# #StayWell 2022: a Teen Vaccine Collaborative QI Framework

ACHIA Collaboratives use three tightly linked and highly successful frameworks: the IHI Breakthrough Series Collaborative Learning Model, the Chronic Care Model, and the Model for Improvement. We will reference these frameworks frequently. We are introducing these concepts to you here.

1. **The IHI Breakthrough Series Collaborative Learning Model** –The collaborative learning model is based on the Institute for Healthcare Improvement's (IHI) Breakthrough Series. The model is designed to create a learning laboratory for practices to test and implement changes using the methods and approaches outlined in this section. In the Best Beginnings learning collaborative, practice CQI Core Team members participate in monthly webinars over a 9-month period. Practice CQI Core Teams identify approaches, tools, and resources to implement small *tests of change* with guidance from improvement faculty. Beyond guidance from experts, we have found that many practices learn the most from one another. Hearing what a similar practice has tested and learning what works (and what does not work), are repeatedly reported to be the most valuable part of the collaborative. During "*action periods*," the time in between practice calls and webinars, the learning collaborative participants analyze their progress by reviewing their data with input from improvement faculty. Monthly practice calls/webinars develop strategies to overcome barriers to making change based on what your practice and other practices are facing as they develop and implement tests of change. Because the learning collaborative is dynamic, topics and assignments currently listed on the syllabus may be revised to meet participant's needs.

2. **The Chronic Care Model** – The Chronic Care Model, developed by Ed Wagner of the MacColl Center for Healthcare Innovation, identifies the essential elements of a health care system that encourages high quality child health care. These elements are outlined in the visual below: the community, the health system, self-management support, delivery system design, decision support and clinical information systems. Since you may be hearing more about the concept of "patient centered medical home," you should know that many of the chronic care components are similar to those required to be a patient centered medical home. The practice *key driver diagram* is based on Wagner's Chronic Care Model.

The Chronic Care Model
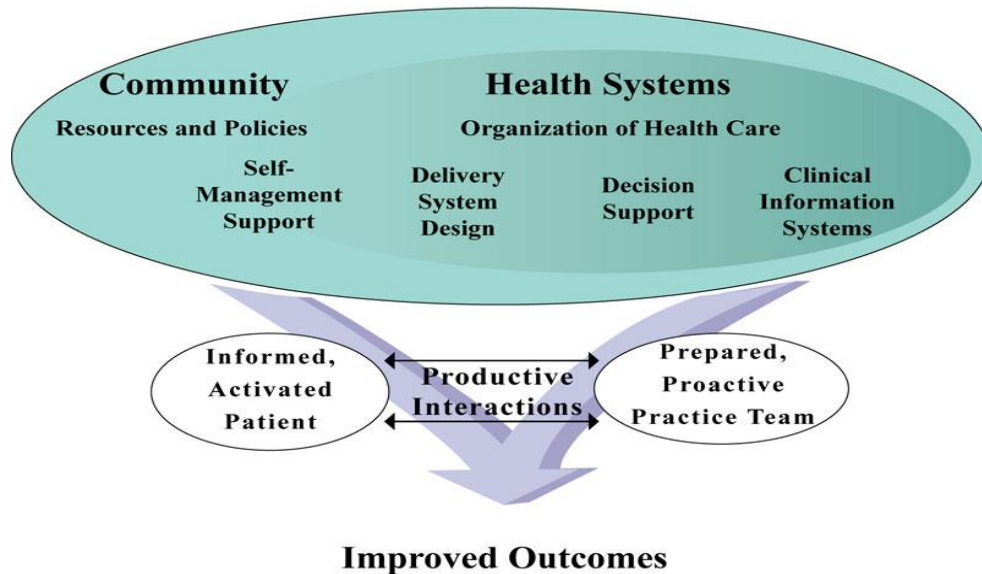
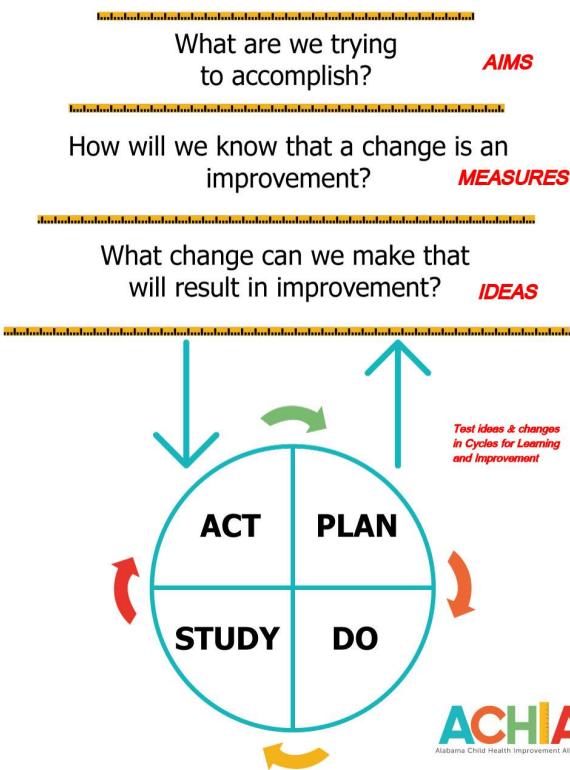Developed by The MacColl Institute
® ACP-ASIM Journals and Books

