

# Measurement Strategy

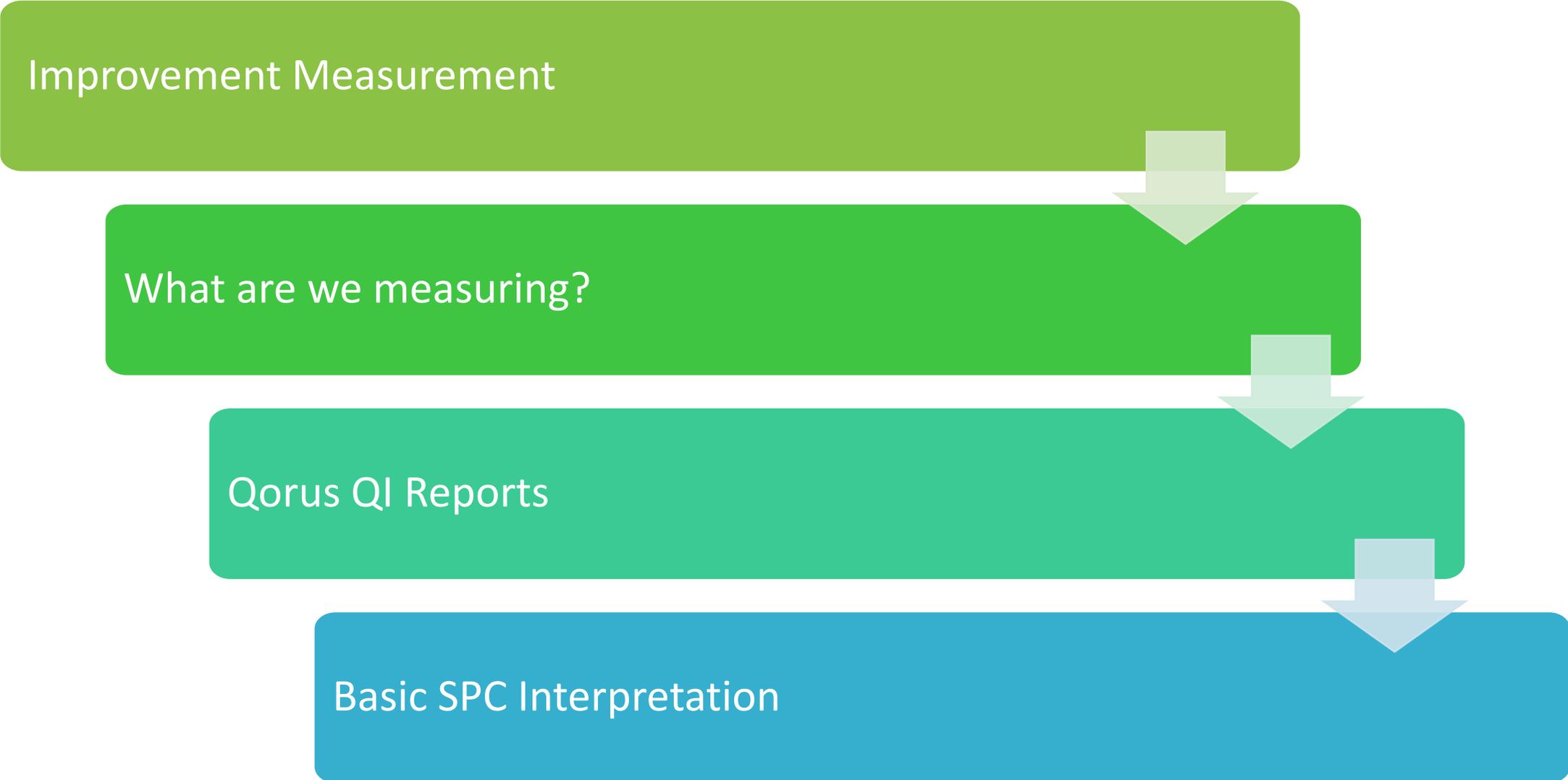
## Interpreting the IBD Qorus QI Reports



Alice Kennedy, MPH  
Research Project Director  
The Dartmouth Institute

# Today's Session

Improvement Measurement



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graph TD; A[Improvement Measurement] --> B[What are we measuring?]; B --> C[Qorus QI Reports]; C --> D[Basic SPC Interpretation];
```

What are we measuring?

