

QUALITY IMPROVEMENT AND PROCESS IMPROVEMENT TOOLKIT

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PLANNING A QUALITY IMPROVEMENT PROJECT

This worksheet is meant to help you plan a test of change using the Plan-Do-Study-Act method. This method is useful for both responding to a problem and for trying to reach an aspirational goal. Quality improvement is an iterative process. You may complete certain or all sections of this document a few times before achieving desired results. Notice that this worksheet references other sections of the toolkit to provide more in-depth advice for certain steps in the change process. Have fun!

PLAN

1. Identify a problem or area for improvement: What problem are you trying to solve? Make sure to start with a problem statement, not a solution. Try to state it in terms of the client's/patient's experience. If you need help identifying problems, consider using "Waste Walk: Identifying opportunities for improvement." (page 5)

We want to test a change to solve the following problem:

2. Form a team: Who in your staff is impacted by this problem? Who can make decisions about changes related to this problem? Are there other people who would be helpful in solving this problem?

Our team includes:

3. Set an aim: Be specific about how you want to change the current situation related to the problem. For example, if your problem is "our no-show rate is 55%," an example of a specific aim would be, "we want to reduce our no-show rate by 15% within three months."

Our aim is:

4. Describe the current process: What is the process surrounding the problem? Who is involved? How do you know if the process is working as intended? Use the worksheet called "Work Flow Worksheet: Steps for Improving the Process" (pages 9-13) to complete this step.

5. Decide what change you want to test: What changes can you make that will result in an improvement? What change do you want to test? Consider using "Brainstorming Tools: Deciding what you want to test" to complete this step (pages 14-18). You may come up with many ideas for changes and you should document those ideas. You will only want to test out one change at a time.

These are potential changes we could make:

We have selected the following change to test:

How will you know that a change is an improvement?

Data we need	Who will collect it?	Where/How will they get it?	When will they get it?

After you have completed the table above, use “Measuring Success: Establishing metrics and data collection” (pages 19-21) to ensure you have a clear, robust plan for data.

6. Make a prediction: What do you think is going to happen?

We think the following things will happen when we test this change:

DO

1. Communicate the plan to test a change to relevant staff. Implement the change on the specified date with the specified people. Collect data while you are testing. Use the worksheet “Demonstrating Success: Developing a project dashboard” (page 22) to organize your data in a way that helps you communicate your experience.

Did any problems or unexpected events occur?

The participants observed the following:

STUDY

1. Bring your team together to review data and the feedback/observations from participants. Discuss findings, including whether your predictions were confirmed and what you learned.

ACT

1. Following this test, decide if you will adopt (implement), adapt (refine and retest) or abandon this change.
2. If adopting or adapting, what is your plan for the next step? Use “Spreading Your Intervention: Implementation planning” (pages 23-27) to complete this step.

**WASTE WALK
IDENTIFYING OPPORTUNITIES FOR IMPROVEMENT**

Waste is anything in the process that uses time and resources but does not add value in the eyes of the “customer” (could be client, patient, family or beneficiary of the process). Wastes are barriers that prevent people from receiving what they need when they need it without stops or interruptions. Spend some time walking through your clinic and observing the work being done to identify opportunities for improvement. You will not be able to get rid of all the waste, but you can probably reduce it quite a bit!

Waste Category	Explanation	What do you see?
Excess Motion	Searching for materials, people or information in order to complete tasks.	
Waiting	Waiting for others to complete tasks before work can begin on the next task. For example, a client waiting to be seen or a clinician waiting for a room to be available.	
Over Processing	Using more supplies than required to perform the job; gathering more information than required.	
Inventory	Overstocked supplies; supplies not available when/where needed; expired supplies (such as forms that are out of date).	
Under Utilized Talent	Staff not performing at their level of capability; idle staff; variation in practices; confusion/lack of clarity.	
Over Production	Doing more than what is needed or doing it sooner than needed, such as auto copies of reports or multiple forms with the same information.	
Rework	Spending time checking for errors and spending time correcting errors.	
Transportation	Moving supplies or equipment from one location to another.	

After you have observed examples of waste, a good next step is to perform a time study to measure how much time in a process is spent on excess motion, waiting, over processing, inventory issues, under-utilized talent, over production, rework or transportation. Use the “Flow Factor Analysis” Excel worksheet to observe and document waste in seconds or minutes. Remember, you will not be able to get rid of all waste (spend zero seconds or minutes) but measuring the waste will help you prioritize your efforts and allow you to observe your improvement with data!

FIVE WHYS: GETTING TO THE ROOT OF THE PROBLEM

Adapted from API/CMS tool “Five Whys Tool for Root Cause Analysis”¹

When trying to solve a problem, it is important to contain the problem and break it down into manageable pieces, so you can determine the source of the problem, not just the symptoms. This will allow you to address the root cause and prevent the problem from reoccurring. Root cause analysis is a structured team approach and the Five Whys technique can be useful for quickly drilling down to the source of your problem.

1. Form a team and appoint a facilitator: It helps to have a multi-disciplinary team of both “experts” on the problem and people who are not directly involved. This way you can knowledgeably answer questions and challenge assumptions. The facilitator does not need to be an expert on the problem.
2. Clarify your problem statement: Be specific about your problem and try to state it in terms of the client’s/patient’s experience.
3. Begin to ask why: The facilitator will ask why the problem identified in the statement happened. People may have different ideas and you should document all of them. Sometimes it is helpful to have people write down different ideas about why a problem happened on post-it notes. Then you can group them together to identify the most likely or most popular response.

By grouping responses together, you are creating an “Affinity Diagram,” (seen below, with more information at [this link](#)) which allows you to consider if all possible causes of a problem have been explored. You can create any categories of possible causes that make sense to you, but an example set includes:

- Human Factors: errors, poor communication, fatigue, stress, etc.
- System: inadequate training, functional limitations, etc.
- Materials: lack of or malfunctioning equipment/supplies
- Methods: lack of or poorly designed processes
- Measure: lack of or lack of compliance to standards
- Mother Nature/Environment: space issues or things outside of your control

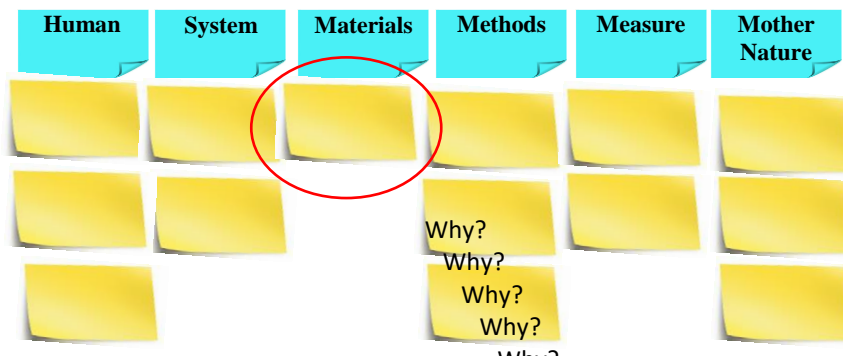


Figure 1: Affinity Diagram

4. Dig deeper: Once you have agreed on an initial response to why the problem happened, the facilitator will ask the team “if we fixed this issue, is it likely the problem would happen again?” If the answer is

¹ <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/downloads/FiveWhys.pdf>

“yes” or “maybe,” you need to dig deeper. If the answer is “no,” you may have identified your root cause and that is where you should begin your improvement effort. It often takes five whys to get to the root, but you may get there sooner or later!

