Insights on Quality Improvement

Amanda Green of UK Healthcare
Bill Harrington of St. Elizabeth Healthcare

03/10/2022

Kentucky Hospital Association

Representing Kentucky Hospitals and Health Systems

QUALITY KENTUCKY

Health Care Quality Improvement Continues

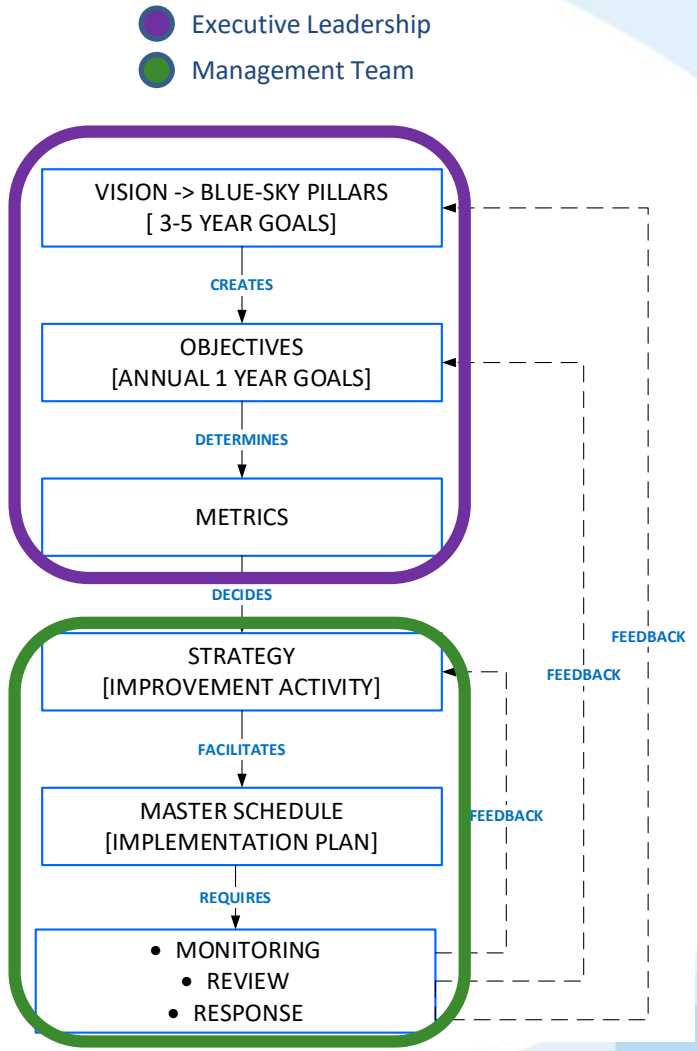
Discussion Objectives

Attendees will gain insights on:

1) Identification and selection of improvement opportunities
2) When is innovation warranted?
3) Process management foundation
4) Determining the proper approach
5) Preparing leaders for project work / expectations
6) Standardization in QI
7) Validating project work and guiding next steps
8) Project handoff and sustainment

What are the Opportunities?

- There should be a process for identifying opportunities
- Opportunities that are undertaken should tie to goals
- Prioritization and knowing when to say “no” or “not now”
- Example of a workflow for review is shown here:



Is Innovation Needed?

- Have been practices from the evidence been implemented into standard work?
- Are these best practices being completed reliably?
- Consider systems to monitor bundle compliance – both electronically and through real time visual observations and coaching moments

CLABSI WILDCARD v 1.3

Date: **Time:** **Unit:**

Coach doing the Wildcard: **RED BLUE**

Why are prevention bundles important for your patient and the work you do?

Is this central line necessary? Why?