Qorus QI Reports

Basic SPC Interpretation

# Three Faces of Measurement



JOURNAL ON QUALITY IMPROVEMENT

*We are increasingly realizing not only how critical measurement is to the quality improvement we seek but also how counterproductive it can be to mix measurement for accountability or research with measurement for improvement.*

PERFORMANCE MEASURES AND MEASUREMENT

## The Three Faces of Performance Measurement: Improvement, Accountability, and Research

LEIF I. SOLBERG, MD  
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Currently there is a great deal of pressure for public accountability of health care organizations, especially for managed care plans and even for medical groups and individual clinicians. Purchasers, legislators, and consumer advocates are all calling for public disclosure of patient satisfaction and other health care outcomes, on the theory that the comparative information will be used in choosing providers and thereby will force attention to quality issues.

In such an atmosphere, it should not be surprising that clinicians are wary. Although they recognize that the high cost of health care has understandably led to an insistence on the assurance of quality, they also recognize better than anyone else how hard it is to develop and collect valid and reliable quality measures. As Dennis S. O'Leary, president of the Joint Commission on Accreditation of Healthcare Organizations (Oakbrook Terrace, Ill), has stated, "the problem with measurement is that it can be a loaded gun—dangerous if misused and at least threatening if pointed in the wrong direction."<sup>1(p 354)</sup>

Simultaneously with this pressure for measurement

*The concepts described in this article are the result of work with hundreds of clinicians and clinic staff involved with the Institute for Clinical Systems Integration (ICSI) and the IMPROVE trial. We are very grateful for those experiences and the insights of innumerable people. We extend special thanks to Eugene C. Nelson, DSc, MPH, at Dartmouth University (Hanover, NH) for his leadership in measurement issues and for his review of and comments on this article.*

Please send requests for reprints to Leif I. Solberg, MD, Group Health Foundation, 8100 34th Ave S, PO Box 1309, Minneapolis, MN 55440-1309; phone 612/883-5017; fax 612/883-5022; e-mail Leif.I.Solberg@HealthPartners.com.

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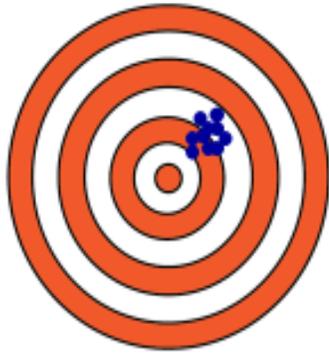
VOLUME 23 NUMBER 3 135

Solberg LI, Mosser G, McDonald S. The three faces of performance measurement: improvement, accountability, and research. Jt Comm J Qual Improv. 1997 Mar;23(3):135-47. doi: 10.1016/s1070-3241(16)30305-4. PMID: 9103968.

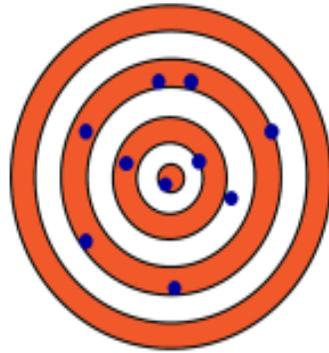
# Improvement Measurement: Informing Intelligent Action

## A Practical Illustration of Variation

The figure below shows how two individuals, Mary and Bill, threw ten darts.



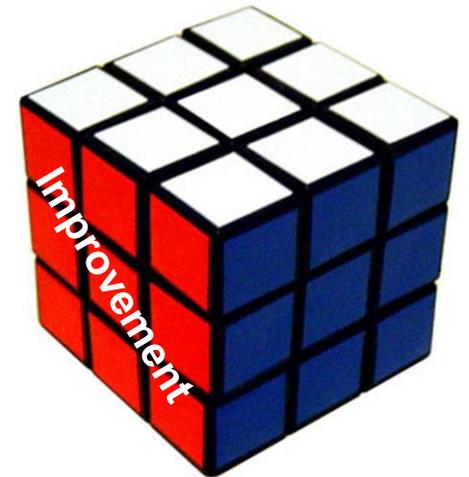
Mary



Bill

*“If I had to reduce my message for management to just a few words, I’d say it all had to do with reducing variation.”*

*W. Edwards Deming*



# IBD Qorus Data Collection Tool: The IBD Qorus Previsit Survey (PVS)

**Improving Care for People with Inflammatory Bowel Disease (IBD)**

DATE: / /  
MM/DD/YYYY

What is your treatment Number One Goal (Target) related to your IBD? This could be related to healing your bowel (mucosal healing), specific symptoms (e.g., diarrhea, abdominal pain), or how IBD might impact school or work, or life events (e.g., wedding, travel, having children).