EXAMPLE FROM API/CMS

Problem statement: Your car gets a flat tire on your way to work.

1. Why did you get a flat tire? You ran over nails in your garage.
2. Why were there nails on the garage floor? The box of nails on the shelf was wet; the box fell apart and nails fell from the box onto the floor.*
3. Why was the box of nails wet? There was a leak in the roof and it rained hard last night.

The root cause is the leak in the roof. *If you had stopped after the second why and “solved” the problem by sweeping up the nails, you would have missed the root cause of the problem.

FIVE WHYS WORKSHEET

PROBLEM STATEMENT:	
Why?	
Why?	
Why?	
Why?	
Why?	
Root Cause(s)	<ol style="list-style-type: none"> 1. 2. 3. <p style="margin-top: 20px;"><i>Remember, it can only be considered a root cause if fixing would prevent the problem from occurring again.</i></p>

PLEASE NOTE: You should consider this a subjective answer until you can back it up with data. To the extent possible, go observe the process to validate your assumptions and collect data to determine the extent of the problem. This will establish the baseline for your quality improvement effort.

WORK FLOW WORKSHEET STEPS FOR IMPROVING THE PROCESS

This worksheet can assist in the following ways:

- To understand an existing process and look for opportunities to streamline.
- To understand an existing process in order to solve problems/pain points (such as part of a root cause analysis exercise).
- To clarify roles and responsibilities for an existing process.

1. **Identify the Players:** Begin by asking yourself who “owns” this process and can make decisions about changing it? Who do you currently think participates in this process?

Once you gather those people around the table (or virtually), ask if all of the correct people are involved. Does everyone agree on who the end-user is/who benefits from this process? (client/family, administration, etc.) Agreement on who benefits from the process ensures that you know where the process ends AND it helps frame your discussion about how to improve the process. **Remember, one goal of every process is to make it valuable and efficient from the perspective of the customer/end-user.**

PROCESS OWNER(S): _____

PROCESS MEMBERS:

-
-
-
-
-

END-USER/CUSTOMER: _____

2. **Describe the Process:** Ask one person (Team Member 1) from the group to describe the process from beginning to end. If you have time constraints, this could be “pre-work” to a meeting and be sent out by email. Otherwise, have them describe it during the meeting. Ask Team Member 2 to listen/take the description and turn it into distinct steps. If possible, have Team Member 2 write down each separate step on a Post-It note. Otherwise, create a list like the following:

- a.
- b.
- c.
- d.

Ask Team Member 3 to facilitate the conversation to create a complete description of the process:

- Who does each step in the process?
- Are there any steps missing?
- Are there decisions that need to be made to proceed from one step to the next? What are the implications of those decisions (“if this, then what”)?

3. Map the Process: During the meeting, use the Post-It notes to map out the process on the table or on the wall/a sheet of paper. Post-It notes make it easier to move things around if people have corrections. Below are symbols that have you visually describe the process. Best practice is to use “swim lanes” to delineate responsibilities and hand-offs.

SYMBOLS FOR SHOWING THE STEPS

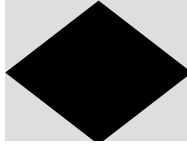
Box represents a step or activity.



Oval represents terminal points (beginning and end).



Diamond represents a decision where the outcome dictates what step follows. There could be multiple outcomes, but there is usually just two: yes or no.



Document can be used to indicate either that you need a document to complete the step OR the step results in a document. Be clear in your map which one!



Star or burst should be used to indicate opportunities for improvement. They can be next to steps on the map and your goal is to eventually remove them all.

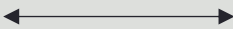


SYMBOLS FOR CONNECTING THE STEPS

Use a **solid line with arrow on one end** to indicate the direction of the process flow.



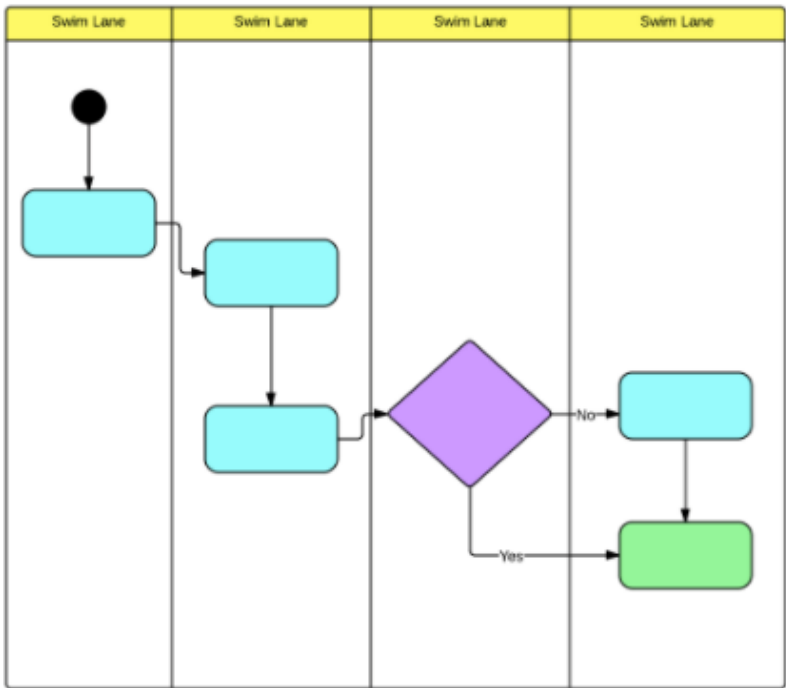
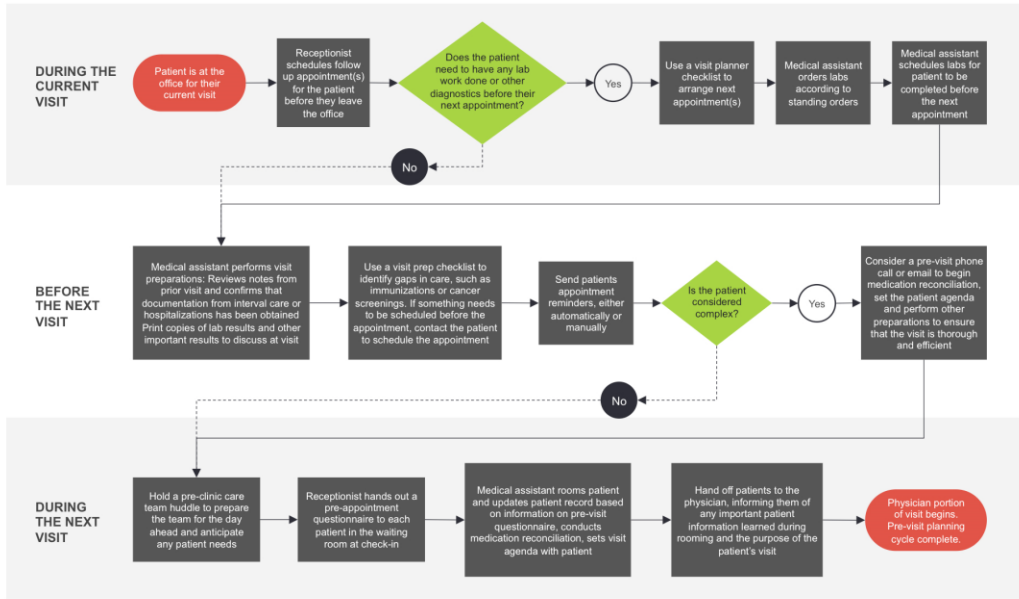
Use **arrows on both ends** when the process flow can move in either direction between the two steps.



