

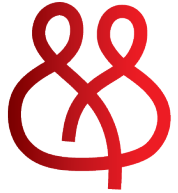


VIRTUAL
2020 NATIONAL
RYAN WHITE
CONFERENCE ON
HIV CARE & TREATMENT

Advanced Quality Management: Learn about QI Tools You Might Not Have Ever Used Before

Center for Quality Improvement and Innovation: Nanette Magnani, EdD; Julia Schlueter, MPH; Justin Britanik, BS; Charles Kolesar, RN, MPH





HRSA Ryan White HIV/AIDS Program

**CENTER FOR QUALITY
IMPROVEMENT & INNOVATION**

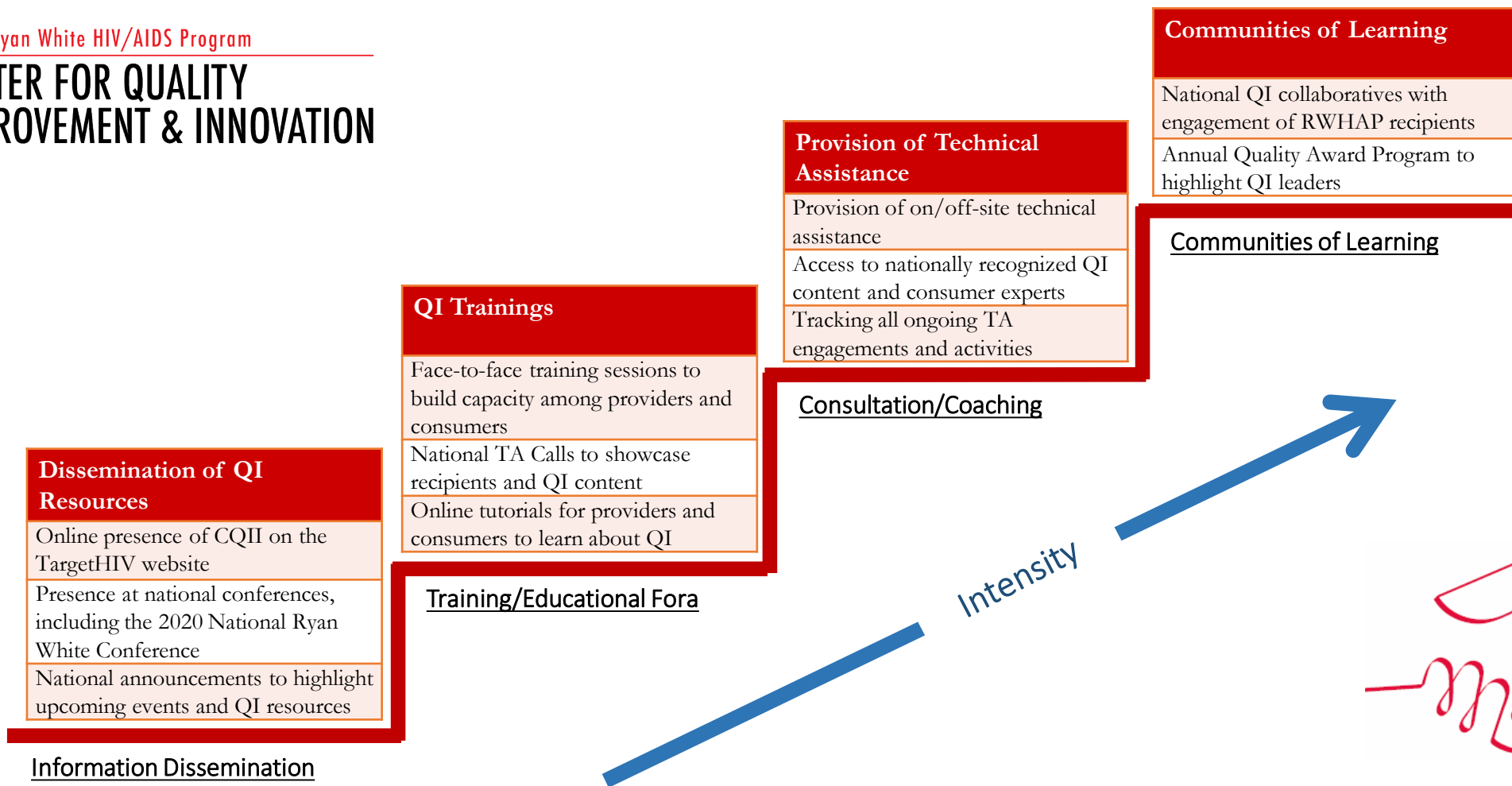
Center for Quality Improvement & Innovation (CQII)

- Funded by the HRSA HIV/AIDS Bureau [#U28HA37644]
- Timeframe: July 1, 2020 to June 30, 2024 (4 years)
- New York State Department of Health AIDS Institute
Center for Program Development, Implementation, Research and Evaluation (CPDIRE)

“Together, we continue to improve the lives of people with HIV across the United States. CQII provides state-of-the-art technical assistance and training to Ryan White-funded recipients and subrecipients that measurably strengthen local clinical quality management programs and improve patient care, health outcomes, and patient satisfaction.”