YES NO

Hand hygiene

YES NO

CLABSI prevention bundle components present:

YES NO N/A	Dressing clean, dry, intact , dated, & initialed
YES NO N/A	Dressing changed every 7 days (KCH) or every Wednesday (Adults) (documentation)
YES NO N/A	Antimicrobial dressing present and clean/dry/appropriately placed
YES NO N/A	CHG treatment within past 24 hours (if applicable) (documentation)
YES NO N/A	All ports covered with alcohol caps (also, nurse should verbalize scrub the hub for 15 seconds with alcohol or CHG for line entry when asked how to access)(documentation)
YES NO N/A	Tubing/end cap change every 96 hours routinely and PRN per policy NI08-16 (documentation)

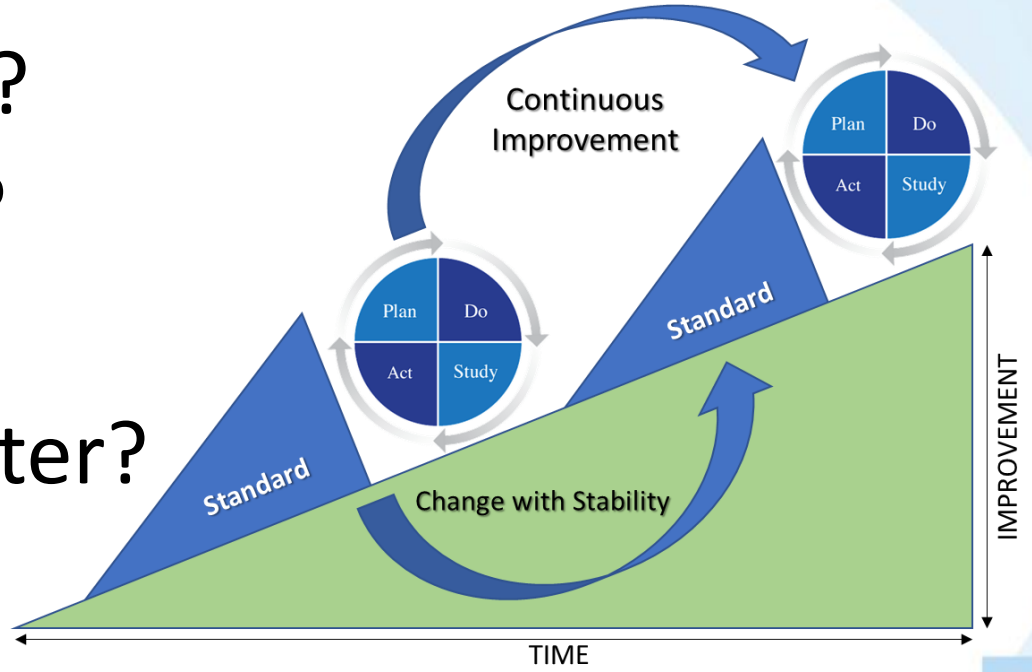
Card is BLUE if "all items are compliant."

Perfect CLABSI prevention bundle achieved!

Thank staff for time and engagement!

Process Management

- Do we manage our standard work?
  - Is it current with EBP?
  - Does it fit our needs?
  - Do we follow it?
  - Could we make it better?