Use **dotted lines** to indicate an alternate process.



Swim lanes can be arranged horizontally or vertically and they are used to delineate roles and responsibilities within the process.



4. Identify Opportunities for Improvement: Using the star or burst above, ask team members to identify pain points or areas of concerns. Examples would be:
 - Points where you consistently do not have the information, equipment or knowledge to complete steps.
 - Points where there is a long delay/waiting.
 - Points where you are doing steps or tasks that may not contribute to the end goal (are these things unnecessary or are they really part of a different process?).
 - Points where you are doing steps to fix errors or problems from earlier in the process.
 - Points where there is a lack of clarity about who is performing what task.

Once you have a list, consult with the Process Owner about what is in your control to change and what should be prioritized.

5. Plan for Improvement: Refer to the worksheet called “Planning a Quality Improvement Project.” You have already completed several steps from in the PLAN stage!
6. Sustain the Improvement: After your test of change, create a final visual of your new process and share broadly with staff, ensuring everyone is properly trained on the new process. Refer to the worksheets called “Communicating Learning: How to Tell Your Clinic’s Improvement Story” and “Implementation Planning: Spreading Your Intervention.”

DECIDING WHAT YOU WANT TO TEST: TOOLS FOR BRAINSTORMING SOLUTIONS

After deciding to take on an improvement project, it is important to bring the people most impacted by the change into the process of finding a solution. But as anyone who has ever attended a staff meeting knows, it can be difficult to get staff to speak up and put their ideas out in front of a group. The following is a guide to leading a brainstorming session with your team.

ESSENTIAL STEPS

1. Define the problem
2. Generate ideas
3. Narrow down options
4. Evaluate potential solutions

ESSENTIAL ELEMENTS

- Elevate the voice of the client
- Center the voices of front line staff and those directly involved in the process
- No idea is too radical
- No judgements
- All ideas are documented for consideration

ESSENTIAL STEP 1: DEFINE THE PROBLEM

What problem are you trying to solve? Make sure to start with a problem statement—it is tempting to jump to solutions! Try to state your problem in terms of the client's/patient's perspective.

We want to test a change to solve the following problem:

ESSENTIAL STEP 2: GENERATE IDEAS

There are several existing tools for generating ideas. Two examples that are easy to implement are the Nominal Group Technique and the Six Thinking Hats technique on the following pages.

Nominal Group Technique:

Excerpted from Nancy R. Tague's [*The Quality Toolbox*](#), Second Edition, ASQ Quality Press, 2004, pages 364–365. Nominal group technique (NGT) is a structured method for group brainstorming that encourages contributions from everyone.

When to Use Nominal Group Technique

- When some group members are much more vocal than others.
- When some group members think better in silence.
- When there is concern about some members not participating.
- When the group does not easily generate quantities of ideas.
- When all or some group members are new to the team.
- When the issue is controversial or there is heated conflict.

Nominal Group Technique Procedure

Materials needed: paper and pen or pencil for each individual, flipchart, marking pens, tape.

1. State the subject of the brainstorming. Clarify the statement as needed until everyone understands it.
2. Each team member silently thinks of and writes down as many ideas as possible in a set period of time (5 to 10 minutes).
3. Each member in turn states aloud one idea. Facilitator records it on the flipchart.
 - No discussion is allowed, not even questions for clarification.
 - Ideas given do not need to be from the team member's written list. Indeed, as time goes on, many ideas will not be.
 - A member may "pass" his or her turn and may then add an idea on a subsequent turn. Continue around the group until all members pass or for an agreed-upon length of time.
4. Discuss each idea in turn. Wording may be changed only when the idea's originator agrees. Ideas may be stricken from the list only by unanimous agreement. Discussion may clarify meaning, explain logic or analysis, raise and answer questions, or state agreement or disagreement.
5. Prioritize the ideas using multi-voting or list reduction.

Nominal Group Technique Considerations







- Discussion should be equally balanced among all ideas. The facilitator should not allow discussion to turn into argument. The primary purpose of the discussion is clarification. It is not to resolve differences of opinion.
- Keep all ideas visible. When ideas overflow to additional flipchart pages, post previous pages around the room so all ideas are still visible to everyone.

Six Thinking Hats:

Adapted from DeBono Group: http://www.debonogroup.com/six_thinking_hats.php

This is a simple, effective parallel thinking process that helps people be more productive, focused, and mindfully involved.

You and your team members can learn how to separate thinking into six clear functions and roles. Each thinking role is identified with a colored symbolic "thinking hat." By mentally wearing and switching "hats," you can easily focus or redirect thoughts, the conversation, or the meeting.

	<p>The White Hat calls for information known or needed. "The facts, just the facts."</p>
	<p>The Yellow Hat symbolizes brightness and optimism. Under this hat you explore the positives and probe for value and benefit.</p>
	<p>The Black Hat is judgment - the devil's advocate or why something may not work. Spot the difficulties and dangers; where things might go wrong. Probably the most powerful and useful of the Hats but when overused can make improvements/solutions seem impossible.</p>
	<p>The Red Hat signifies feelings, hunches and intuition. When using this hat, you can express emotions and feelings and share fears, likes, dislikes, loves, and hates.</p>
	<p>The Green Hat focuses on creativity; the possibilities, alternatives, and new ideas. It's an opportunity to express new concepts and new perceptions.</p>
	<p>The Blue Hat is used to manage the thinking process. It's the control mechanism that ensures the Six Thinking Hats® guidelines are observed.</p>

ESSENTIAL STEP 3: NARROW DOWN OPTIONS

Use the multivoting technique as described by ASQ.² Multivoting narrows a large list of possibilities to a smaller list of the top priorities or to a final selection. Multivoting is preferable to straight voting because it allows an item that is favored by all, but not the top choice of any, to rise to the top.