My Number One Goal (Target) is: \_\_\_\_\_

How confident are you that you can reach this goal / target within the next six months?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%  
Not Confident Somewhat Confident Fully Confident

IBD includes Crohn's disease and ulcerative colitis. I have been diagnosed with (choose only ONE response):

Ulcerative Colitis  Crohn's disease  Other (specify): \_\_\_\_\_

When you are not experiencing symptoms of your inflammatory bowel disease, how many bowel movements do you typically have each day?

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20+

Not Applicable (I have an ostomy)

*Now, please tell us about your current symptoms. Over the past 7 days...*

What is your average (typical) number of bowel movements that you had in a single day last week?

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20+

Not Applicable (I have an ostomy)

Daily abdominal pain (check one)

None  Mild  Moderate  Severe

Blood in stool (check one)

No blood seen  Blood less than 50% of the time  Blood 50% or more of the time

In the past 7 days, have you had bowel movement(s) when you passed blood alone?  Yes  No

How would you rate your general well being over the past 7 days? (check one)

Generally well  Slightly under par  Poor  Very Poor  Terrible

Have you been to an Emergency Department (ED) in the past 3 months due to your IBD?  Yes  No

Have you been hospitalized in the past 3 months due to your IBD?  Yes  No

Are you currently taking prednisone by mouth for your IBD?  Yes  No

Are you currently taking opioids (pain medications) for your IBD?  Yes  No

Gender:  Male  Female

**Improving Care for People with Inflammatory Bowel Disease (IBD)**

Age (in Years):

Less than 21  21-30  31-40  41-50  51-60  61-70  71-80  Greater than 80

**FOR PROVIDERS ONLY**

In your best estimate how close is your patient to achieving steroid free mucosal healing?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%  
No healing Halfway there Complete healing

Did you discuss steroid free mucosal healing with your patient today?

Yes  No

Did you and your patient discuss your patient's targets (goals of care) today?

Yes  No

How recently have you done endoscopy/imaging to assess mucosal healing?

Within the past 6 months  
 More than 6 months and less than 12 months  
 More than 12 months and less than 3 years  
 More than 3 years

When do you next plan to assess mucosal healing (endoscopy/imaging)?

Within the next 6 months  
 Within the next 12 months  
 Longer than 12 months  
 I would like to assess mucosal healing but patient declines assessment  
 I don't know at this time

Which medications is your patient currently taking for their IBD (check all that apply)?

5-ASA (oral and/or rectal)  
 Immunomodulators (methotrexate, thiopurines)  
 Corticosteroids (prednisone, budesonide)  
 Anti-TNF agent  
 Non-TNF biologic agent (vedolizumab, ustekinumab)  
 Targeted small molecule inhibitors (tofacitinib)  
 Other

If your patient has NOT achieved steroid-free mucosal healing, are you making any treatment changes (select all that apply)?

No treatment change – patient choice  
 No treatment change - I do not feel that any change in treatment will lead to a meaningful improvement  
 No treatment change - due to cost/insurance coverage  
 No treatment change today – will decide based on therapeutic drug monitoring  
 Optimizing current therapy (such as increasing dose)  
 Adding new therapy  
 Switching to alternative therapy  
 NOT RELEVANT – patient has mucosal healing  
 Other \_\_\_\_\_

What is your Physician Global Assessment (PGA) for this patient today?

Normal  
 Mild  
 Moderate  
 Severe

# IBD Qorus QI Reports



## Opioid Treatment (Lower is better ↓)

Are you currently taking opioids (pain medications) for your IBD?