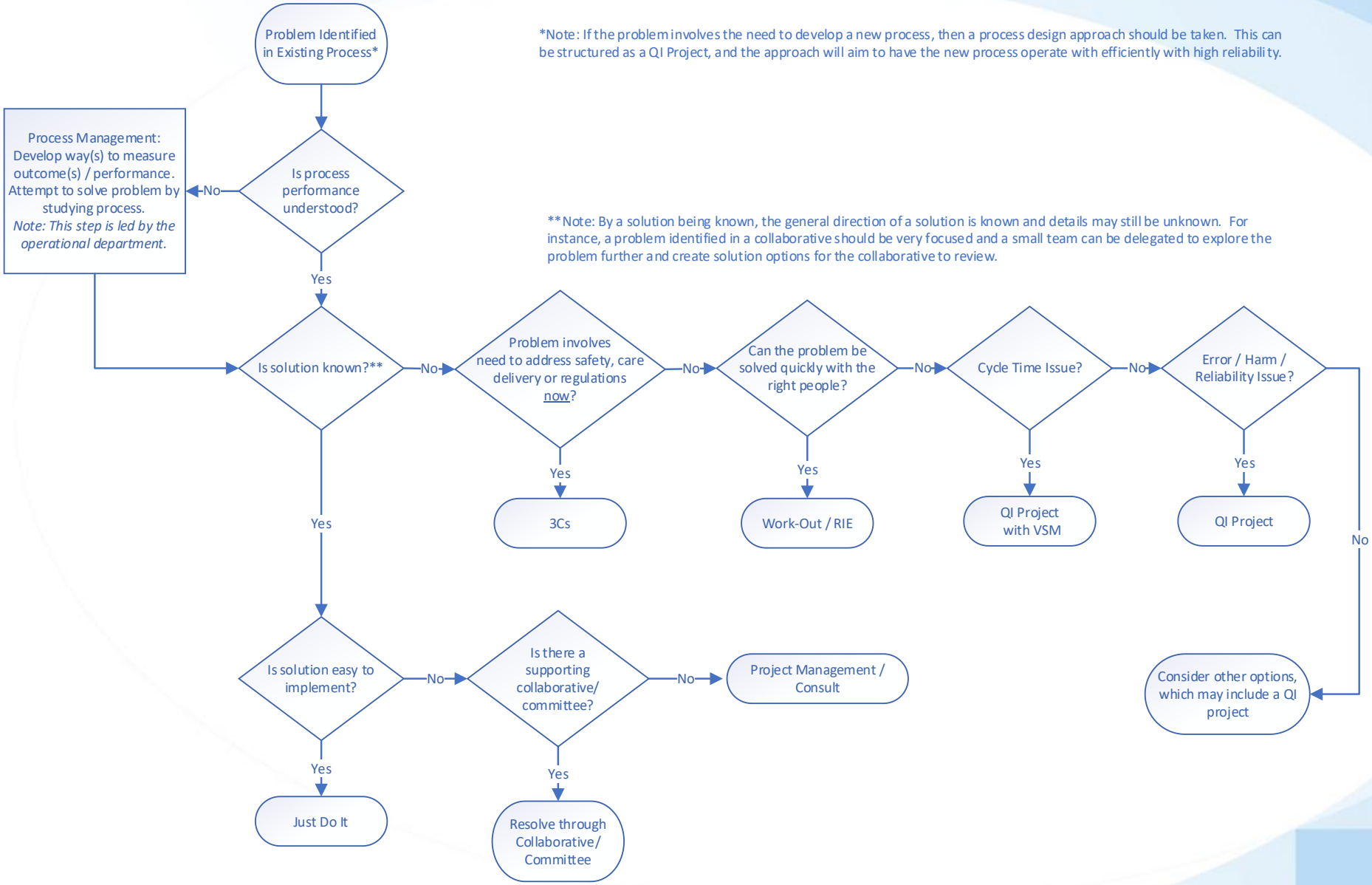


- Process improvement without process management is futile

What Approach to Take?

- Not all improvements need a project
- Have a plan to evaluate the right approach
- Your plan effectively is a process!

Problem Solving Approach Selection Guide



*Note: If the problem involves the need to develop a new process, then a process design approach should be taken. This can be structured as a QI Project, and the approach will aim to have the new process operate with efficiently with high reliability.

**Note: By a solution being known, the general direction of a solution is known and details may still be unknown. For instance, a problem identified in a collaborative should be very focused and a small team can be delegated to explore the problem further and create solution options for the collaborative to review.

Preparing Others for Improvement

- Build awareness on philosophy of improvement
- Establish shared terminology
- Train on concepts of improvement
  - Data measurement, reliability, planning PDSAs, spreading change, sustaining improvement
- Development pathway for growing competencies in making improvement
- Training should include all levels of the organization

Core	Training Modules	Est Time
Daily Management	QI 100 Intro to Quality Improvement (waste reduction, standard work- CBL available)	2 hrs
	QI 200 Daily Management System – Huddles (Leading, Safety focus, Metrics, Opportunities, Validation)	2 hrs
	QI 250 Journey to Excellence Overview - CBL (Purpose, model, leadership practices, rounding)	30 min
	QI 300 Applied LEAN for Leaders (5S, Visual mgmt., etc)	1 day
Sponsored Events	QI 400 A3 Problem Solving for Leaders (FOCUS PDSA, Value Stream Mapping, RCA, A3)	4 hours
	QI 450 Lean Fundamental Skills for teams (Focus PDSA, observations, removing waste, prioritizing, simulation)	4 hours
	QI 500 Advanced QI for Clinicians *	2 hrs
	QI 600 Facilitator Training - CAP/Workout (Workout problem solving, Facilitation skills)	4 days
Leadership Standard Work	QI 700 Leadership Alignment	2 hrs
	QI 710 Sustain Planning for Leadership	2 hrs
	QI 720 Senior Leader Rounding process	1 hr
	QI 730 Financial Impact Reporting, Calculators & Operational Metrics Dashboards *	1 hr