When to Use Multivoting

- After brainstorming or some other expansion tool has been used to generate a long list of possibilities,
- When the list must be narrowed down, and
- When the decision must be made by group judgment.

Multivoting Procedure

Materials needed: flipchart or whiteboard, marking pens, 5 to 10 slips of paper for each individual, pen or pencil for each individual.

1. Display the list of options. Combine duplicate items. [Affinity diagrams](#) can be useful to organize large numbers of ideas and eliminate duplication and overlap. List reduction may also be useful.
2. Number (or letter) all items.
3. Decide how many items must be on the final reduced list. Decide also how many choices each member will vote for. Usually, five choices are allowed. The longer the original list, the more votes will be allowed, up to 10.
4. Working individually, each member selects the five items (or whatever number of choices is allowed) he or she thinks most important. Then each member ranks the choices in order of priority, with the first choice ranking highest. For example, if each member has five votes, the top choice would be ranked five, the next choice four, and so on. Each choice is written on a separate paper, with the ranking underlined in the lower right corner.
5. Tally votes. Collect the papers, shuffle them, then record on a flipchart or whiteboard. The easiest way to record votes is for the scribe to write all the individual rankings next to each choice. For each item, the rankings are totaled next to the individual rankings.
6. If a decision is clear, stop here. Otherwise, continue with a brief discussion of the vote. The purpose of the discussion is to look at dramatic voting differences, such as an item that received both 5 and 1 ratings, and avoid errors from incorrect information or understandings about the item. The discussion should not result in pressure on anyone to change their vote.
7. Repeat the voting process described above in steps 4 and 5 of the multivoting procedure. If greater decision-making accuracy is required, this voting may be done by weighting the relative importance of each choice on a scale of 1 to 10, with 10 being most important.

² This section is adapted from ASQ <http://asq.org/learn-about-quality/decision-making-tools/overview/multivoting.html>

ESSENTIAL STEP 4: EVALUATE POTENTIAL SOLUTIONS

When choosing a potential test of change, consider the costs of the work versus the potential return. There is a delicate balance between effort and potential impact that should be taken into consideration, as seen below:



Source: AMA. Practice transformation series: culture. 2015.
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MEASURING SUCCESS: ESTABLISHING METRICS AND DATA COLLECTION

There are three reasons to collect data related to quality improvement:

1. To understand the problem you want to solve;
2. To measure whether your chosen change is leading to improvement; or
3. To monitor your performance on defined quality metrics on a dashboard (which may indicate a need to test a change).

Below are some tips for deciding what data you need and how you can collect it.

1. Choosing Data to Collect

If you are collecting data related to a quality improvement project...

Start with your problem statement!

How do you know this is a problem? When does it happen? How often does it happen?

What data has already been collected about the problem?

If you do not currently have data about your problem, you will need to do some data collection BEFORE you start your test of change.

If you are collecting data because you want to monitor your performance (create a performance dashboard)...

What do you want to know that you don't currently have information about?

Regardless of your reason for collecting data, it is important that you are honest about what is possible.

What are you capable of collecting with the resources (staff, time, technology, etc.) that are currently available to you?

2. Assessing Sources for Data Collection

There are three ways to collect data in the DMH setting: from pre-existing reports in Cognos, by requesting data from CIOB, and manually collecting data in the clinical setting (which can be done by chart review or real-time observation).

You need to assess the best source for the specific data you want, while keeping in mind the timeliness of collecting data (devoting the time to manually collect data may be faster than submitting a request to CIOB!) and what is culturally acceptable to your patient population or staff.

3. Choosing a Format for Data Recording and Establishing Assignments

Your plan for using the data (establishing baseline, observing change or monitoring performance) will impact how you record the data and who is responsible for collecting and recording the data. Given the purpose of the data, it is helpful to create a data collection plan. Once you have a plan, you will be able to establish your format for recording the data.

Here is an example of a data collection plan:

Data Element (metric) What you are collecting	Operational Definition	Segmentation Factor	Data Collection Method (include sample size)	Data Source/Location	Who Collects	Due Date for Collecting Data
Appointment Time	Time of the appointment as indicated in the appointment calendar	Day of the week	Electronic download from March 1 – 7	Electronic appointment calendar		
Check-In Time	Time a client checks in as indicated by the manually written time on the clerk’s sheet	Day of the week	Manual collection of paper check-in sheets	Paper check-in sheets from the clerks		
Checked-In Time	Time a client is checked in as indicated by the time stamp in the appointment calendar	Day of the week	Electronic download from March 1 – 7	Electronic appointment calendar		

Once your data collection plan is established, you will want to consider the following before you proceed:

- Who will be analyzing data?
- Who is responsible for assessing whether the data makes sense?
- Who will interpret the analysis?
- Who will report the data with recommendations?
- With whom will data be shared?
- With what frequency will data be reported back to stakeholders?

4. Establishing a Baseline

This will help the team understand where you are starting and what is feasible for data collection for current/planned staffing assignments. Before you test any changes, decide for how long you want to collect data for your measures to establish the baseline.

**DEMONSTRATING SUCCESS:
DEVELOPING A PROJECT DASHBOARD**

When assessing the success of a program it is essential to track your metrics over time. This will allow your QI team to determine at a glance whether the test of change is having the desired effect. Project dashboards allow the most important data to be communicated at a glance (visually) to your team members, both in depth (through tracking multiple metrics in a chart format) and over time (through run charts or other visual data reporting tools). This can also help to consolidate data collected over multiple staff members.