Technical Assistance Levels



CQII.org | 212-417-4730

- This workshop, facilitated by CQII staff and nationally recognized quality improvement (QI) experts:
 - Nanette Magnani
 - Julia Schlueter
 - Justin Britanik
 - Charles Kolesar

Agenda



- Introductions and Learning Objectives – Charles Kolesar
- Case Study QI Project: Rapid Start – A3 Sheet Overview – Nanette Magnani
- SIPOC Diagram Overview – Justin Britanik / Julia Schlueter
- Flowcharting/Value-Stream Mapping Overview – Justin Britanik / Julia Schlueter
- Priority Matrix/Failure Mode and Effects Analysis Overview – Justin Britanik / Julia Schlueter
- Kanban Overview (5min) – Justin Britanik / Julia Schlueter
- FAQs - Charles Kolesar
- Related QI resources – Julia Schlueter
- Additional CQII resources – Charles Kolesar

Learning Objectives

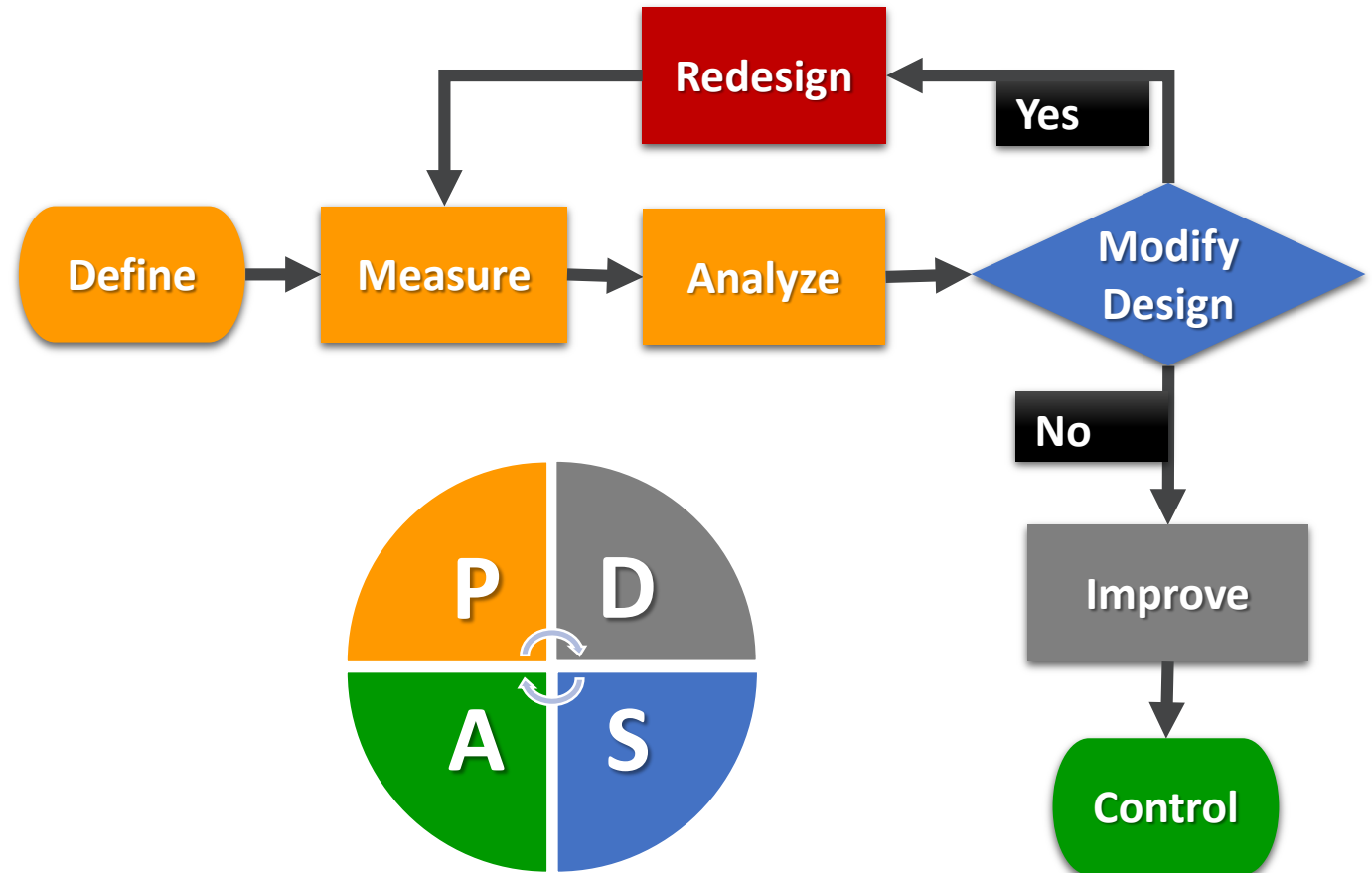


At the end of this session, participants will:

- Learn about five advanced quality improvement (QI) tools for use in HIV programs
- Learn about the application of different advanced tools in busy clinical quality management programs
- Understand how to use advanced QI tools in current future QI projects

Combining Tools For Synergistic Effect

- **Develop Project Goals**
A3 Project Charter
- **Describe Current Process**
SIPOC Diagram
Value Stream – Current State
- **Develop Improvement Theory**
FMEA
- **Describe Improved Process**
Value Stream Map – Future State
- **Adopt**
Kanban



Case Study – QI Project Rapid Start



Note: This Case Study is a composite of FQHC experiences but is inspired by a QI project completed at Crescent Care in New Orleans, an FQHC, RWHAP-funded clinic, presented by Dr. Jason Halperin, MD, MPH. Thus, not all of the information presented here is factual about that project.

For more information specific to the original QI Project please contact, Jason.Halperin@crescentcare.org.

Background

- The Parts A and B RWHAP programs have received Federal money to End the HIV Epidemic (EHE) in their state
- Rapid Start is one of the strategies being promoted to EHE
- There is significant senior leadership support across departments
- Research supports same-day treatment resulting in reduced time to viral suppression

Background (cont.)