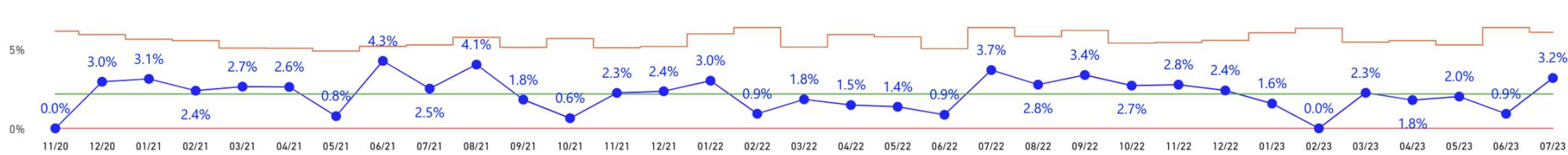
Date Range  
 From Nov-2020  
 To Jul-2023

Jul-2023



Monthly Opioid Proportion for your Site (p Chart)

Average (Green Line) = 2.2%



Your site over time

Monthly Opioid Proportion for all Sites (p Chart)

Average (Green Line) = 3.5%



Collaborative over time

Proportion Opioid by Site for Date Range (p Chart)

Average (Green Line) = 3.5%

(Your Site Number is 8)



Collaborative by site

For time points in which only one response is received, control limits will disappear (2 or more responses required per time point for control limits to show).

### Your Site

5540  
 Total (Denominator)

121  
 # Yes (Numerator)

### All Sites

20825  
 Total (Denominator)

725  
 # Yes (Numerator)

42  
 Number of Sites Reporting

# IBD Qorus QI Reports

Date range

