Model for Improvement

Question 1: What are we trying to accomplish?

AIM:

A specific, measurable, time-sensitive statement of expected results of an improvement process (a statement of a specific, intended goal)

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 the following:

- 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

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Sample Aim Statement

By *[insert date]*, Happy Valley Pediatrics will improve the provision of preventive and developmental services to patients younger than 5 years by implementing the Bright Futures framework in our practice. Our office will focus on adopting strength-based counseling strategies and tools, the routine use of structured developmental assessments, forming links with resources in our community, and instituting a recall and reminder system.

We will achieve this Aim by using the Bright Futures Implementation and Training tools and materials so that

- One hundred percent of charts for children younger than 5 years have preventive services documented on a preventive services prompting sheet.
- Ninety percent of children younger than 5 years have structured developmental assessments documented in their charts.
- More than 90% of families with children younger than 5 years have parental strengths and needs assessed at well-child visits.

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 usually are required. These measures also can be used to monitor a system's performance over time. In 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 aims or goals.
- Seek usefulness over perfection.
- Be integrated into daily work whenever possible.
- Be graphically and visibly displayed.
- For PDSA cycle measurement, 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 principles** to be tested in PDSA cycles can be derived from the following:

- Evidence—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
- 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)
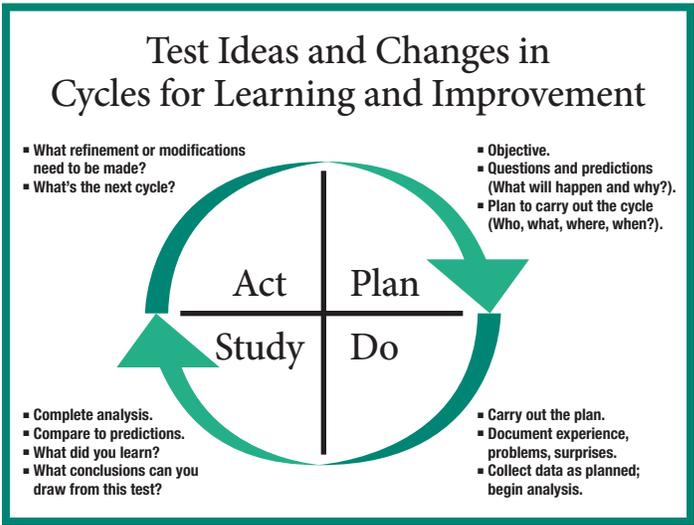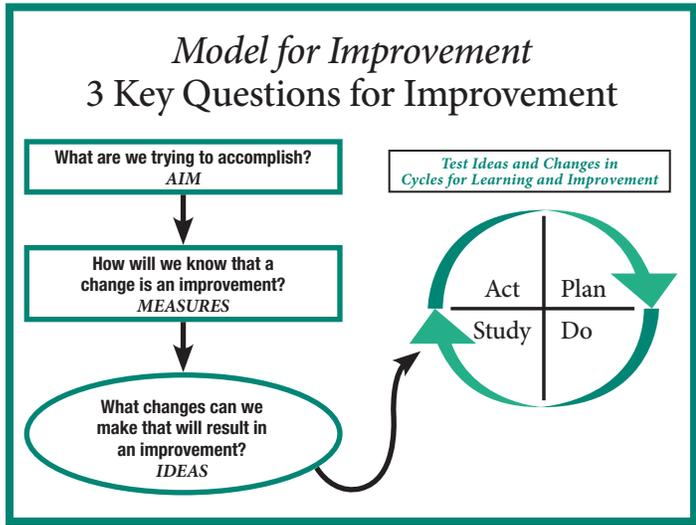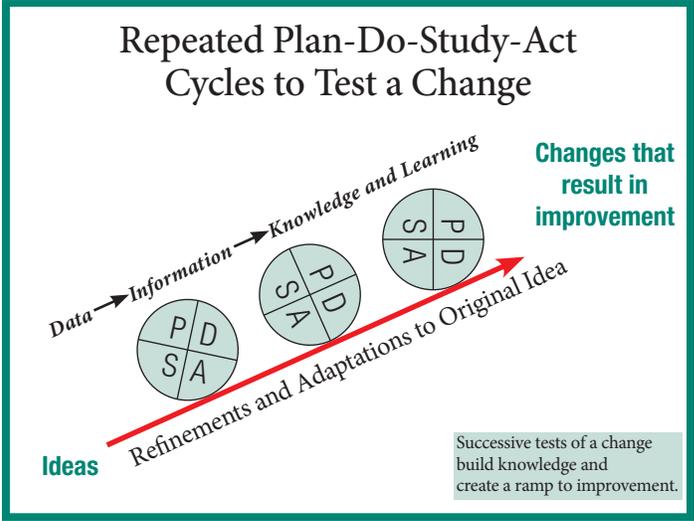- Shortness of the cycle (1 week NOT 1 month)

Model for Improvement Key Points

Why a Model? What Purpose?