- The RWAHP team at Neighborhood Health Center (NHC) has had success in its prior QI projects on improving viral suppression and patient retention rates. Team members have participated in CQII collaboratives, TA calls, and some have participated in QI trainings
- QI Project Team
 - Linkage Coordinator
 - Testing Coordinators from NHC
 - Patient Navigator
 - Front Desk
 - Client Services Coordinator
 - Nurses and Providers

- Outcome Measure
 - Viral suppression (HIV/AIDS Bureau measure)
- Process Measures
 - Linkage time in hours from knowledge of diagnosis to medical appointment with HIV provider
 - Time to viral suppression (from diagnosis to first suppressed lab test)
- Inclusion criteria:
 - Clients enrolled in the EIS program seen between 12/06/2019 – 01/31/2020

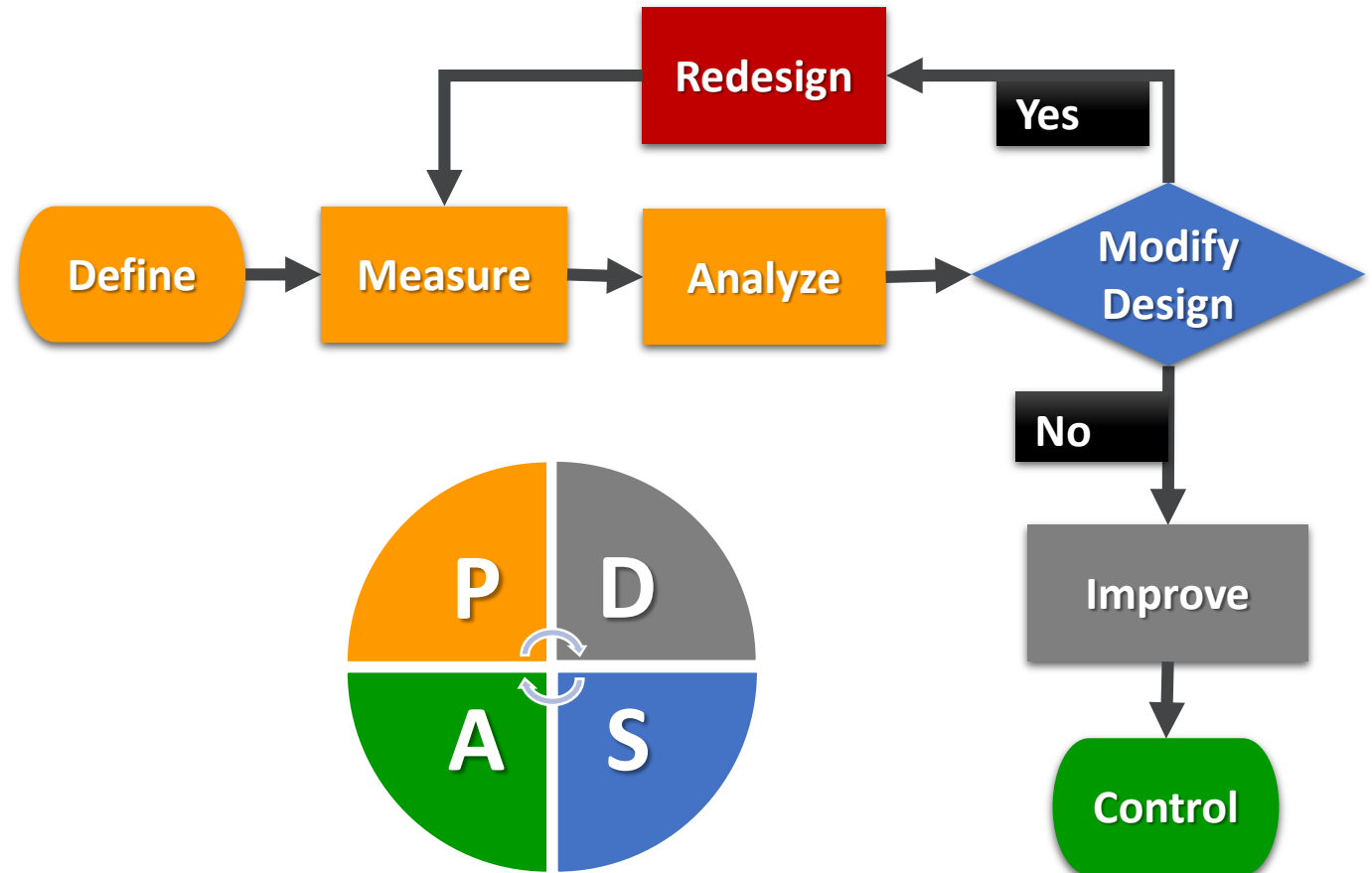
Baseline Data



- Annual clinic viral suppression rate (10/01/2018 – 9/30/2019)
 - 82% (1150 patients)
 - 56% (150 newly diagnosed patients)
- Process Measures
 - Linkage time – no baseline data
 - Time to viral suppression – no baseline data

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A3 Planning, Tracking and Documentation Tool



- A3 is a Lean Six Sigma tool to
 - continuously track your team's problem-solving process
 - organize your work
 - condense work on an 11" x 17" size paper (derivation of A3 name)
 - document and report your QI work
 - could also be a QI project aim statement or charter

“Rapid Start QI Project” A3 Sheet



Project Title: Rapid Start		PDSA
Project Dates: Start: 12/1/2019		
Projected End: 3/31/2020		
Team Leader and Members:		
Define Problem: ETE requires preventing HIV transmission		Implementation Plan: Rapid Start Project / Effective treatment as prevention supports ETE
Measures: VL Suppression, Linkage Time, Time to VL Suppression		Observations/Do:
Develop Project Goals: Increase VL suppression rate from 82% to 88% Reduce linkage time from 30 days to 5 days Reduce time to VL suppression from 89 days to 35 days.		
Root Cause Analysis (tools/results):		Results/Study:
Tests of Change:		Follow-up Actions:

Stakeholders, Inputs, Process, Outputs, and Customers

When to use it:

- When you first start to investigate a process and a team needs to understand the basics that make up the process
 - Especially when you need to understand how complex processes work together as a system
- When a team needs a way to get the collective knowledge of the team members about a process recorded in an easy to view format
- When we need to make a concise communication to others about a process and the parameters that it encompasses

Filling Out a SIPOC

Stakeholders	Inputs	Process	Outputs	Customers
Who is your project team? Who supports the project?	What resources are needed for the project? <ul style="list-style-type: none"> Physical objects Information Factors that influence the process 	What steps go into the project (look at process map) <ul style="list-style-type: none"> Take a high-level view (≈10 steps) List steps sequentially 	List the outputs of the entire process	End users of the service and internal customers that the process <ul style="list-style-type: none"> Who are we doing this for, who defines value?