* Still under development

Preparing Others for a Project

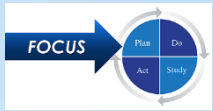
- Establish shared expectations on roles
- Define problem statement, scope, timeline, other details of project (use a project charter)
- Get all team members and other stakeholders comfortable with the project
  - What are they hopeful will be addressed?
  - What do they fear could be ruined?

Standardizing the Approach

- How is the QI program managed?
- What are the phases of completing a project?
- Do we follow a scientific approach to improve?
  - Are we comfortable with navigating the unknown?
  - Do we validate our assumptions and views?
- What are the requirements in each phase?
- What if the base requirements are insufficient?
- Focus on the learning journey more so than simply completing a tool
  - You did a process map… What did it show you?

FOCUS Checklist

Multi-week detailed phase-by-phase actions and deliverables. *Note: Other Tools listings are examples and not exhaustive lists.*



Find
the process to improve

√	Outcomes
	Determine Project's Value / Strategic Fit
	Evaluate Project Leadership Capacity
	Obtain Senior Leadership Buy-in

√	Deliverables
	Purpose & Scope
	Project Leadership
	Key Stakeholders
	Measurable Goal
	Gap to Goal
	Business Impact

Required Tools:
- Initial SIPOC
- Stakeholder Interviews
- Initial VOC / VOB Affinity Diagram
- Readiness for Change
- Key Outcome Metric and Historical Performance
- Initial Approved Charter

Other Tools (As Needed):
- ROI Matrix
- Focus Group Discussion
- Satisfaction Surveys
- A3

Organize
the team

√	Outcomes
	Define Team Structure
	Establish Cadence to Solution Proposal

√	Deliverables
	Core Working Team
	SME Resources
	Scheduled Meetings
	Committed Team
	Change Barriers
	Success Criteria

Required Tools:
- Validated SIPOC
- Validated VOC / VOB Affinity Diagram
- Project Storyboard
- Project Plan
- Communication Plan

Other Tools (As Needed):
- Waste Walk
- Lean Simulation
- Literature Review (Journey)
- A3

Clarify
knowledge of the process

√	Outcomes
	Grasp Process
	Measure Process
	Validate Problem Statement

√	Deliverables
	Current Conditions
	Ideal Conditions
	Key Process Gaps
	Metric Definitions
	Validated Data

Required Tools:
- Project Storyboard
- Project Plan
- Communication Plan
- Current State Process Map
- Data Collection Plan
- Data Validation
- Run Charts
- Validated Charter

Other Tools (As Needed):
- Control Charts
- Pareto Charts
- Process Observation
- VSM
- A3

Understand
variability & root cause(s)

√	Outcomes
	Identify Wastes
	Quantify Wastes
	Validate Root Causes

√	Deliverables
	Sources of Waste
	Point of Detection
	Point of Cause
	Causal Factors
	Root Causes

Required Tools:
- Project Storyboard
- Project Plan
- Communication Plan
- VA / NVA / NVA-R Analysis
- Process Issues Affinity Diagram
- Process Issues Validation
- 5-Whys

Other Tools (As Needed):
- Logical Deduction
- Statistical Hypotheses Tests
- Multi-Voting
- Fishbone Diagram
- A3

Select
key solutions

√	Outcomes
	Obtain Solution Set Approval (QIC)
	Evaluate Resource Needs for Change
	Establish PDSA Target Start

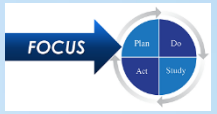
√	Deliverables
	Solution Set Proposal
	Long Term Interventions
	Short Term Interventions
	PDSA Readiness Plan

