The Model for Improvement: Plan, Do, Study, Act (PDSA)

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Stratis Health
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Objectives
• Describe the fundamentals of the Model for Improvement
• Identify key concepts about testing changes on a small scale using Plan-Do-Study-Act (PDSA) cycles
• Execute a small test of change within your nursing home
The Model for Improvement has two parts

• The Thinking Part
• The Doing Part

The Thinking Part

What are we trying to accomplish?
• Improvement begins with setting aims
  – State aim clearly
  – Make aim measurable
  – Make aim achievable

How will we know that change is an improvement?

What change can we make that will result in an improvement?
Setting SMART Aims

- Specific
- Measureable
- Achievable
- Relevant
- Time bound

How will we know that change is an improvement?

- Measurement allows us to determine if change is an improvement or if the process is working

What change can we make that will result in an improvement?

- Clarify current process
- Look for ways to limit variation in the process, streamline, and simplify
- Is there a best practice?
- You don’t need a perfect solution the first time
The Doing Part-PDSA

**PLAN**

- What is the objective of the test?
- What do you predict will happen and why?
- What change will you make?
- Who will it involve (e.g., one unit, one floor, one department)?
- How long will the change take to implement?
- What resources will they need?
- What data need to be collected?

**DO**

- Describe what actually happened when you ran the test.

  - Implement the change. Try out the test on a small scale.
  - Carry out the test.
  - Document problems and unexpected observations.
  - Begin analysis of the data.
STUDY

Describe the measured results and how they compared to the predictions

• Set aside time to analyze the data and study the results and determine if the change resulted in the expected outcome.
• Complete the analysis of the data.
• Compare the data to your predictions.
• Summarize and reflect on what was learned. Look for: unintended consequences, surprises, successes, failures.

ACT

Describe what modifications to the plan will be made for the next cycle from what you learned

• If the results were not what you wanted, try something else.
• Refine the change, based on what was learned from the test.
• Adapt – modify the changes and repeat PDSA cycle
• Adopt – consider expanding the changes in your organization to additional residents, staff, units
• Abandon – change your approach and repeat PDSA cycle

For Example: Ivy Care Center would like to try a small test of change to help them reduce their use of off-label antipsychotic drug use.
The Thinking Part

What are we trying to accomplish?

• Reduce the number of residents on the memory care neighborhood with an order for an off-label antipsychotic medications by 15% by May 1, 2013.

How will we know that change is an improvement?

• The residents that have had antipsychotic dose reductions will be more alert, more engaged in activities, and will not demonstrate an increase in difficult to manage behaviors.
What change can we make that will result in an improvement?

• A trial antipsychotic medication reduction that will either lead to a dose reduction or a discontinuation of the medication

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The Doing Part-PDSA

Do

Plan

Act

Study

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PLAN

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What is the objective of the test?

• To decrease the number of residents with an order for an off-label antipsychotic medication.

PLAN

What do you predict will happen and why?

• For some residents, decreasing the dose or eliminating the medication will have a positive effect by improving their quality of life.

PLAN

What change will you make?

• The pharmacist will provide recommendations to the physician for all residents with an order for an off-label antipsychotic medication that has not been reduced in the last six months.
PLAN

Who will it involve?

- All residents with an off-label antipsychotic medication order on the memory-care neighborhood

How long will the change take to implement?

- One month-April 1, 2013-May 1, 2013

PLAN

What resources will they need?

- Extra time to collect and analyze the data

PLAN

What data need to be collected?