Input Measures:
How do you measure stakeholders generating outputs in terms of goals?

Process & Step Measures:
What are stakeholders doing? How long does it take, how much does it cost, where are the complexities?

Outcome Measures:
How do you measure outputs in terms of goals?
Do outputs effectively improve health outcomes, service delivery efficiency, and customer satisfaction?

Case Study SIPOC

Stakeholders	Inputs	Process	Outputs	Customers
<ul style="list-style-type: none"> • NHC Staff • Testing Agencies • Parts A and B partners • HRSA 	<ul style="list-style-type: none"> • Dedicated staff • Data Systems • On site medication • Designated provider at each site • Defined Approach • Laboratory 	<ul style="list-style-type: none"> • Patient Confirmed Positive • Contact patient, schedule visit • Arrange transportation • Patient arrives at appt, provider dispenses first ART dose • Follow-up appt scheduled (3-4 weeks from first visit) • Patient completes RW paperwork • Patient attends follow-up appt and repeat viral load drawn to check for suppression 	<ul style="list-style-type: none"> • Actionable real-time data reports • Knowledge gained by stakeholders • Linkage to ART • Improved health outcomes • Improvement ideas 	<ul style="list-style-type: none"> • PLWH

Input:
of RS appts
of meds dispensed

Process:
Cycle Time – 1) linkage to care; 2) diagnosis to viral suppression
Process Complexity – testing and referrals to clinic to provider

Outcomes:
Patient suppressed in <60 days

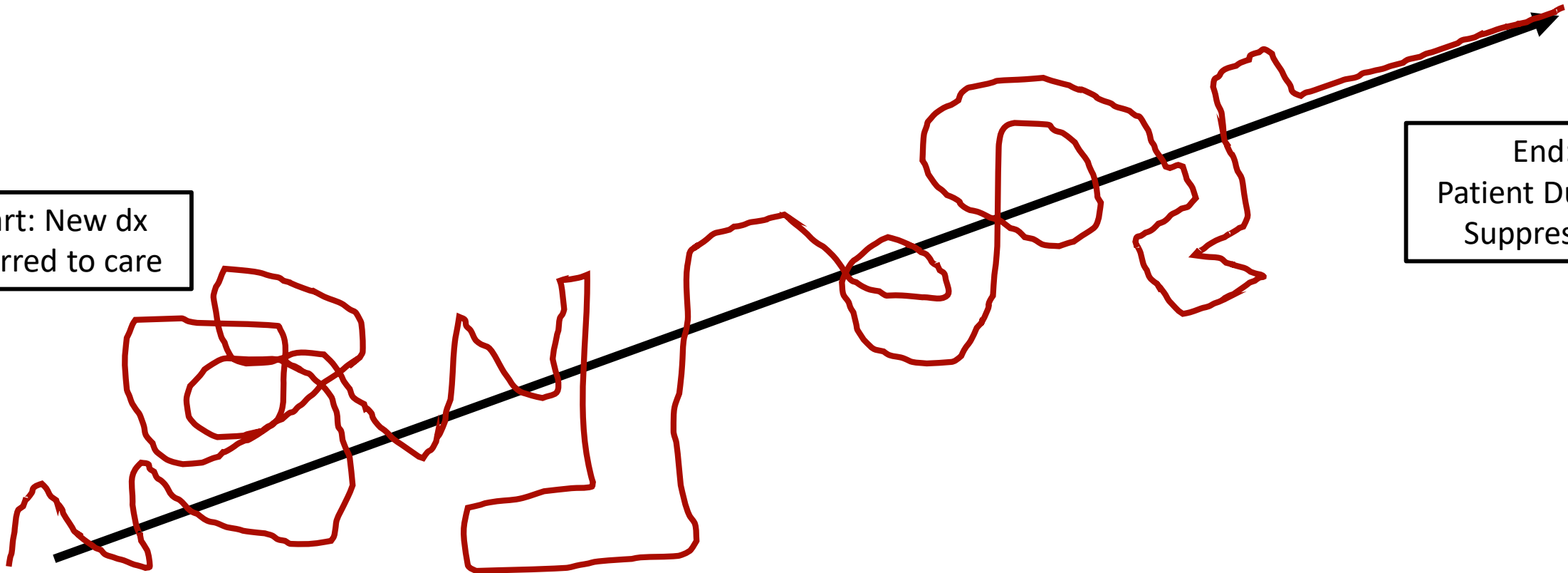
Mapping a Process



- Process mapping helps us describe a process visually to:
 - Understand the process
 - Identify potential sources of problems
 - Outline the ideal process steps
 - Enable communications with others
- There are several tools for mapping a process
 - Spaghetti Diagrams
 - Decision Trees
 - **Flowcharts - Beginner**
 - **Value Stream Maps – Advanced**

Process Flow: Actual vs. Documented

Start: New dx
referred to care



End:
Patient Durably
Suppressed

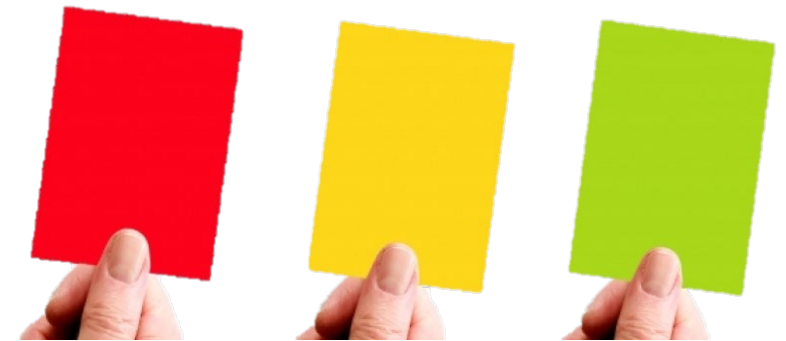
Quick Review of Value



- **Value Added Step** - the customer wants it, it fundamentally changes the service experience, AND it has to be done right the first time. **All three elements must be present to be Value Added.**
- **Requirements** - required by the consumer, required by the organization, or required by law. **Challenge requirements**--things like policies can be changed and aren't necessarily always requirements!
- **Non-Value Added** - everything else! We can't get rid of all NVA, some of it (sometimes over 50%) is inherent to the process. Also, **NVA does NOT mean unimportant**, things like data collection are technically NVA, but can be critical to the success and sustainability of the process improvement.

