Disclosure to Participants

Notice of Requirements For Successful Completion

Please refer to learning goals and objectives. Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours.

Conflict of Interest (COI) and Financial Relationship Disclosures:

Presenter: Michael Baratz – No COI/Financial Relationship to disclose
Presenter: Raynelle Shelley, MS, RD, CDE, BC-ADM – No COI/Financial Relationship to disclose

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Objectives

Learning Objective

1. Describe the Lean Problem Solving methodology and how it is used to facilitate change
2. List all 8 parts of an A3 tool according to this method
3. Describe how using Lean Problem Solving and the A3 tool improved the Baylor Scott & White Round Rock ambulatory diabetes program

Using LEAN Problem Solving Methodology to Improve Diabetes Programs
Agenda and Purpose

• What is A3 Thinking
  – Overview of A3 process
  – A3 process improvement for Diabetes program

What is an A3?

• A different way of thinking
• Structured problem solving methodology formatted on 11x17 inch size sheet of paper
  – Used for problems that need more analysis
• Concise summary of the problem and countermeasures
• Keeps teams from jumping to conclusions/solutions
• Follows PDCA cycles

Higher Level uses of A3 Thinking

Define Value
Value vs. Waste from customer’s viewpoint

Develop People
• Surface problems “No problem is Problem”
• Shift away from asking who to asking why

Culture
• Incremental, continuous improvement
• Engaged workforce
• Sustain changes

Decision Making

Problem Analysis
“Left Side”

• Problem / Issue
• Background
• Current Condition
• Root cause analysis

Implementation Plan
“Right Side”

• Action Items
• Benefits/Results
• Future Steps
• Follow-up

<table>
<thead>
<tr>
<th>Session</th>
<th>Length</th>
<th>What Involved</th>
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</thead>
<tbody>
<tr>
<td>Session 1</td>
<td>2 - 4 hrs</td>
<td>A3 training, Start “Left Side” Problem, Statement, Background, Current Condition, Root Cause analysis, Action Items</td>
</tr>
<tr>
<td>Session 2</td>
<td>1 x 2 hrs</td>
<td>Review &amp; Validate “Left Side” Review with your manager</td>
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<tr>
<td>Session 3</td>
<td>2 - 4 hrs</td>
<td>Training Start Right side Countermeasures, Follow-up</td>
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<tr>
<td>Session 4</td>
<td>2 - 4 hrs</td>
<td>Review &amp; Validate Right Side, Discuss Progress, Implement actions, Collect additional data on a tool of A3 on your huddle board, Review with your manager</td>
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<tr>
<td>Session 5</td>
<td>1 x 2 hrs</td>
<td>Review &amp; Validate “Right Side”, Discuss Progress, Prepare Presentation, Implement actions, Collect additional data on a tool of A3 on your huddle board, Review with your manager</td>
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<tr>
<td>Report out</td>
<td>1 hr</td>
<td>Present Final Report Out, Prepare Board or presentation, Homework = Continue implementation</td>
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Problem Analysis (Root cause Theory's)

**Goal:**

**Issue (Problem Statement):**

Provided physician education on ambulatory diabetes education services to patients admitted by Round Rock’s in-patient physicians with an A1C of 7.1 or higher, or those with an A1c of 7.1 or higher. This has resulted in underutilized outpatient diabetes education opportunities, potential poor continuity of care, and a potential loss of regional American Diabetes Association Recognition status.

**Current Condition:**

- Inpatient Physician referrals to outpatient diabetes education increased from 4.5% prior to the experiment to an average of 26.5% between November 1, 2014 to March 23, 2016.
- We feel that an increase in referrals will reduce readmission rates, improve community health, and improve access to patient diabetes self-management resources (increased patient satisfaction).
- 65 patients in Round Rock Hospital (excluding emergency department and labor and delivery) had a 3-month glucose control history (A1C) of 7.1 or higher and/or a new diagnosis of diabetes. Ambulatory Diabetes Education program for newly diagnosed diabetes and existing diabetes patients with an A1c of 7.1 or higher. This has resulted in underutilized outpatient diabetes education opportunities, potential poor continuity of care, and a potential loss of regional American Diabetes Association Recognition status.

**Problem Statement Template**

During (time period), the (main contributor) in location (where) increased from X% to X% which resulted in (negative consequences)

**Baseline Metrics**

Weekly No Shows – Volume

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<th>Week</th>
<th>No Shows</th>
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<tr>
<td>Dec. 6-10</td>
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<td>Dec. 13-17</td>
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<td>Dec. 20-24</td>
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<td>Dec. 27-31</td>
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**Background**

- **The Goal:** Provide quantitative (Data) background information about the problem statement
  - Graphical representation of baseline data supporting the problem statement
- Baseline data will be used to measure progress
- Goals should also be set in this step
- What to we want to improve using this A3 and by how much
Diabetes Education Background

- 65 patients in Round Rock Hospital (excluding emergency department and labor and delivery) had a 3-month glucose control history (A1C) of 7.1 or higher and/or a new diagnosis of diabetes between July 27, 2014 to October 31, 2014 and only three were referred to ambulatory diabetes education resulting in poor continuity of care.
- We feel that an increase in referrals will reduce readmission rates, improve community health through diabetes self management, and facilitate basic continuity of care.
- Inpatient Physician referrals to outpatient diabetes education increased from 4.5% prior to experiment to an average of 26.5% between November 1, 2014 to March 23, 2016.
- Goal of 50% increase in referrals to ambulatory diabetes education was not met.