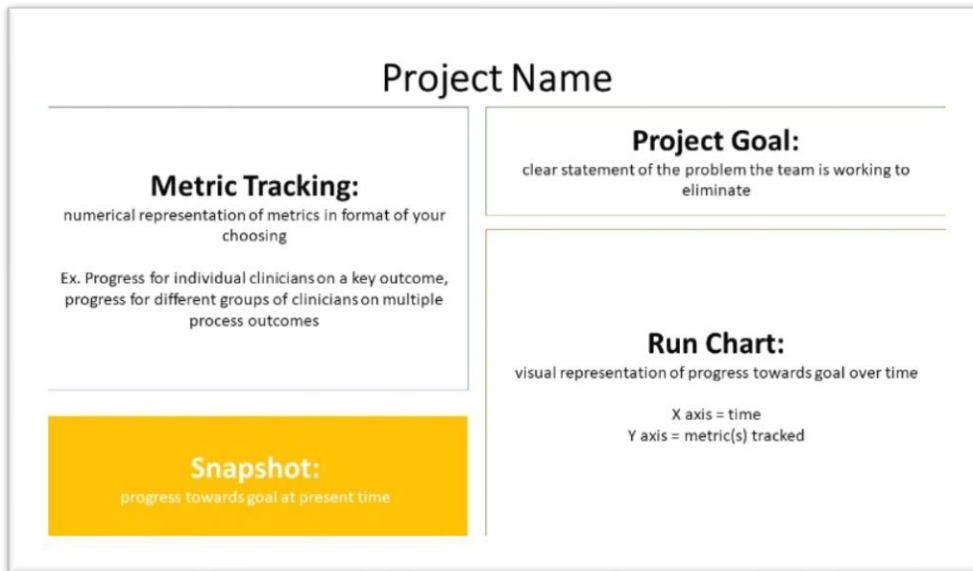
ESSENTIAL ELEMENTS:

- **Benchmarking goal/Aim:** Be sure to indicate what you are trying to achieve so you can observe how close you are.
- **Progress towards goal:** It is helpful to have multiple data points over time so you can observe if you are moving in the right direction even if you have a ways to go from your goal.
- **All relevant measures included:** Be sure that your display tells the full story of the work you are doing—the problem, the goal and your progress toward the goal.

TOOLS:

IHI Improvement Tracker (requires free login): <http://app.ihi.org/Workspace/tracker/>
You can also create graphs and displays in Microsoft Excel if you manually enter your data into an Excel spreadsheet.

Template:



**SPREADING YOUR INTERVENTION:
IMPLEMENTATION PLANNING**

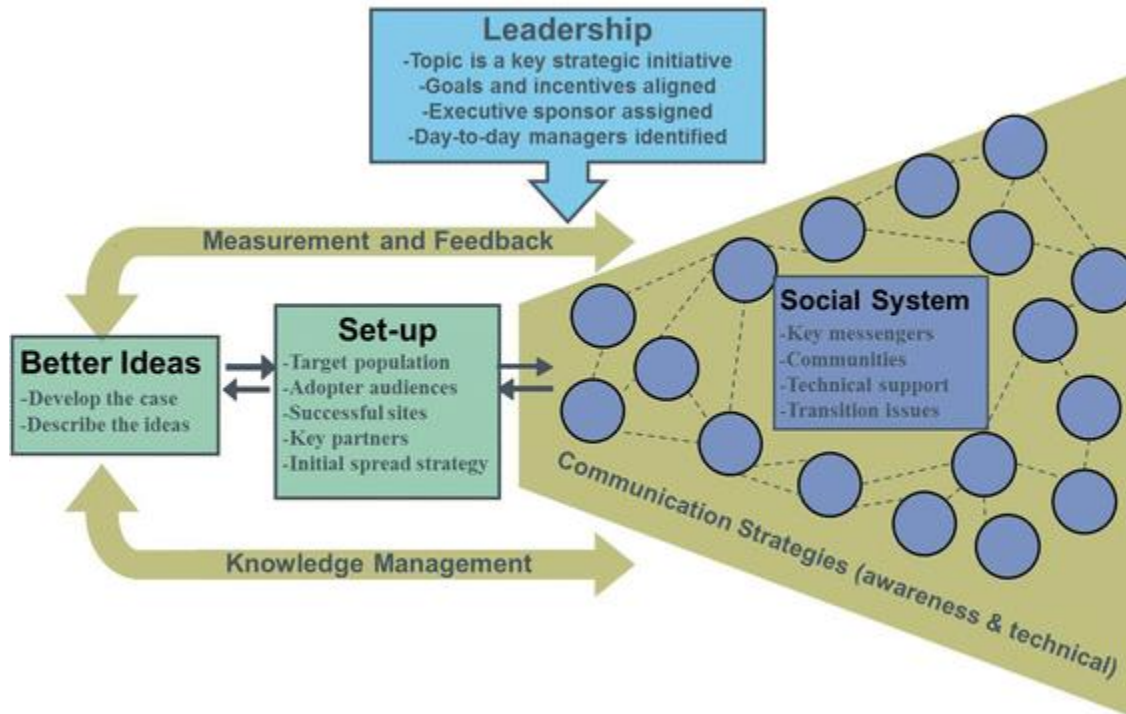
After a successful small test of change, many practices consider how to scale the work up to impact outcomes for more clients. This is another change process distinct from the initial test with additional considerations. Adapted from *The Improvement Guide, Second Edition (2009)*.

FRAMEWORK FOR SPREAD

The following areas should be considered for any spread initiative.

- Leadership
- Better Ideas
- Set-up
- Social System
- Measurement and Feedback
- Knowledge Management

These areas are explained in the graphic below and in the following guidelines for the three phases for spreading improvements.



THREE PHASES FOR SPREADING IMPROVEMENTS

1. Organizational Readiness Phase
2. Developing an Initial Spread Work Plan
3. Executing and Refining the Plan

PHASE 1: ORGANIZATIONAL READINESS

In this phase, multiple players need to engage in specific activities to ensure success to scale up the change. Listed below are activities for each player and some overall concepts to keep in mind in this phase.

Activities by Player

- Strategic Topic: Leadership
 - For an initiative within the clinic, this would likely be the program manager
 - Align system-wide and local goals and incentives with the innovation you are aiming to spread. This may require changes to an organization's reward and recognition systems.
 - Communicate a compelling message of why the initiative is needed rather than mandating involvement.
 - Schedule time to review progress and provide advice.
 - Be visible to those making changes.
 - Assign high performers to the effort and allocate them sufficient time to do the work.
- Executive Sponsor
 - Play an active role in the development of the spread plan and its revisions.
 - Offer assistance to overcome barriers.
 - Help other leaders, middle managers, and staff understand the importance of the initiative.
 - Keep the executive leadership team aware of the progress and the success of the work.
- Project Manager
 - Oversee the development, execution, and revision of the spread plan
 - Connect adopters to others who can assist them
 - Share important issues with appropriate leaders
 - Manage the expanding knowledge base
 - Report on progress
 - Organize and lead the spread team
- Spread Team
 - Guide and support spread work
 - Membership:
 - Project manager
 - People with expertise in the area being spread
 - Representatives from teams, departments or sites where changes being spread were successfully tested and implemented
 - Representatives from support services when needed (e.g. IT, HR, QI)
 - Clients/families

Concepts to Keep in Mind

- Looking for Better Ideas
 - *Relative advantage* over status quo or alternative ideas
 - *Compatibility* with existing values, experiences, and needs
 - *Complexity* diminishing the ability of ideas to be adopted
 - *Trialability* allowing ideas to be tested and abandoned if desired
 - *Observability* of the ideas in practice

- Making the Case for Change to Your Team
 - Explicit statement from leadership documenting what the organization expects to achieve.
 - Elements to include:
 - The ideas, processes or systems being spread
 - The target population for spread
 - The time frame for spread activities
 - The target level of system performance to be achieved

PHASE 2: DEVELOPING AN INITIAL SPREAD WORK PLAN

Even spreading your improvement will be an iterative process. Before you begin implementing the change further within your organization, create a plan that considers how you can leverage your organizational structure to communicate and measure your spread. Your Initial Spread Work Plan will need to delineate the what, when, and who of each part of communication and measurement, as well as how to keep track of who decides to adopt the change.