Required Tools:
- Project Storyboard
- Project Plan
- Communication Plan
- Intervention Brainstorming
- Solution Set Development
- CAP Analysis
- A3
- Solution Set Review Meeting

Other Tools (As Needed):
- FMEA
- Simulation
- Optimization
- Huddle Board Metrics
- Literature Review (Solutions)

PDSA Checklist

Multi-week detailed phase-by-phase actions and deliverables. *Note: Other Tools listings are examples and not exhaustive lists.*



Plan

√	Outcomes
	Obtain Approval of Projected WWW Implementation Plan
	Specify Objective of the Test

√	Deliverables
	Proposed WWW Implementation Plan
	Target Conditions
	Work Instructions
	Pilot Test Plan
	Pilot Metrics

Required Tools:
- Project Storyboard
- Project Plan
- Communication Plan
- Initial WWW Implementation Plan
- PDSA Test of Change Plan
- Draft Standardized Work Instructions
- Pilot Data Collection Plan

Other Tools (As Needed):
- Workflow Mock-up
- Work Cycle Analysis

Do

√	Outcomes
	Test the Changes

√	Deliverables
	Pilot Training
	Pilot Start / Stop
	Pilot Data
	Documented Unplanned Events
	Stakeholder Feedback

Required Tools:
- Project Storyboard
- Project Plan
- Communication Plan
- Pilot Training Plan / Documents
- Pilot Observations
- Pilot Stakeholder Feedback

Other Tools (As Needed):
- Observation Forms
- Data Collection Sheets

Study

√	Outcomes
	Evaluate the Changes
	Identify Pilot Gaps as Noise or Controllable

√	Deliverables
	Outcome Metric Performance
	Assessment of Target Conditions Met / Not Met
	Documented Learnings

Required Tools:
- Project Storyboard
- Project Plan
- Communication Plan
- Post-Pilot Stakeholder Interviews
- Run Charts

Other Tools (As Needed):
- Control Charts
- Pareto Charts
- Capability Analysis

Act

√	Outcomes
	Decide to Adopt, Adapt, or Abandon Changes
	Recommend opportunities for future PDSA cycles

√	Deliverables
	Adapt: Scale Testing
	Adopt: Roll-out Plan
	Abandon: Solution Revision and New Test Plan

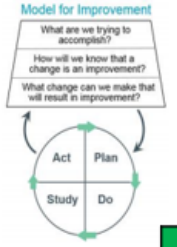
Required Tools:
- Project Storyboard
- Project Plan
- Communication Plan
- Updated Standardized Work Instructions
- Control Plan
- Huddle Board / Dashboard
- Follow-up Reviews
- Finalized A3

Other Tools (As Needed):
- Sustainability Planning
- Internal Publications
- External Publications

Improvement Roadmap

Provides a guide to help drive quality improvement using standardized tools.

UK HealthCare Improvement Roadmap



AIM
What are you trying to accomplish?