- The number of residents with an order for an off-label antipsychotic medication before the intervention
- The number of those same residents that have an order for an antipsychotic medication 3 months after the intervention
PLAN
What data need to be collected?
• Behavior log data every shift-start two weeks before the intervention and continue through 2 weeks after the intervention
• Activity log data every shift-start two weeks before the intervention and continue through 2 weeks after the intervention

PLAN
What data need to be collected?
• Sleep log data every shift-start two weeks before the intervention and continue through 2 weeks after the intervention

PLAN
List your action steps along with person(s) responsible and timeline
• The DON will talk with the pharmacist by April 1, 2013
• The Medical Director will inform all physicians and physician extenders by April 1, 2013
PLAN
List your action steps along with person(s) responsible and time line

• The ADON will update behavior log, sleep log, and activity log templates by April 1, 2013

PLAN
List your action steps along with person(s) responsible and time line

• The nurse manager will discuss at neighborhood meetings by April 1, 2013- will include information about completing logs

PLAN
List your action steps along with person(s) responsible and time line

• The pharmacist will review all records of residents on an off-label antipsychotic medication by April 26, 2013
List your action steps along with person(s) responsible and time line

• The pharmacist will make recommendations to physicians for dose reduction by May 1, 2013

• The nurse manager will collect the number of residents with an order for an off-label antipsychotic medication on 5/1/13

• The nurse manager will collect the number of these same residents with an order for an off-label antipsychotic medication on 8/1/13

• The nurse manager will gather information from logs every shift—from 4/17/13 through 5/15/13

• The nurse manager will review the logs and provide the team with a report by 5/31/13
DO

Describe what actually happened when you ran the test

Do
• Implement the change. Try out the test on a small scale.
• Carry out the test.
• Document problems and unexpected observations.
• Begin analysis of the data.

DO

• Implement the change. Try out the test on a small scale.

DO

Document problems and unexpected observations

• Too many orders for dose reduction and discontinuation at once
• Too hard to monitor more than a few residents with medication changes at a time
DO

Begin analysis of the data

• Of the 12 residents needing a trial reduction, 2 of the resident’s medications were discontinued immediately (they were ordered as prns and had not been used in the last 3 months)

• Of the other 10 residents, 8 residents were begun on a trial reduction immediately

• For two of the 12 residents, a reduction was not attempted because the families would not agree to it

• Many of the logs were not completed each shift, so it was difficult to analyze this data
STUDY
Describe the measured results and how they compared to the predictions

• Set aside time to analyze the data and study the results and determine if the change resulted in the expected outcome.
• Complete the analysis of the data.
• Compare the data to your predictions.
• Summarize and reflect on what was learned: Look for: unintended consequences, surprises, successes, failures.

STUDY
Complete the analysis of the data and compare the data to your predictions

• The data indicates that this intervention has resulted in the reduction or discontinuation in antipsychotic medication use as predicted.

STUDY
Summarize and reflect on what was learned

• Physicians responded well to the recommendations of the pharmacist.
• Psychotropic medication reduction was started before we had systems in place to monitor drug reduction.
• Some families were “not on board.”
STUDY

Summarize and reflect on what was learned

• Unable to analyze quality of life changes—many logs were not completed

ACT

Describe what modifications to the plan will be made for the next cycle from what you learned

If the results were not what you wanted you try something else
Refine the change, based on what was learned from the test.
• Adapt—modify the changes and repeat PDSA cycle
• Adopt—consider expanding the changes in your organization to additional residents, staff, units
• Abandon—change your approach and repeat PDSA cycle

ACT

Adopt:
• Medication reviews by pharmacist with recommendations to physician

Adapt:
• Prior to drug reduction attempts, provide education to residents and families
• Attempt dose reduction for all identified residents but reduce only 2 residents per month to allow a focus on individualizing care
ACT

Abandon:
• Antipsychotic drug elimination or dose reduction for more than two residents per month

Changes that result in improvement

Hunches, Theories And Ideas

For Example:

Magnolia Care Center just completed an employee satisfaction survey and they note that only 40% of the nursing assistants hired in the last year rated their orientation as positive (good or excellent). They also note that only 50% of newly hired NAs last year are still employed.
The Thinking Part

What are we trying to accomplish?

- Increase the percentage of newly hired nursing assistants who rate orientation as positive (good or excellent) by 20% by 12/31/12

How will we know that change is an improvement?

There is a decrease in nursing assistant turnover

What change can we make that will result in an improvement?
What change can we make that will result in an improvement?