- Organizational Structure
 - Take advantage of existing groupings
 - Questions to consider:
 - Can we use existing groupings within the organization to accelerate the rate of spread?
 - What is the geographic distribution of the units involved?
 - Where are the authority or influence centers?
 - What groupings might be established to assist with the spread?
 - Are there some groups that could be focused on first because there is a better chance for success?
 - Think through whether you need structural enhancements to facilitate and support spread (e.g. electronic information sharing)
- Communication Plan
 - Tell the story of evolving from awareness to decision
 - Use data or patient stories to illustrate why this change is needed.
 - Consider your audience, and the message and methods needed to reach that particular audience.
 - Define measurable objectives for outcomes (e.g. % of target population who chooses to adopt the change in 3, 6, and 9 months)
 - Explain how you will evolve from decision to action
 - Take advantage of your team's structure. For example, does your team fall into natural subgroupings that you can use to incrementally change clinic practices?
 - Focus on only a few of the ideas initially (in the case of multiple ideas to spread)
 - Arrange for technical support
 - Identify messengers
 - Focus on peers of adopters rather than managers

- There will naturally be some individuals on your team who their peers trust. Let them lead by example and do not overly formalize their role as an opinion leader. This might disrupt their informal leadership position.
- Arrange for the coaching needed to make the messengers effective
- Understand and address the issues of opinion leaders who decide not to participate
- Measurement Plan
 - Plan to collect and plot data over time so you can monitor implementation and identify areas that need improvement
 - Include data from the entire population identified in the spread aim
 - Collect information on the rate of spread of the key ideas within the target population by having sites report data via forms or by interviewing participants.

PHASE 3: EXECUTING AND REFINING THE PLAN

Once you implement change on a broader scale, you will find that *individuals do not make the decision to adopt changes at the same time*. Spread is a temporal process, with the curve being rather flat initially. The spread team should not get frustrated if the initiative starts slowly.

- Diffusion of innovation—you will observe several things as people adopt change at their own pace.
 - *Early adopters are the foundation for spread*. They are the first in the target population to make the decision to adopt. They don't necessarily have the best results initially. Resources should be dedicated to the early adopters to make them successful.
 - *The early and late majority will be viewing the success of the early adopters*. Making the success of the early adopters visible reduces the risk for the majority and makes their decision to adopt easier.
 - *Those termed laggards are reluctant to adopt the changes*. They should not consume the resources of the spread team. Some connection though needs to be made with those identified as opinion leaders.

Once you determine which group people fall into, the spread team should consider the following:

- Does the message for certain groups need improvement?
- How capable are the messengers?
- Are the communication methods effective?
- Are transition issues affecting those making the decision?

Here are some final tips for ensuring there is knowledge transfer between the spread team and the adopters so that you are able to **maintain your gains and sustain the improvement**:

- Focus on peer to peer interactions
- Offer QI support to adopters as they work to optimize performance
- Develop a system for ongoing knowledge collection
- Review results with adopters:
 - Do the methods to assist adopters to take action need to be improved?
 - Are managers at the local level supporting the work?

- Do adopters have sufficient time to test and implement the changes?
- Do adopters possess sufficient understanding of improvement methods (ie. Testing and implementation)?
- Is technical support sufficient?
- Are there transition issues preventing adopters from moving to action?
- Do the changes proposed need refinement?

TELLING YOUR CLINIC'S IMPROVEMENT STORY: COMMUNICATING LEARNING

Communication is key, especially when it's time to scale a project up internally or talk to funders. Here are some things to think about when it's time to tell the story of your improvement project.

CASE STUDY: A STORY OF THE IMPACT ON A SINGLE PATIENT

Case studies help you communicate a meaningful impact of a program on an individual. This humanizes the work that we do and brings it to an understandable level for more people. Some things to include when writing a case study:

- Patient background – what they carry into the clinic, physically, psychologically, socially
- What did the clinic do to improve the patient's outcome?
- How did the patient's outcome change?

Below is an example of a case study and the following page has a worksheet to help you create your own.

Example of a Case Study:

Yolanda is a 26-year-old English-speaking bisexual cis-gender Latina patient. She had her first visit with behavioral health 14 months after the birth of her first child. Thanks to the clinic's perinatal mood and anxiety disorder training program for providers, the provider was able to identify that the patient was experiencing post-partum depression. While she was in treatment with Dr. B, she became pregnant again and had an increase in her symptoms of depression, especially feelings of guilt for not being more present for the first year of her first child's life. Dr. B was able to refer to psychiatry for medication support and coordinated care with this outside provider and the obstetrician, particularly when the patient was nearly hospitalized due to her depression.

Following the birth of her second child, the patient was able to return to work, which also helped with her depression symptoms. She discontinued medication while still in therapy. Due to her work schedule, the patient had to drop out of therapy.

Recently this patient has presented again for treatment due to situation stressors.

CASE STUDY WORKSHEET

<p>Patient Background: What does the patient bring with them into the clinic?</p>	<p><i>Age</i> <i>Gender Identity</i> <i>Race/Ethnicity</i> <i>Sexuality</i> <i>Relationship status</i> <i>Housing status</i> <i>Employment status</i> <i>Children</i> <i>Social history</i> <i>Medical history</i> <i>Psychological history</i></p>	
<p>Clinic Intervention: What did clinic staff do to impact the patient's outcome?</p>	<p><i>Clinical intervention</i> <i>Social intervention</i> <i>Duration and intensity of intervention</i></p>	
<p>Patient Outcome: How did the patient's outcome change because of your efforts?</p>	<p><i>Income</i> <i>Housing status</i> <i>Health status</i></p>	

IMPROVEMENT STORY: A STORY OF A TEST OF CHANGE

Improvement stories help you communicate the process and outcome of a PDSA cycle or cycles on the clinic. It helps bridge the gap between the story of an individual success and broad implementation of a system-wide intervention. Some things to include when writing an improvement story:

- What was the problem you were trying to solve?
- What did the clinic do to tackle the problem?
- What was the improvement goal?
- How did you know that the program was an improvement?
 - How did your clients'/patients' experiences or outcomes improve?
 - What was the impact on staff, such as staff satisfaction or time savings?
 - Highlight any known cost savings, including cost of care and the return on investment
- Were there any challenges faced and how were they overcome?
- Were there things you tried that didn't work?