Which way is better?

Average



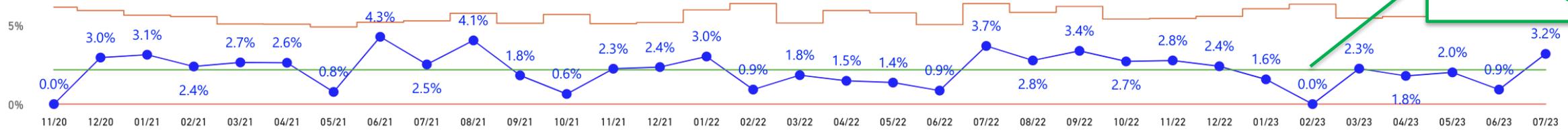
## Opioid Treatment (Lower is better ↓)

Are you currently taking opioids (pain medications) for your IBD?

Date Range  
 Nov-2020 From  
 Jul-2023 To

Monthly Opioid Proportion for your Site (p Chart)

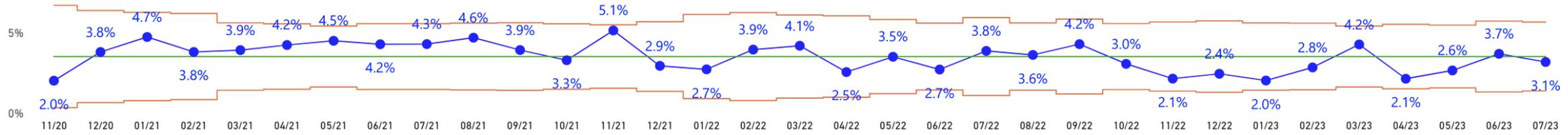
Average (Green Line) = 2.2%



Average

Monthly Opioid Proportion for all Sites (p Chart)

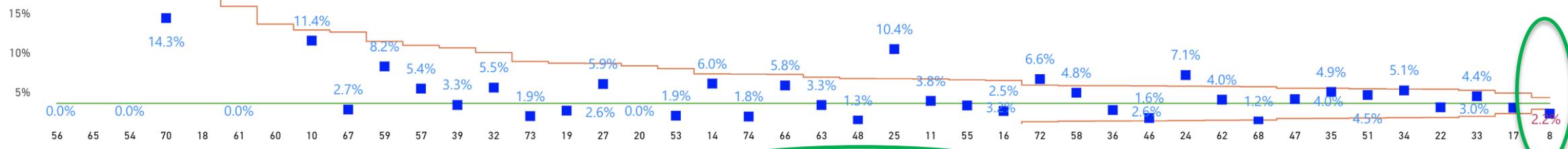
Average (Green Line) = 3.5%



Proportion Opioid by Site for Date Range (p Chart)

Average (Green Line) = 3.5%

(Your Site Number is 8)



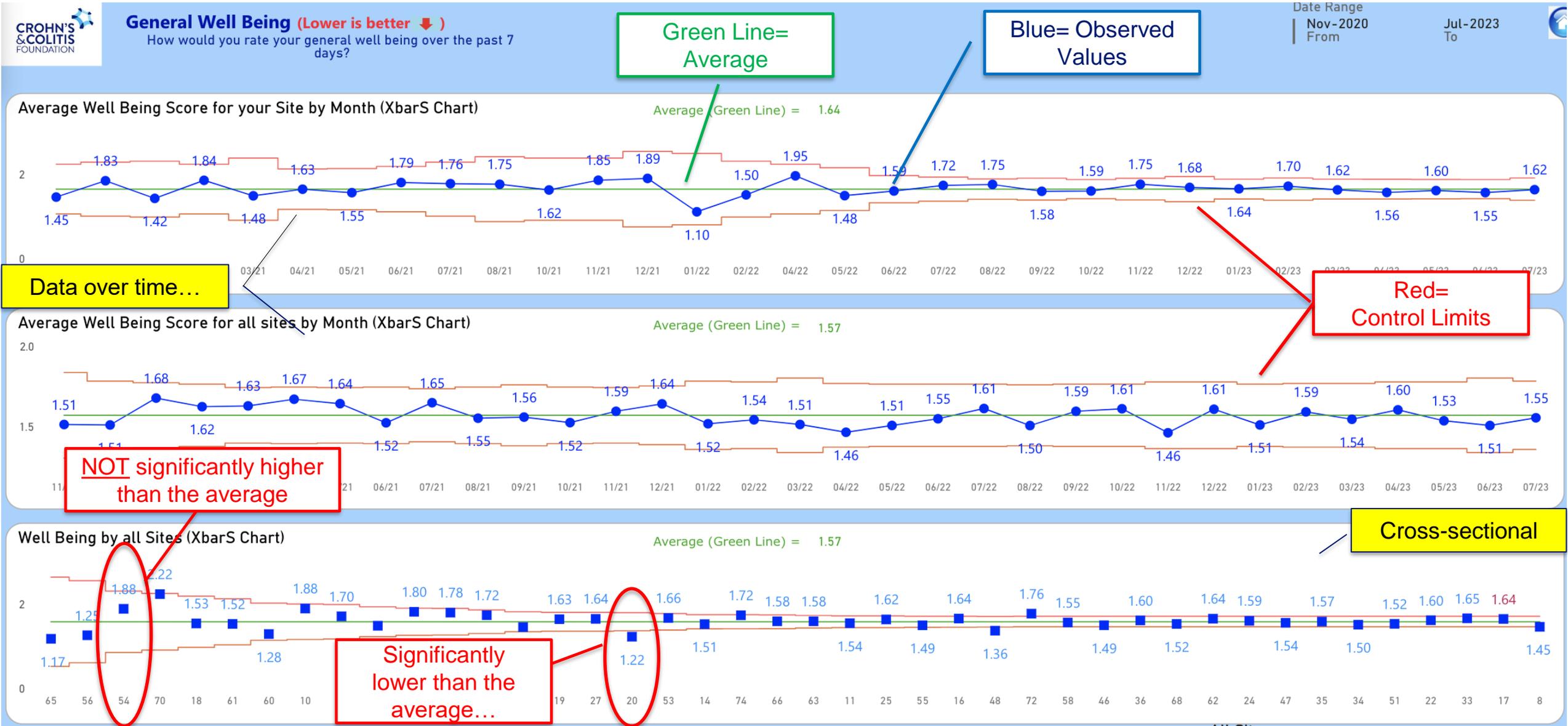
2.2%

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Your Site  
 5540 Total (Denominator)  
 121 # Yes (Numerator)

All Sites  
 20825 Total (Denominator)  
 725 # Yes (Numerator)  