MEASURE
How will we know that a change is an improvement

CHANGE
How will we know that a change is an improvement

	Define	Plan	Kick Off	Execute	Execute	Execute	Execute	Execute	Spread
	Define an opportunity	**Plan for support for quality Improvement work**	**Kick off meeting for quality improvement work**	**Develop portfolio of data (measures)**	**Utilize measures and set goals**	**Develop theory for improvement (prove or disprove hypothesis)**	**Design and test changes to build scalability**	**Implement and standardize for sustainability**	**Leverage learnings and improvements achieved**
Description	This Is the initial phase where the opportunity that needs to be addressed is defined. How does an opportunity become quality improvement work? Senior Leadership will bring an opportunity forward and bring to the Quality Operations Committee.	In this phase, determine what is needed to support this new quality improvement work including data analytics, other personnel support, how to communicate with the team, and meeting logistics.	During this phase, the team starts to have actual meetings.	Identify balanced set of measures including outcome, process, and balancing measures. Establish appropriate data displays including baseline. Understand system performance by studying data over time.	In this phase, the team selects focused key measure(s) for the project and develops operational definitions for those measures. Baseline performance is assessed, and data is plotted in an appropriate measure display. The Problem Statement and SMART Goal for the project is refined.	The team utilizes their understanding of the current state using measures, coupled with their subject matter expertise and evidence, where available, to describe the key drivers for successfully achieving the SMART Goal. This will allow team to develop and test initial interventions.	With the theory for improvement established, the team focuses on a cyclical testing of interventions to change the system using reliability principles. Performance is measured to gauge the impact and believability of the PDSA Sprints.	Successful changes are implemented by making them a permanent part of day-to-day processes. Process and role documentation are updated, and a sustainability plan is created to monitor ongoing performance to ensure improved performance will be sustained.	In this phase, the team looks for opportunities to leverage the successful changes by documenting for future reference, communicating to other interested teams or actively pursuing spread of changes as applicable. Interventions spread enterprise wide.
Primary Tools	• QVS Scoping Document (include assessment of QI structure to support work) • Stakeholder Analysis as necessary (with signoff from executive sponsor) • Voice of the Customer	• Service Now • ID support personnel • MS Teams • Outlook – Send meeting invite for pre-kickoff and 1st meeting with core team • Team Communication Plan	• Run charts • Pareto charts • Introduction to KDD • Systematic review of literature	• Operational definition	• High level process map • Detailed process map • Wildcard Analysis • Pareto chart • Time data analysis • Eight waste analysis • SPC charts	• 5 Whys or Fishbone • Key Driver Diagram • Value Stream Map • sFMEA • Systematic review of literature • KDD • Voice of the Customer	• PDSA planning ramp • PDSA worksheet • PDSA summary • Updated measure display • Reliability principles for designing for interventions	• Implementation plan • Sustainability plan including who, by when, and monitoring measures • Sustainability and Spread Communication Plan	• Final report (communicate results and learning)

Validating Project Work

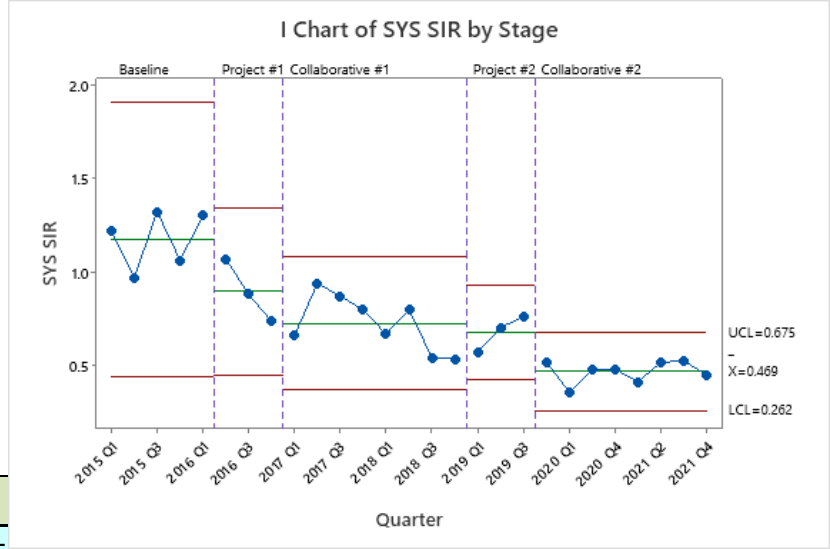
- What is the accountability for review, e.g., tollgates?
- How do we ensure the scientific process of our methodology is followed?
- How are interventions tested for efficacy and sustainability?

Project Handoff and Sustainment

- Have general requirements to ensure sustainment
  - Standard Work (new, updated)
  - Control Plan (metrics, monitoring, reaction)
  - Dashboards / Feedback implemented
  - Process Governance (oversight)

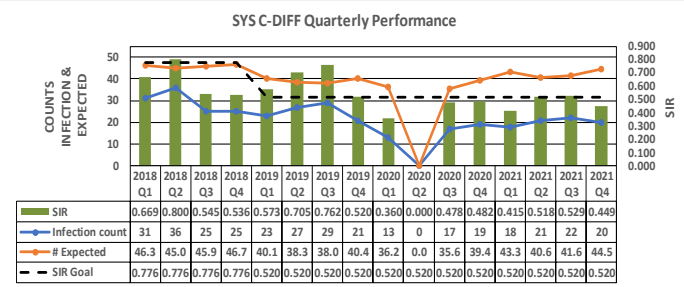
C. Diff Process Governance

- Tool to find and fix issues:
  - Loose stool with delayed test
  - Documentation issues
  - Testing patients without active infection