Below is an example of an improvement story and the following page has a worksheet to help you create your own.

Example of an improvement story:

Using PHQ-9 as a monitoring tool at Antelope Valley Mental Health Center

PHQ-9 Project Summary:

The PHQ-9 project aims to measure the level of depression in client who experience moderate to severe depressive symptoms. The PHQ-9 assessment tool was administered at the beginning, and at the end of the project. Eight clients were selected to receive six to eight weekly therapy sessions, utilizing CBT interventions. The duration of each therapy session ranged between 45-60 minutes.

The results demonstrated the following:

Two clients, who were selected to participate in the project right after intake, attended only one therapy session, and were not responsive to outreach attempts.

Four clients received between 5-11 individual therapy sessions. These clients demonstrated a reduction in depressive symptoms, and showed great improvement in daily functioning. One of the clients was terminated from therapy services after 5 individual sessions (per client's request, due to graduating from college), and two other clients obtained full time employment. The clients who remained in treatment expressed a desire to continue therapy services on a bi-weekly or monthly basis (group or individual).

Another client received individual therapy services for a year, met her therapy goals, and was terminated from individual therapy services. The client wrote her success story, and provided it to the therapist.

The last client received 3 individual therapy sessions. She had a high rate of no shows, and did not experience any reduction in depressive symptoms.

All clients who actively engaged in therapy showed a decrease in the PHQ-9 scores comparing before to after treatment.

Recommendations:

Based on these findings, I believe that providing short-term, 12 weekly individual therapy sessions, would be an effective intervention for clients. To increase implementation of PHQ-9, it would be easier if the PHQ-9 was a part of the intake process. It would be helpful to create an alert on IHBIS to update the PHQ-9 every 4 months.

IMPROVEMENT STORY WORKSHEET:

<p>Problem: What was the issue identified by the clinic team?</p>	<p><i>Examples of measurable ways the problem manifested, eg: Patient wait times Staff time Waste</i></p>	
<p>Performance goal</p>	<p><i>What was the goal of the team? Can use SMART goal format</i></p>	
<p>Data collection</p>	<p><i>Dates of data collection Metrics used to measure improvement</i></p>	
<p>Tests of change</p>	<p><i>Tools used to impact the problem</i></p>	
<p>Improvements</p>	<p><i>Revisit the measures used to collect data, ie: Staff impact Cost of care/billing Patient outcomes</i></p>	
<p>Challenges and Unsuccessful Tests</p>	<p><i>Where did the team encounter resistance? What were some tests of change that were attempted and how did they fail? What did the team learn from this process?</i></p>	
<p>Elements of Success</p>	<p><i>What factor can you identify that was most responsible for your success?</i></p>	

SYSTEM STORY: A STORY OF THE IMPACT PROGRAM-WIDE

System stories help you communicate the value of your intervention more broadly. This contextualizes your effort and helps explain how it could have a lasting impact on your target population. Some things to include when writing a system story:

- What was the problem you were trying to solve?
- Why was there will to solve this problem?
- What did the clinic do to tackle the problem?
- How did you know that the program was an improvement?
 - How did your clients’/patients’ experiences or outcomes improve?
 - What was the impact on staff, such as staff satisfaction or time savings?
 - Highlight any known cost savings, including cost of care and the return on investment
- Were there any challenges faced and how were they overcome?
- Were there things you tried that didn’t work?

Below is an example of a system story and the following page has a worksheet to help you create your own.

TCPI Exemplary Practice Story, November 2018

LA County Department of Mental Health, Service Area 1

Theion Perkins, Service Area 1 District Chief

Mental Health Consumers and Providers Collaborate to Transform in Antelope Valley

LA County Department of Mental Health (LADMH) is the largest county-operated mental health department in the United States, with a budget of \$2.4 billion. Its 85 directly operated sites serve as the local Mental Health Service Administrator for Medi-Cal clients with moderate to severe mental health challenges. Services are delivered in eight designated Service Areas. **DMH Service Area 1 (SA1)** is located in the northwest part of Los Angeles County, contains a mix of urban, suburban, and rural development, and is poorer and sicker than the rest of Los Angeles, with the county’s highest rates of depression, suicide, and overdose deaths. Mental health services are delivered through a combination of two directly operated clinics and a number of contracted legal entities providing mental health and substance abuse services. The directly operated clinics have (as of November 2018) a combined caseload of 5684 clients and employ 11 psychiatrists, 2 nurses, 24 masters-level clinicians, and 13 case managers.

LADMH is currently undertaking a system transformation and departmental reorganization. SA1 had a leadership turnover two years ago that resulted in a new Service Area District Chief and new Program Manager at one directly operated clinic. Simultaneously, the county in general and SA1 in particular have experienced an increased need for mental health and homelessness services, for which they do not have adequate resources: there are no child psychiatrists located within Antelope Valley – youth must travel an hour or more to receive psychiatric services – and there are no year-round homeless shelters, despite the harsh high desert conditions.

Bold Aims and Exceptional Performance that makes us a high value to payers and patients:

Service Area 1 has repeatedly demonstrated its ability to respond quickly and effectively to shifting priorities within LADMH while centering the consumer experience and joy in the workplace. This eye towards quality measurement and agile management enables better care coordination and strong internal and external partnerships and facilitates the delivery of coordinated, evidence based care that meets clients where they are.

As a Delivery System, what is in place to provide a quality performance:

Both of the DMH directly operated clinics in SA 1 have participated in the Los Angeles Practice Transformation Network since 2017. For the last two years they have received coaching in quality improvement and process improvement methodology. As a result of the trust built through the SA 1 Health Neighborhood and LAPTN quality improvement advisors were able to facilitate the development of a formal process for referrals and information sharing between the Department of Mental Health and Bartz-Altadonna, a community primary care provider (also a member of LAPTN) able to provide behavioral health services for mild to moderate mental illness. This ensures continuity of care between these two clinics, particularly as clients graduate to a lower level of care.

The clinic incorporates PDSAs and QI methodology throughout their service delivery process and make measuring their quantitative and qualitative impact central to these processes. The TCPI quality improvement advisor coached and educated staff on implementing PHQ-9 as part of the standard clinical workflow, and facilitated sessions for clinicians to voice their concerns and share successes with the tool as part of their clinical practice (see Fig. 1). Assessing clients' suicide risk is now a standard part of the clinic workflow (see Fig. 2), of particular importance for this community. And as the Service Area with the highest rates of many chronic diseases, clinic teams have worked together to nearly double the rates of follow up for clients with high BMI (see Fig. 3). As of November 2018, SA 1 clinics have already completed Phase 4 of the TCPI clinical quality milestones.