 42 Number of Sites Reporting

# Statistical Process Control (SPC)

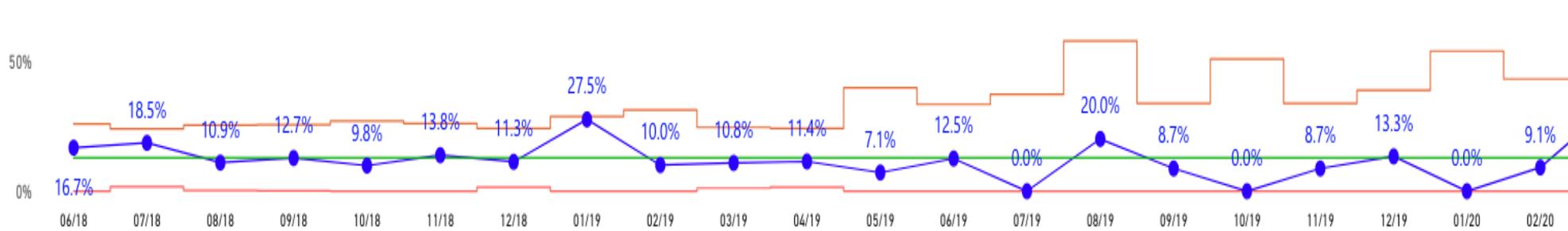


# Three Basic Detection Rules (IHI Criteria)

1. SHIFT = 8 or more consecutive points above or below the average
2. Points outside the control limits: One or more points outside of the upper or lower control limits
3. TREND = 6 or more consecutively increasing or decreasing points

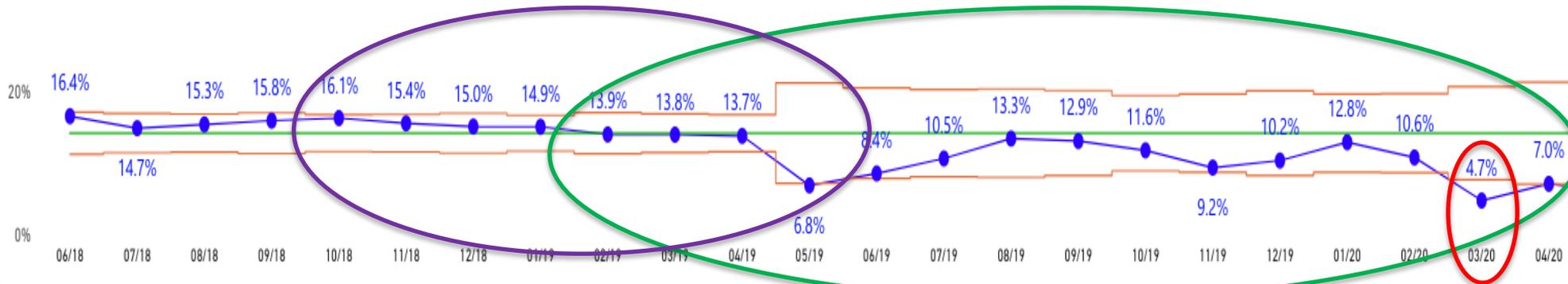
Monthly ED Utilization for your Site - Proportion (p Chart)

Average (Green Line) = 12.8%



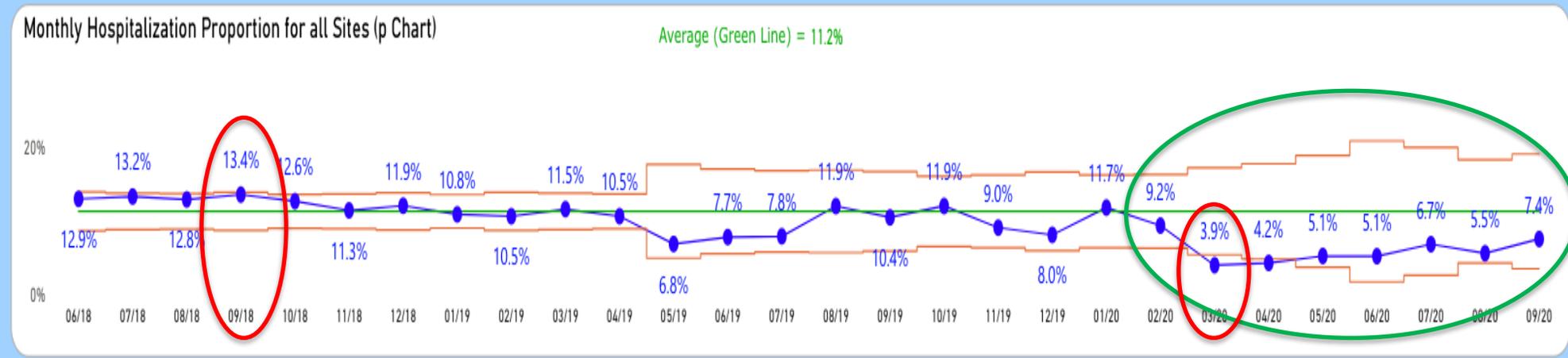
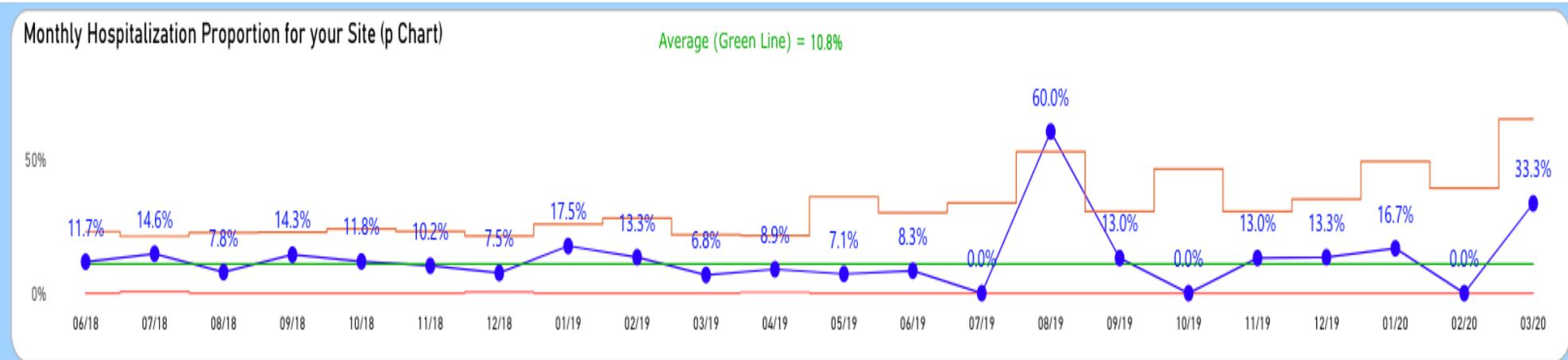
Monthly ED Utilization for all Sites - Proportion (p Chart)

Average (Green Line) = 14.0%



# Three Basic Detection Rules (IHI Criteria)

1. **SHIFT** = 8 or more consecutive points above or below the average