Make an Existing Flowchart into a Value Stream Map

1. Take an existing flowchart or other process map
2. Gather a small team that has knowledge of the process
3. Talk through each step at a time
4. Use Sticky Notes and markers mark each step:
 - Green Mark– value added
 - Yellow Mark – requirement
 - Red Mark – non-value added
5. Assign each step accordingly – go for consensus
6. Brainstorm how to remove waste and add more value
 - Use quantitative process data to inform discussion
 - Use qualitative consumer data as well – compare to their map or journey map



Creating the Current State Map



- ✓ Identify the scope of the map for the initiative
 - ✓ Begin with a high-level map across departments/unit
 - ✓ Then focus on the level of processes or step that you wish to address
- ✓ Identify when the consumers requirements are met (success!!)
- ✓ Inform process owners that the map we be created from actually walking and get their input
- ✓ Agree on icons that will be used
- ✓ Keep it simple, but good enough

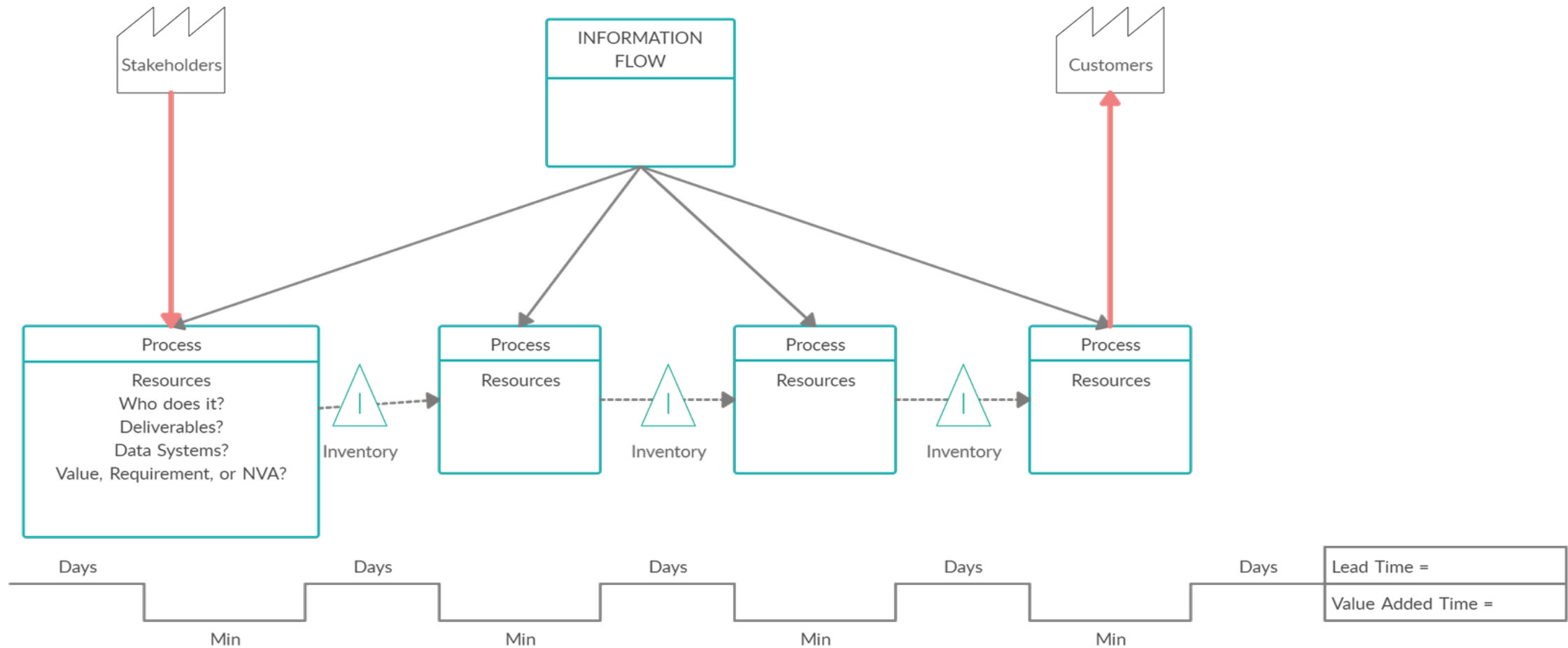
Value Stream Mapping: Data Boxes



- Takt Time: the amount of time it takes to complete the process to keep up with demand
 - We have 15 min schedules and we double book
 - We need to see 30 patients in 7 hours – what is our takt time?
- Cycle Time: the amount of time it takes for the step
 - Average time to get patients checked out at front desk
- Lead Time: Total time from initiation of process to customer
- # of People: the number of staff involved in the step
- Inventory: the number of patients or items “waiting”
 - We’ve seen 20 pts. and have 10 waiting to be seen or currently in the process and we have 2 hours before the last slot, will we be able to see everyone?

$$\begin{aligned} &\underline{\text{TAKT TIME}} \\ &(7\text{hrs} * 60\text{min}) = 420 \text{ min} \\ &420\text{min} / 30\text{pts} = \mathbf{14 \text{ min}} \end{aligned}$$