- Provide organizing structure to guide thinking.
- Ensure discipline and thoughtfulness.
- Support improvement principles.
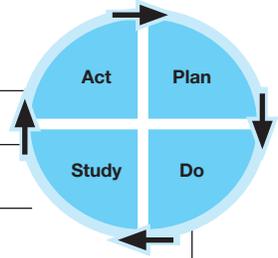- Facilitate improvement.
- Foster common language.

Improvement Principles

- Listen to customers.
- Tap knowledge of the system and people in it.
- Understand processes and interactions in the 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.

Repeated Plan-Do-Study-Act Cycles to Test a Change

Data → Information → Knowledge and Learning

Changes that result in improvement

Ideas — Refinements and Adaptations to Original Idea

Successive tests of a change build knowledge and create a ramp to improvement.

Model for Improvement 3 Key Questions for Improvement

What are we trying to accomplish? *AIM*

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

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

Test Ideas and Changes in Cycles for Learning and Improvement

Act | Plan
Study | Do

Test Ideas and Changes in Cycles for Learning and Improvement

- What refinement or modifications need to be made?
- What's the next cycle?

- Objective.
- Questions and predictions (What will happen and why?).
- Plan to carry out the cycle (Who, what, where, when?).

Act | Plan
Study | Do

- Complete analysis.
- Compare to predictions.
- What did you learn?
- What conclusions can you draw from this test?

- Carry out the plan.
- Document experience, problems, surprises.
- Collect data as planned; begin analysis.
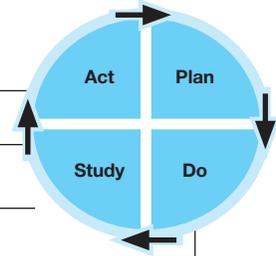
Tips to make the most of PDSA cycles and tests of change

- ✔ Think a couple of cycles ahead.
- ✔ Plan multiple cycles to test and adapt change.
- ✔ Scale down size of test (number of patients, location)…A "cycle of 1."
- ✔ 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—particularly early on.
- ✔ 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.
- ✔ Communicate what you have learned.
- ✔ Engage leadership support.

***Model for Improvement* PSDA Planning Worksheet**	**Team Name:**_____ **Cycle:** _____ **Date:** _____

PLAN

Objective for this cycle:

Questions:

Predictions:

Plan for change or test: (Who, What, When, Where?):

Plan for collection of data: (Who, What, When, Where?):

DO: Carry out the change or test. Collect data and begin analysis. Describe observations, problems encountered, and special circumstances.

STUDY: Complete analysis of data; summarize what was learned.

ACT: Are we ready to make a change? Plan for the next cycle.

Example

Model for Improvement PSDA Planning Worksheet	**Team Name:** Happy Valley Pediatrics **Cycle:** ___1___ **Date:** _____

PLAN:
Establish a reminder/recall system identifying and following up on patients needing preventive care.

Objective for this cycle:
Take a proactive approach by identifying patients who need preventive care and calling them to schedule appointments.

Questions:
How can patients who need preventive care be identified? How many patients are there who need well-child checks? Do we have time available on the schedules to see them? Who has time to do the scheduling? What information should be kept to track the effectiveness of the scheduling efforts?

Predictions:
Calling patients to schedule appointments should improve our goals for patient care.

Plan for change or test: (Who, What, When, Where?):
I will try to identify the patients who need well-child checks and assign calls to the office staff.

Plan for collection of data: (Who, What, When, Where?):
They will indicate the outcome of each call. If scheduled, they will indicate the date of the appointment so I can track whether the patient kept their appointment.

I have assigned a report to more easily identify patients who need well-child checks, but, until it is programmed, I will use a report I currently have by entering dates of service and the procedure codes for health checks.

DO: Carry out the change or test. Collect data and begin analysis. Describe observations, problems encountered, and special circumstances.
The first run of the report produced 392 pages. This had to be broken down to be manageable. Ran the report again for only 0- to 1-year olds. This run produced 10 pages—229 patients.

Using the report, we scheduled 121 patients, there were 47 scheduled before the project, 33 are pending and 28 were lost to follow-up.

STUDY: Complete analysis of data. Summarize what was learned.
This is a worthwhile effort. We will continue to take a proactive approach to scheduling well-child checks. The front office staff will routinely make calls. Calls will be assigned evenly among the office staff as part of their job duties.

If we make appointments and patients do not keep their appointments, a warning letter may be sent defining our agency policy. If another appointment is missed, patients may be eligible for discharge. There is a system in place to identify patients who need warning or discharge letters but they are easier to identify if they miss their appointment. Getting all patients scheduled provides a means for follow-up on medical care as well as patient compliance.

ACT: Are we ready to make a change? Plan for the next cycle.
We made a second round of calls to this group of patients and there are still 33 pending, but we did schedule 121 through this effort. We will continue this effort with patients aged 1 to 2 years. Then, we will call 2- to 3-year-olds and go back and pick up the 2-month checkups for the 0- to 1-year-olds and so on.

Continue to work with information services on the new report, which lists patients' date of birth and a table of the periodicity schedule with the date the well-child check is due based on the birth date and the periodicity schedule.

Idea: This table/schedule would be helpful for parents. Can we make magnets for their refrigerators with the schedule for each of their children?

From the Bright Futures Training Intervention Project. For additional information, visit http://brightfutures.aap.org.