2. **Points outside the control limits**: One or more points outside of the upper or lower control limits
3. **TREND** = 6 or more consecutively increasing or decreasing points



# Summary

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MMDDYYYY

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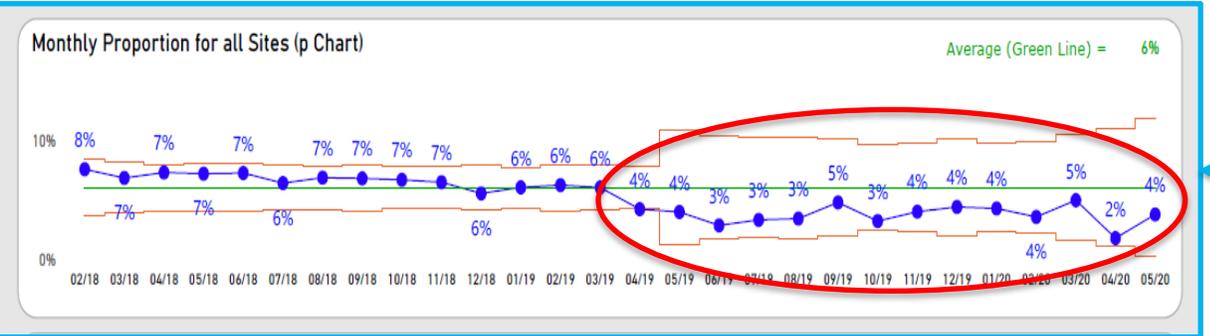
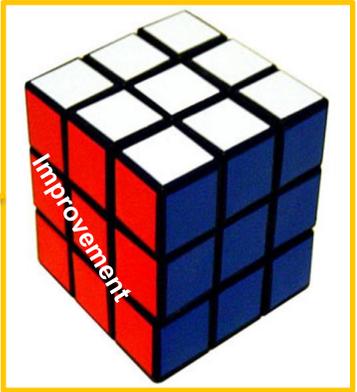
Gender:  Male  Female

Improvement Measurement

What are we measuring?

Qorus QI Reports

Basic SPC Interpretation



# Next Steps

ACTIVITY	MATERIALS
<b>Review this lesson and share with key members of your team</b>	Microlesson powerpoint or recording
<b>Collect data for your QI reports</b>	
<b>Review your data with your team and look for areas of improvement!</b>	Data Driven Improvement Story Template