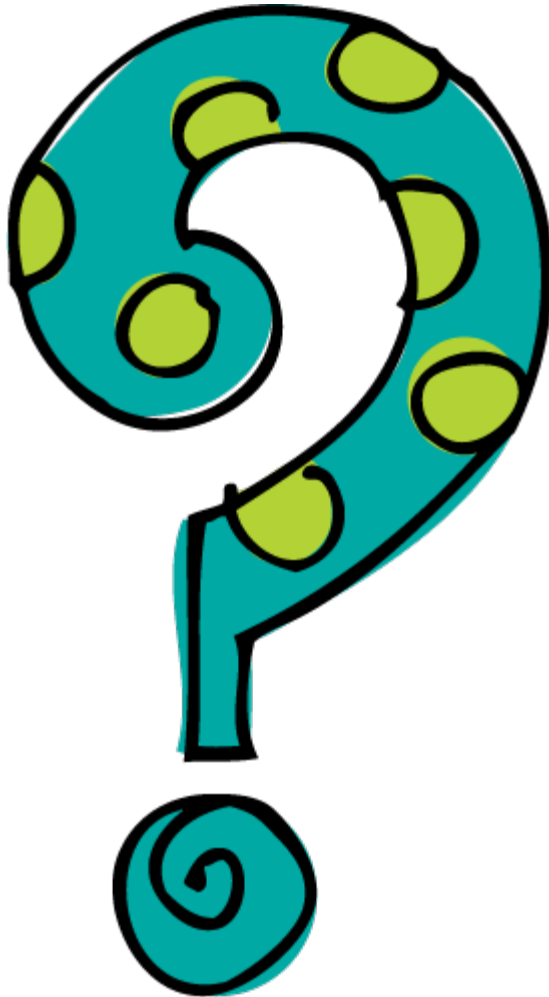
- ◆ Providers (17)
- ◆ Bedside Nurse (60)
- ◆ Bedside CNA (39)
- ◆ House Supervisors (6)
- ◆ Nutrition Services (25)
- ◆ Inpatient Care Committee (4)
- ◆ Discharge Planners (2)
- ◆ aICU Providers (?)

Finding the Treasure

Knowing That the Crew Has Accomplished It's Mission



Questions/Comments



ALL

References

- ◆ Glucose Management in Hospitalized Patients, Charles Kodnet, MD; Laurie Anderson, MD; and Katherine Pohlgeers, MD; University of Louisville School of Medicine, Louisville, Kentucky; American Family Physician, Volume 96, Number 10, November 15, 2017
- ◆ Diabetes Care; Standards of Medical Care in Diabetes, 2019
- ◆ Inpatient Management of Diabetes and Hyperglycemia: Implications for Nutrition Practice and The Food and Nutrition Professional; Journal of the American Dietetic Association, 2007