- Assign a “buddy” or “mentor” for all new staff

The Doing Part-PDSA

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List your action steps along with person(s) responsible and timeline
**PLAN**

**What is the objective of the test?**
- To make the orientation process a positive experience

**What do you predict will happen and why?**
- Staff will rate orientation process as positive because of support they receive from their mentor and NA turnover will decrease

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**PLAN**

**What change will you make?**

- Assign a “buddy” or “mentor” for all new staff

**Who will it involve (e.g. one unit, one floor, one department)?**
- All new nursing assistant staff

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**PLAN**

**How long will the change take to implement?**
- One year

**What resources will you need?**
- Time for planning and training
PLAN

What data need to be collected?

- The percent of new nursing assistants rating the orientation experience positive (good or excellent) six months prior to the intervention and 6 months after the intervention

PLAN

List your action steps along with person(s) responsible and time line

- HR will develop a nursing assistant mentorship program by 3/31/12
- Clinical managers will identify and recruit nursing assistant mentors by 4/19/12

PLAN

List your action steps along with person(s) responsible and time line

- HR will distribute orientation survey to all staff that have been hired between 12/31/11 and 6/30/12 by 7/31/12
PLAN

List your action steps along with person(s) responsible and time line

• Staff development will train nursing assistant mentors by 6/30/12

PLAN

List your action steps along with person(s) responsible and time line

• Clinical managers will assign nursing assistant mentors to all new NA staff starting 7/1/12
• DON will schedule NA mentorship meetings monthly starting 8/1/12

PLAN

List your action steps along with person(s) responsible and time line

• HR will distribute orientation survey to all staff that have been hired between 7/01/12 and 12/31/12 by 1/31/13
DO

Describe what actually happened when you ran the test

DO

Implement the change. Try out the test on a small scale.

- Since this home only averages 2-3 new NA staff monthly, the team decided to try it out throughout the nursing home.

DO

Document problems and unexpected observations.

- Monthly mentor meetings are positive during these meetings, mentors are coming up with great suggestions on ways to improve orientation.
DO

Begin analysis of the data

- Baseline data from first orientation survey - 40% rated orientation as good or excellent

STUDY

Describe the measured results and how they compared to the predictions

- Set aside time to analyze the data and study the results and determine if the change resulted in the expected outcome.
- Complete the analysis of the data.
- Compare the data to your predictions.
- Summarize and reflect on what was learned. Look for unintended consequences, surprises, successes, failures.

STUDY

Analyze the data and study the results and determine if the change resulted in the expected outcome

- 2nd orientation survey results - staff rating orientation as positive increased from 40% to 83%
- NA turnover rate also decreased from 50% in 2011 to 20% in 2012
STUDY

Compare the data to your predictions

• Results met expectations-NA's rating orientation as positive increased from 40% to 83% and NA staff turnover rate decreased

STUDY

Summarize and reflect on what was learned

• Assigning mentors improved orientation satisfaction scores
• NA turnover rate also decreased

STUDY

Summarize and reflect on what was learned

• Monthly mentor meetings were positive-gave the NAs an opportunity to share ideas with each other
STUDY
Summarize and reflect on what was learned

• The mentor program worked best when a mentor was only assigned to one new team member at a time which was not always possible due to the number of trained mentors.

ACT
Describe what modifications to the plan will be made for the next cycle from what you learned

ACT
Adapt:

• Offer mentorship training annually and as needed so that each neighborhood has at least three trained mentors
**ACT**

**Adopt:**
- Hold monthly NA meetings for all NAs—not just the mentors
- Expand the mentorship program to licensed nurses

**Abandon:**
- The process worked well—nothing will be abandoned

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**PDSA**

**What are we trying to accomplish?**
**How will we know that change is an improvement?**
**What change can we make that will result in an improvement?**

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**NEXT STEPS**

- Identify and implement small tests of change
- Share test of change at next national virtual learning session on May 14, 2013
- Briefly share a test of change in next ATTAX data collection
Questions?
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