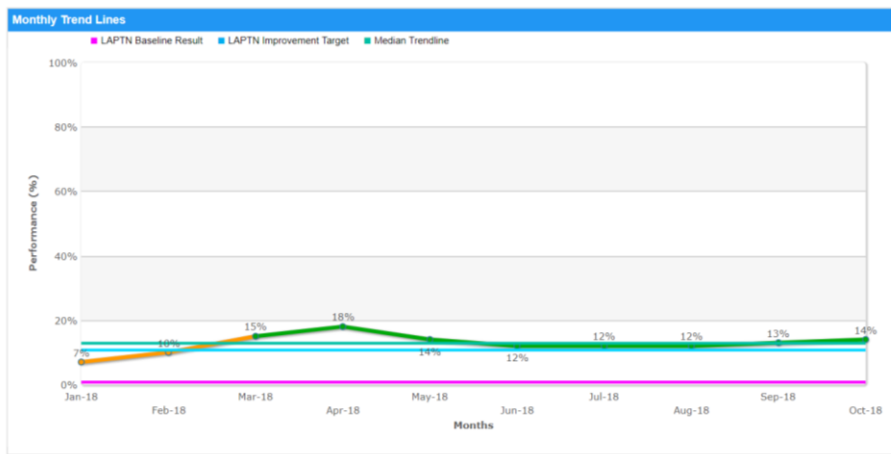


Figure 2: Utilization of PHQ-9 to Monitor Depression Symptoms, January to December 2018 (2015 baseline = 1.33%).

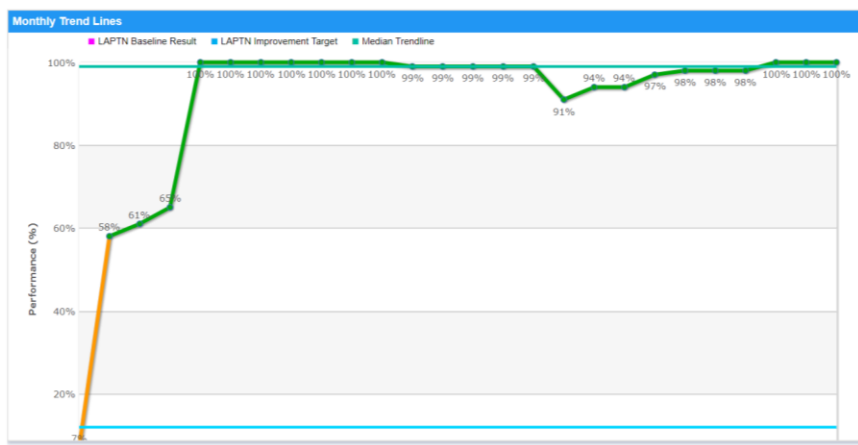


Figure 3: Adult Suicide Risk Assessment, 2015-2018 (2015 baseline = 7.24%).

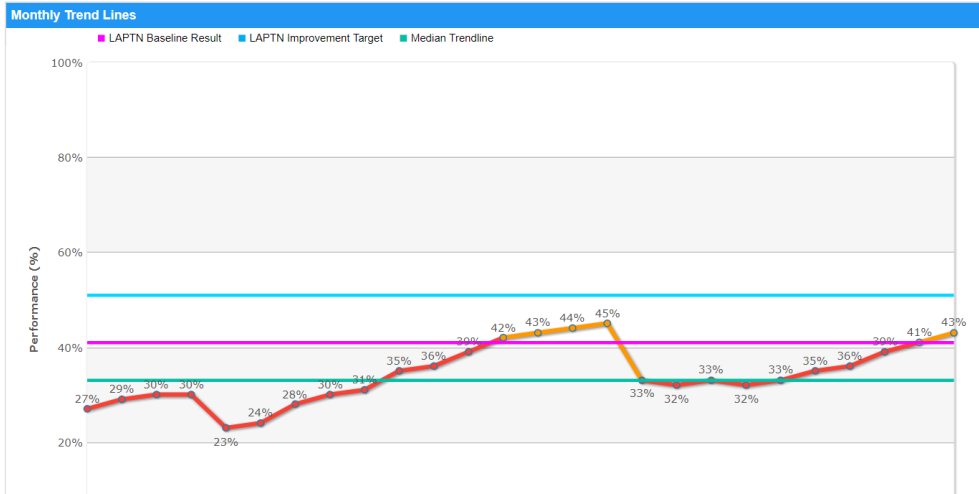


Figure 4: BMI screening and follow up plan, 2015-2018 (2015 baseline = 27%)

Additionally, the clinics have used quality improvement and patient centered design methodology to help redesign their intake processes to increase access to mental health care and develop a plan for multidisciplinary care teams. At Antelope Valley MHC, multidisciplinary teams were first brought to the client council for input in September 2018, where the need to show the benefit to clients receiving care was emphasized. The entire staff participated in a design process to determine how the existing staff would be divided into teams, how communication between team members would be facilitated, and how to use data on process implementation, client outcomes and staff outcomes to demonstrate success of the clinic redesign. Clinic staff worked together to identify ten metrics to gauge the success of multidisciplinary teams: staff satisfaction, communication between staff, timeliness and accessibility of services, client access to ancillary services, psychiatric appointment compliance, group attendance, client hospitalization rates, client suicidality, consumer access and engagement with treatment teams, and staff time spent providing direct services. The clinic has already collected baseline data for all measures, highlighted specific areas for improvement, and is planning for full implementation in April 2019.

The factor most responsible for our success:

The biggest strengths of SA1’s directly operated programs are an exceptionally dedicated staff and strong support from local leadership. Two years ago, SA1 was underperforming and struggled to retain staff, but with dedication to building strong teams and encouraging staff retention, it has become a place for both new and experienced clinicians to innovate and thrive. DMH leadership actively enables client leadership, which is transforming service delivery to be more community-based and accountable to consumers. As one client emphasized in a recent meeting of the client advisory board, “we want to know that you’re not just changing for the sake of change, you’re changing to make things better.”

SYSTEM STORY WORKSHEET

<p>Problem: What was the issue identified by the clinic team?</p>	<p><i>Examples of measurable ways the problem manifested, eg: Patient wait times Staff time Waste</i></p>	
<p>Tests of change</p>	<p><i>Tools used to impact the problem</i></p>	
<p>Improvements</p>	<p><i>Staff impact Cost of care Patient outcomes</i></p>	
<p>Challenges</p>	<p><i>Where did the team encounter resistance?</i></p>	
<p>Unsuccessful tests</p>	<p><i>What were some tests of change that were attempted and how did they fail? What did the team learn from this process?</i></p>	