Value Stream Map Template



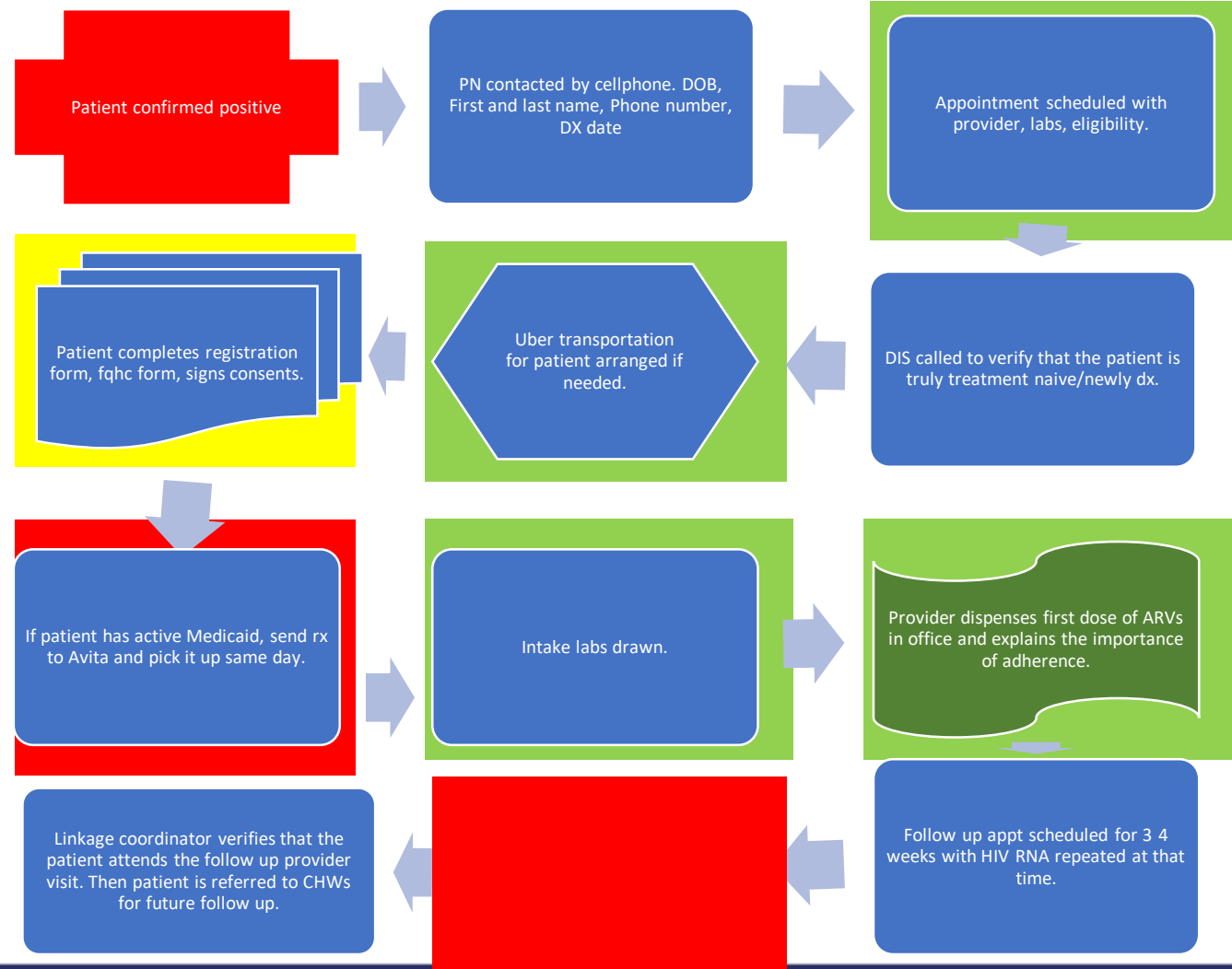
Future State Value Stream Map: Key Questions



1. How would the customer draw this map?
2. What would the ideal process look like?
3. Look for value added activities (usually the boxes) and seek to eliminate waste (arrows, forms, decisions, rework, transport etc.)
4. What improvements could be made if there were **no** constraints on scope or resources?
5. Where is continuous flow most important?
6. Where could we employ a creative idea to remove waste?
7. Which improvements will give us the most juice for the squeeze?
(intersection of high impact, high probability, low cost solutions)
8. Which improvements will best help the process owners sustain?

Value Stream Map Case Study

Value Added
 Required
 Non-Value Added



Cycle Times:

- Dx to ART = 28.9 hours
- Dx to Viral Suppression = 29 days

Implementing Solutions



- How do you prioritize multiple solutions to root cause(s)?
 - Sort possible projects
 - Collect relevant data
 - Analyze relevant technical and experiential data
 - Refer to Root Cause Analysis to ensure solution addresses the root cause
 - Consider impacts vs. barriers to implementation
- There are several tools for prioritization
 - **PICK Chart or Priority Matrix (Beginner)**
 - **Failure Mode Effects Analysis (Advanced)**

Failure Mode & Effects Analysis (FMEA)

- *Developing An Improvement Theory*



Good Failure:

- It happened quickly
- We learned something



Bad Failure:

- It used up resources and buy-in
- We don't understand why we failed
- We're losing faith in the project



Understand Critical Failures



- What should we prioritize?
 - Think horses, not zebras
- FMEA key questions for improvement teams
 - What could go or went wrong?
 - What would cause it?
 - What are the consequences?
 - What can we do? (Redesign)
- Contingency planning for probable, critical, occurrences
 - Designing better interventions could save you several cycles!
 - **If X, then Y planning**

Failure Mode & Effects Analysis (FMEA)



- With a long history in private industry and the military, FMEA is a step-by-step approach for identifying all possible failures in a design, a process, or a product or service. It is a common analysis tool for QI projects.
- **Failure modes:** means the ways, in which something might fail. Failures are any errors or deviations from quality, especially ones that affect the consumers, and can be potential or actual
- **Effects analysis:** refers to studying the consequences of those failures, potentially even before they happen