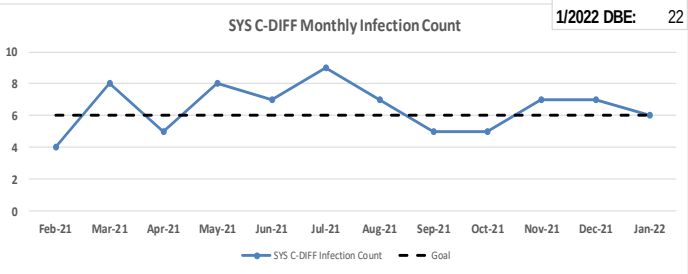


FIND the process to improve

MONITOR OUTCOMES



	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
SIR	0.669	0.800	0.545	0.536	0.573	0.705	0.762	0.520	0.360	0.000	0.478	0.482	0.415	0.518	0.529	0.449
Infection count	31	36	25	25	23	27	29	21	13	0	17	19	18	21	22	20
# Expected	46.3	45.0	45.9	46.7	40.1	38.3	38.0	40.4	36.2	0.0	35.6	39.4	43.3	40.6	41.6	44.5
SIR Goal	0.776	0.776	0.776	0.776	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520



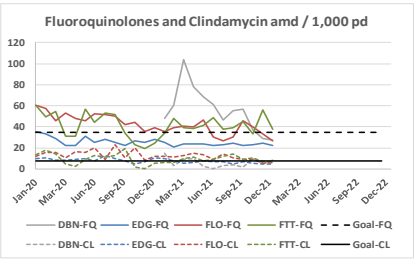
Max DBE:	22
1/2022 DBE:	22

REVIEW DATA FOR CAUSAL

Stratification - Hospital and Level of Care (HOS-LOC)

HOS-LOC Last 3 MOS		Nov-21	Dec-21	Jan-22
EDG-MS	6	1	3	2
EDG-TCU	4	2	2	0
FTT-MS	4	2	1	1
EDG-ICU	3	1	1	1
DBN-MS	1	1	0	0
FLO-TCU	1	0	0	1
FLO-MS	1	0	0	1
DBN-ICU	0	0	0	0
FLO-ICU	0	0	0	0
FTT-ICU	0	0	0	0
FTT-TCU	0	0	0	0
GRT-MS	0	0	0	0

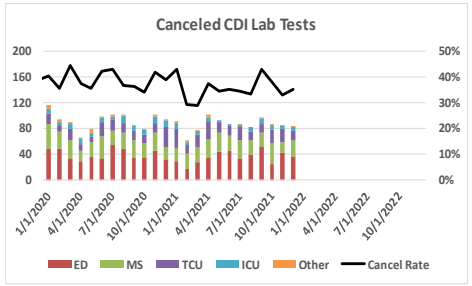
Tracking - High Risk for CDI Antibiotics Use



Stratification - Factors (up to 2 factors per event)

Factor	Last 3 MOS	Nov-21	Dec-21	Jan-22
True positive HO	8	2	5	1
Loose Stool Delayed Test	5	2	0	3
Non-Active Colonized Pt.	3	0	1	2
True HAI environmental/staff	2	1	1	0
Cause Unknown	2	2	0	0
Documented Stool < Type 6	1	0	1	0
I/O Documentation Issue	1	0	0	1
Pt. on Motility Agent	0	0	0	0
Diet Influenced (liquid, tube)	0	0	0	0
BPA not/incorrectly addressed	0	0	0	0
Antibiotic Use (other options)	0	0	0	0
Antibiotic Use (appropriate)	0	0	0	0
BPA did not fire	0	0	0	0
Poor HH/TBP Noted	0	0	0	0

Tracking - Canceled Tests



Q&A Discussion

Thank you!