3. **The Model for Improvement (MFI)** – Building multiple, planned *tests of change* allow learning to be captured in small increments. This approach reduces the risk of lengthy planning periods and lost time and effort. The MFI is based on the 3 questions stated below. The circle describes the iterative cycles that your *Practice CQI Core Team* will go through to identify whether a test you have tried is worth acting on a larger scale.

The MFI is at the core of your practice's work, so it is described below. More information about the Model for Improvement developed by Associates in Process Improvement is available at http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx

MODEL FOR IMPROVEMENT

What are we trying
to accomplish?   *AIMS*

How will we know that a change is an
improvement?   *MEASURES*

What change can we make that
will result in improvement?   *IDEAS*

*Test ideas & changes
in Cycles for Learning
and Improvement*

ACT | PLAN

STUDY | DO

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Model of Improvement

Why A Model? What Purpose?	Improvement Principles
• Provide organizing structure to guide thinking • Ensure discipline and thoughtfulness • Support improvement principles • Facilitate improvement • Foster common language	• Listen to patients and families • Tap knowledge of the system by involving staff • Understand processes and interactions in system • Use disciplined method in successive cycles to test changes • Test on small scale; move rapidly to improve • Measure to learn and to understand variation

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Question 1:
What are we trying to accomplish?

AIM: A specific, measurable, time-sensitive stateme of expected results of an improvement process.

A strong clear aim gives necessary direction to improvement efforts, and is characterized as:
- Intentional, deliberate, planned
- Unambiguous, specific, concrete
- Measurable with a numeric goal, preferably one that provides a "stretch" to motivate significant improvement
- Aligned with other organizational goals or strategic initiatives
- Agreed upon and supported by those involved in the improvement and leaders

Make your aim actionable and useful. Include:

- **A general description of what you hope to accomplish**
- **Specific patient population who will be the focus**
- **Some guidance for carrying out the activities to achieve aim**

Question 2: How will we know that a change is an improvement?

MEASURES: Measures are indicators of change. To answer this key question ("How will we know that a change is an improvement"), several measures are usually required. These measures also can be used to monitor a system's performance over time. In Plan-Do-Study-Act (PDSA) cycles, measurement used immediately after an idea or change has been tested helps determine its effect.

In improvement, key measures and measurement should:
- Clarify and be directly linked to goals
- Seek usefulness over perfection
- Be integrated into daily work whenever possible
- Be graphically and visibly displayed
- For *PDSA cycles*, be simple and feasible enough to accomplish in close time proximity to *tests of change*

Question 3: What changes can we make that will result in an improvement?

IDEAS: Ideas for change or **change concepts** to be tested in a *PDSA cycle* can be derived from:
- Evidence or results of research/science
- Critical thinking or observation of the current system
- Creative thinking
- Theories, questions, hunches
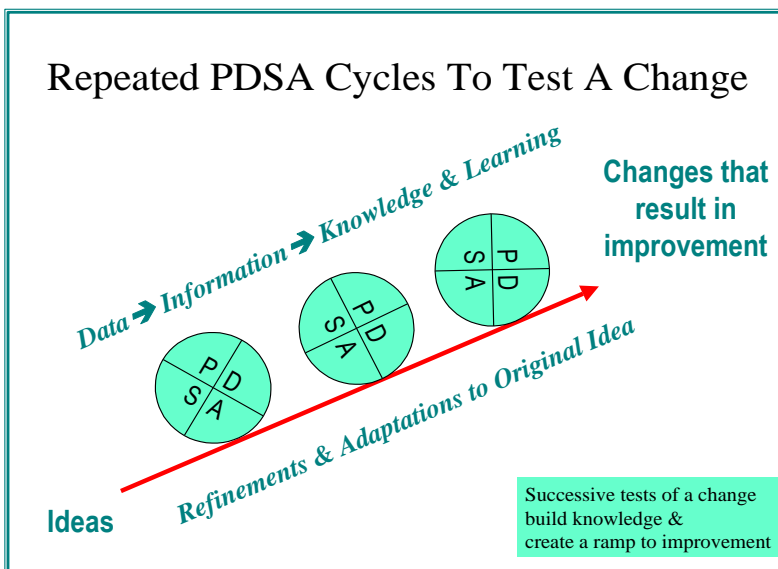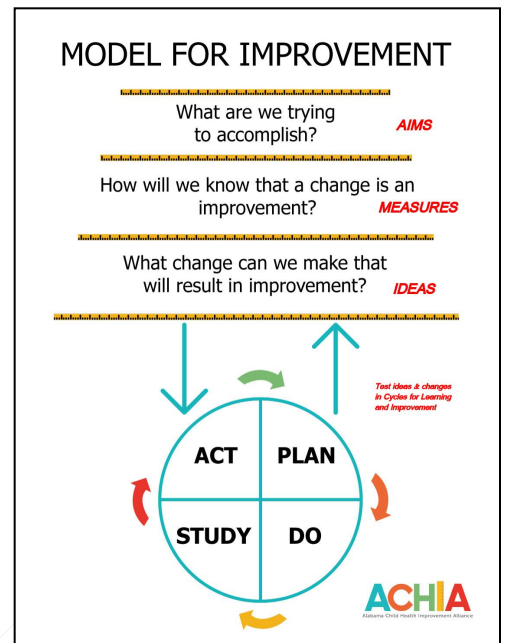- Extrapolations from other situations