Simplified FMEA example

□	A Function ▾	A Failure Mode ▾	A= Effects ▾	Severity ▾	A Cause of Failure ▾	Likelihood ▾	A Risk Priority ▾	A Action Recommended ▾	31 Date Due ▾	A Person Responsible ▾
1	Review data	insufficient interfaces between data systems to easily create data dashboard	Review is not data driven Stakeholders don't value process	7 - High	Lack of resources (time, IT, and expertise)	6 - Moderate: Possible chance...	42	IT workaround - do manual data import and use sharepoint instead of Tableau	6/9/2020	
2										

↑
1-10 Scale
Use data
to confirm

↑
1-10 Scale
Use data
to confirm

↑
Multiply
Severity X
Likelihood of
Occurrence
For Risk
Priority
Number
(RPN)

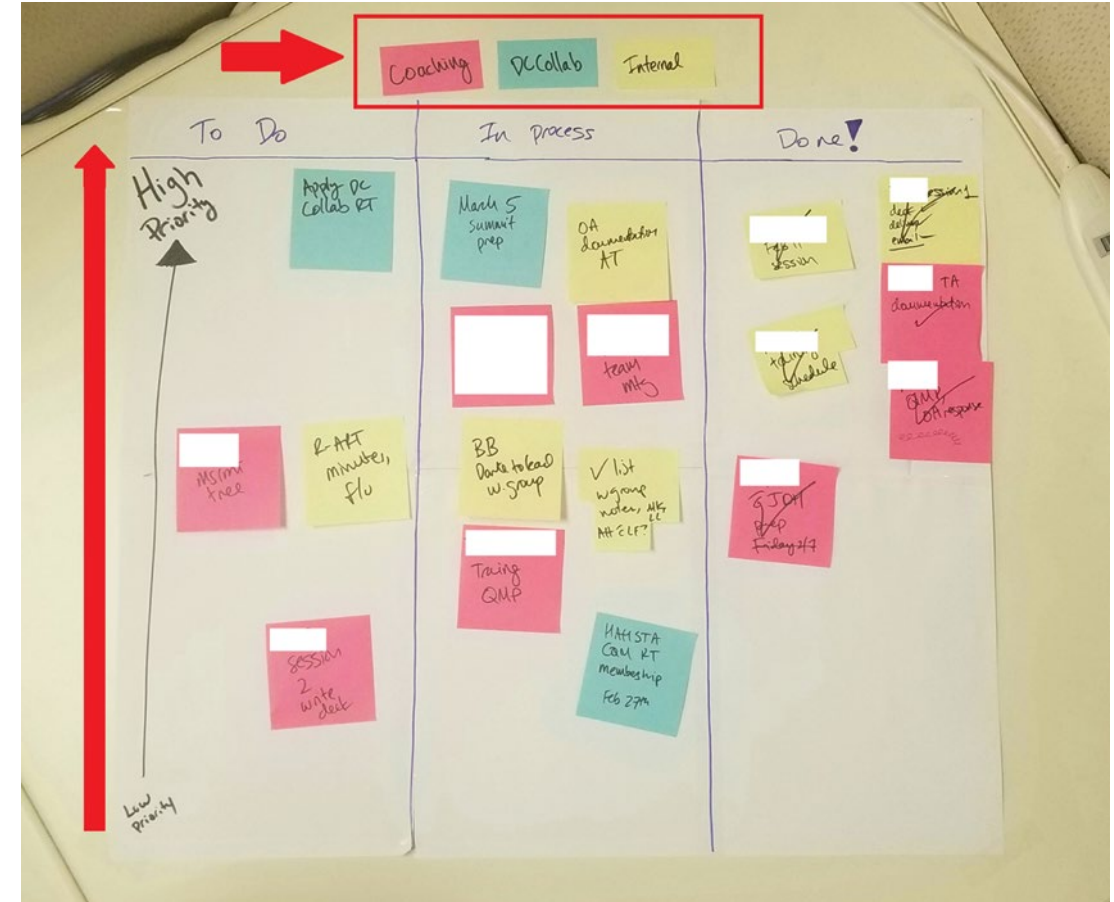
↑
Develop
recommended
actions for
high RPN
functions

Case Study - FMEA

Function	Failure Mode	Effects	Severity	Cause of Failure	Likelihood	Risk Priority	Action Recommended
On site medication	Meds are not delivered by pharmacy	Unable to conduct DOT	9 – Very high	Pharmacy short staffed	5- Moderate possible chance	45	Have starter pill pack on site in case pharmacy unable to deliver
Designated Provider at each site	Provider scheduled for that day is not available	RS appt not available at clinic	10 – very high	Designated Dr. called in sick	6 – moderate	60	Sites have more than one designated RS provider as back-up

Kanban

- Japanese for “signboard”
- A visual display that regulates the flow of work
- Organized around the different milestones in an improvement project
- Clearly indicates what work remains to be done and who is responsible
- Colors can represent the state of the work in process
 - Example: yellow can mean behind schedule; orange on time; red means immediate attention



Making a Simple Kanban

Status →

Priority ←

Task Owner ←

Due date ←

Status	Task Title	Category	Due Date	Priority	Task Owner	CQM Domain
Not Started	QCMC Committee Meetin...	Meetings	7/23/2020			INFRASTRUCTURE
Not Started	QCMC Committee Meetin...	Meetings	10/22/2020			INFRASTRUCTURE
Not Started	QCMC Committee Meetin...	Meetings				
Working	Gather Feedback - Adjust ...	Measurement				PERFORMANCE MEASUREMENT
Working	Effective QM Committee ...	Didactic Sessions	6/17/2020		Justin Britanik	REGIONAL CQM ACTIVITIES
Working	Easy Lean Improvements: ...	Didactic Sessions				
Waiting	Record previous didactic p...	Website/YouTube				COMMUNICATION STRATEGIES
Waiting	Create Process Map to Sus...	Measurement	1/31/2020	Important not Urgent		PERFORMANCE MEASUREMENT
Waiting	Lean Six Sigma Training	CQM Committee - Response Te...				
Review	Draft Process for complian...	HAHSTA Leadership Buy-in CQM	12/13/2019		Khalil Hassam	INFRASTRUCTURE
Review	g a Kaizen Event	Didactic Sessions	9/16/2020		Justin Britanik	
Review	Key questions and timeline	Formative Evaluation	11/20/2019			EVALUATION
Review	Stakeholder Feedback	Formative Evaluation	3/5/2020			
Review	Provider QM Summit Kickoff					

Using Kanban for Team Huddles

Huddles are:

- Brief; 10-15 minutes
- Focused; no side conversations, everyone is focused and reviewing the information
- Standing meetings
- Review of the “vital few”
- Engagement focused
 - More than just speaking aloud or reading an email, visual boards help everyone see the same thing
 - Responsibility for leading the huddle rotates

Redesigning Care
 Improving the patient journey in Ward 5B

KEY Needs / A/C
 Referred /
 Seen /
 Ready for discharge /
 Discharge from service

Bed	Patient Name	Med Team	PT	OT	SW	DN	SP	Other Referrals	Waiting for	Pre-hospital Profile	D/C Destination	ED
1	Mrs Patrick	NSX	△ Craig	△ Leah	△ Sherrill			CHC on transport	DC Plans on	△ HH	UE	
2	MR WOOD	NSX	△ Craig	△ Leah	L	L	△ Hah			HH	HH	U
3	Ms REED	NSX	△ Craig						10 Bedside Pump	△ HF	Nickerson sample	U
4	MS FARROW	NSX										U
5	MS GREEN	HCP	△ Craig	△ Leah	△ Sherrill	△ L	△ Leah	MHS & ACAT		△ HH	HLC	U
6	MS WILLIAMS	Resp								△ HH	?	U
7	MR CLARKE	NSX	△ Craig	△ Leah	△ Sherrill		△ Leah	Agelmar	ECU 2612 Pushing 2 wife at 7/3	△ HW	△ GPC	U
8	MR SINAI	HepB								HA	?	U
9	MR Montgomery	NSX	△ Liz	△ Leah	△ Sherrill		△ Leah			△ HW	?	U
10	MR Raso	NSX	△ Craig	△ Leah	△ Sherrill		△ Leah		see 5th	△ HW	?	U
11	Ms Bouzatis	NSX	△ Craig	△ Leah	△ Sherrill		△ Leah		OTHV 613 1:30pm or 7/3	△ HH	? Haha	U
12	MR Mackenzie	Ortho								HP	?	U
13	MR Winter	NSX	△ Craig	△ Leah	△ Sherrill		△ Kyle		ACAT 11:00 7/3	△ HH LLC	? HLC	U
14	Mr Quass	Gastro			△ Sherrill					HI Anu	?	U
15	MS KRIKKE	NSX	△ Liz									
16	MR EARL											
17	MS Koutelas	NSX	△ Liz	△ Hah	△ Sherrill	△ L	△ Leah	Strong & Jiffro				
18	Ms Bator	HepB										

Next Patient: Physio Craig 38214, Liz 38214, SW Jan 38225, Sherrill 38226, SP Hah 38230, Leah 38231, MeL 38232, Lash 38233

How to do a Kanban Huddle



- It's easy! Review the information on the board; it's a conversation piece, not wallpaper
- Agenda could look like
 - “Glow and Grow”
 - Updates on roadblocks, celebrating team members, and opportunities for improvement
 - Top 1 (what is the thing we want to get done this week?)
 - What was our Top 1 last week? Did we do it? Why / why not?
 - Metrics – review of data. Color coded red/yellow/green. Improvement ideas flow from data review
 - Offers and requests
 - Cheer. End with joy, a fun quote, a verbal cheer, anything to smile and unify!

Case Study - Kanban

To-Do

Task: Present 3rd Qtr.
performance measures
for RS process

Priority: Medium

Due Date: 6/1/20

Person Responsible:
Quality Manager,
Data Coordinator

In-Process

Task: Train front desk
staff on rapid appt
scheduling procedures,
insurance (RW)

Priority: High

Due Date: 11/15/2019

Person Responsible:
Clinic Manager

Done!

Task: Train testing sites
on rapid linkage
process

Priority: High

Due Date: 10/15/2019

Person Responsible:
Linkage Coordinator

Frequently Asked Questions:



- Which tool should we use if we are just getting started with our quality improvement project?
- Which tool would we use to help us to capture and document our project?
- How do these tools apply to a health department or Ryan White recipient that does not provide direct patient care?

Related QI Resources



ASQ - <https://asq.org/>

Search their site for information and examples of QI tools

Colorado Local Public Health & Environmental Resources QI tools -

<https://www.colorado.gov/pacific/cdphe-lpha/tools-and-resources>

EPA Lean Metrics Guide –

https://www.epa.gov/sites/production/files/2014-04/documents/metrics_guide.pdf

Institute for Healthcare Improvement - <http://www.ihl.org/>

Quality Improvement Essentials toolkit and a wide variety of tutorials on tools

Center for Quality Improvement & Innovation (CQII)

CQII.com:

- ✓ Information on Advanced Trainings
- ✓ On site Technical Assistance
- ✓ Quality Academy
- ✓ Consumer Quality Improvement Activities
- ✓ Collaborative Resources





CQII at the RW Conference

Other CQI Workshops



- QI 101 Institute: Clinical Quality Management
 - Thursday, August 13 at 4:30 p.m.-5:30 p.m.
- Advanced Quality Management: How to Best Track and Measure Your QI Project Using Intermediate Measures
 - [TBD]
- Advanced Quality Management: Learn about QI Tools You Might Not Have Not Ever Used Before
 - [TBD]
- Addressing Disparities Using Quality Improvement to Make Measurable Differences: Experiences from the end+disparities ECHO Collaborative
 - Friday, August 14 at 11:00 a.m.-12:30 p.m.
- Engaging People with HIV in Quality Improvement: Best Practices to Meaningfully Engage and Involve Consumers
 - [TBD]
- TargetHIV Panel: Resources and Technical Assistance by the CQII
 - Friday, August 14 at 12:45 p.m.-2:15 p.m.





Contact Information

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Contact Information

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