When selecting ideas to test, consider the following:
- Direct link to the aim and goals
- Likely impact of the change (avoid low-impact changes)
- Potential for learning
- Feasibility
- Logical sequencing
- Series of tests that will build on one another
- Scale of the test (3 patients, NOT 30)
- Shortness of the cycle (1 week, NOT 1 month)

Tips to make the most of PDSA cycles and tests of change:

✓ Think a couple of cycles ahead

✓ Plan multiple cycles to test and adapt change

✓ Scale downsize of test (# of patients, location). A "cycle of 1" is often appropriate

✓ Do more cycles, at a smaller scale and faster pace instead of fewer, bigger, slower Test with volunteers first

✓ Do not seek buy-in or consensus for the test

- ✓ Be innovative and flexible to make test feasible
- ✓ Collect **useful (and only just enough)** data during each test
- ✓ Test over a wide range of conditions
- ✓ Learn from failures as well as successes
- ✓ Engage leadership support
- ✓ Communicate what you have learned
- ✓ Use Model for Improvement Change Concepts (See List of concepts after the Glossary)

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Repeated PDSA Cycles To Test A Change

Data ➜ Information ➜ Knowledge & Learning

Changes that result in improvement

P D
S A

P D
S A

P D
S A

Refinements & Adaptations to Original Idea

Ideas

Successive tests of a change build knowledge & create a ramp to improvement

Shift Happens

Quality Improvement science states that a change in practice processes is statistically likely to have occurred if improvements are measurably above (or below) the baseline level for 6 measurement periods. This concept is known as "Shift."

Given that the entirety of the collaborative intervention period is 6 months, practices should continue to collect and analyze data monthly until at least 6 intervals are at the practice's goal.

Data: Improvement v Quality Assurance v Research

Throughout the collaborative, use of the term "data" refers to QI data which are different from both Quality Assurance (QA) and Research data. All are valuable and valid but achieve different ends. Research data contribute new information to generalizable knowledge. QA data are for comparison or accountability. These data are frequently used by payors for incentive programs. QA can be a rich source for identifying areas in need of improvement. QI data seek to improve care by increasing the efficiency and effectiveness of processes. It is the data needed to reliably integrate what is known to be best practices into everyday workflow. Below is a table that outlines some differences. Also provided is a link to a brief 2-minute video where Dr. Moses explains the difference between Research and QI. http://www.ihi.org/education/IHIOpenSchool/resources/Pages/Activities/Moses-ResearchVsQI.aspx

Aspect	Improvement	Accountability	Research
Aim	Improvement of care (efficiency & effectiveness)	Comparison, choice, reassurance, motivation for change	New knowledge (efficacy)
Methods: • Test Observability	Test observable	No test, evaluate current performance	Test blinded or controlled
• Bias	Accept consistent bias	Measure and adjust to reduce bias	Design to eliminate bias
• Sample Size	"Just enough" data, small sequential samples	Obtain 100% of available, relevant data	"Just in case" data
• Flexibility of Hypothesis	Flexible hypotheses, changes as learning takes place	No hypothesis	Fixed hypothesis (null hypothesis)
• Testing Strategy	Sequential tests	No tests	One large test
• Determining if a change is an improvement	Run charts or Shewhart control charts (statistical process control)	No change focus (maybe compute a percent change or rank order the results)	Hypothesis, statistical tests (t-test, F-test, chi square), p-values
• Confidentiality of the data	Data used only by those involved with improvement	Data available for public consumption and review	Research subjects' identities protected