Diabetes Education Background: Financial

- The CDC stated in 2008 that "Outpatient training to help people self-manage their diabetes prevents hospitalizations. Every $1 invested in such training can cut health care costs by up to $8.76." 1
- Diabetes Self-management Education reduces hospital admissions and readmissions.2,3,4

Background: Patient and Family Centeredness

- Improved patient continuity of care.
- Improved patient access to diabetes education through group session availability.
- Outpatient diabetes support appears to decrease diabetes-related readmission risk.4
- Increased awareness of Diabetes Education Class by in-patient dietitian contact.

“SMART” Goals

- Specific:
- Measurable:
- Actionable:
- Realistic:
- Time-bound:

Example:
- Department X will decrease/reduce negative (increase positive) from X to Y by DATE
- Reduce no-show rate in department by 50% in 6 months
Background:

Issue (Problem Statement):

- Providing in-patient dietitians with access to pend the referral order for in-patient physicians.
- In-patient dietitians adding “sticky notes” in Epic requesting the referral.
- We aim to generate Ambulatory Diabetes Education referrals from 4.5% to 50% of all patients admitted by Round Rock’s in-patient physicians.

Current Condition:

The Goal:

We aim to generate Ambulatory Diabetes Education referrals from 4.5% to 50% of all patients admitted by Round Rock’s in-patient physicians with an A1C of 7.1+ or those with a new diagnosis of diabetes between October 31, 2014 to February 23, 2016.

Benefits/Results:

- Goal of 50% increase in referrals to ambulatory diabetes education was not met.
- Inpatient Physician referrals to outpatient diabetes education increased from 4.5% prior to the goal experiment to an average of 26.5% between November 1, 2014 to March 23, 2016.
- We feel that an increase in referrals will reduce readmission rates, improve community health through diabetes self management, and facilitate basic continuity of care.
- 65 patients in Round Rock Hospital (excluding emergency department and labor and delivery) had an 3-month glucose control history (A1C) of 7.1 or higher and/or a new diagnosis of diabetes between July 27, 2014 to October 31, 2014 and only three were referred to ambulatory diabetes education resulting in poor continuity of care.

Current/Future Condition:

- Cartoon

Diagram of Process:

Current/Future Condition

- Process Map

Problem Analysis (Root cause Theory’s):

- Include a diagram, such as:
  - Mini-VSM
  - Spaghetti diagram
  - How the process runs now (bullet points)
  - Process map
  - Picture (sketch) that represents the problem
Root Cause Analysis

The Goal: To isolate and verify the most fundamental causes (root causes) of the issue / problem statement.

- Root cause analysis identifies the factor/s that, if eliminated or corrected, would have prevented or can minimize the problem from existing or occurring.
- Root cause analysis logically connects the problem statement to the root cause:
  - "If this root cause is removed will the problem also be removed or reduced?"

Tools:
- 5 Whys
- Fishbone analysis

Note: "Human Error" and/or "Training" are greatly DISCOURAGED as Root Causes.

Fishbone Diagram

1. In-patient doctors unaware of ambulatory diabetes education program
2. There is no one party assigned to work the orders in this file
3. Scheduling rules for diabetic education not updated or communicated to Contact center

Deep Reflection

For an A3, it means the team should have/gain a deep understanding of the problem – to study it at some depth:

- What is really causing the issue (root cause)?
- What else is impacted by this problem?
- What short-cuts have been created?

Root cause Prioritization

1. In-patient doctors unaware of ambulatory diabetes education program
2. There is no one party assigned to work the orders in this file
3. Scheduling rules for diabetic education not updated or communicated to Contact center
Create An Implementation Plan

- Actions that are needed to make the countermeasures happen
  - Identify what will be done
- Who will be responsible
  - Responsible person does not need to do all the work (sharing implementation helps to get buy-in)
- When it will be done
  - Note milestones and integrate with other timelines/initiatives
- Should not include:
  - Investigate, evaluate, verify, check, determine, etc.
- Obtain approval and agreement (if needed)

Use of Rapid Cycle Methodologies

- Plan: Acquire the physician and Epic permission for in-patient dietitians to pend orders for Ambulatory Diabetes Education referrals. Physicians would then either deny or approve and then sign at discharge.
- Do: Physician approval acquired. Epic built the permission screen for the in-patient dietitians. Dietitians pended orders in Epic for Ambulatory Diabetes Education referrals from May 9, 2015 to present.
- Check: Monitored Epic data for referrals to ambulatory diabetes education upon discharge.
- Act: After reviewing the results over 42 weeks, an average of 23.1% of eligible patients received a referral to ambulatory diabetes education.

Use of Rapid Cycle Methodologies

- Plan: Educate in-patient physicians that diabetes education programs were available and how to make referrals to these programs.
- Do: Attended weekly hospital physician huddles and provided a flow chart of how to find the correct referral for diabetes education between October 25, 2014 – October 31, 2014.
- Check: Monitored Epic data for referrals to ambulatory diabetes education upon discharge.
- Act: After reviewing the results, there was no improvement so we abandoned the physician education as our only approach.

Graphical Display of Metrics/Measures Results

- Next Steps
  - Target workque (Schedule Orders WQ 1984) file and set policy that no more than 2 people are on the not contacted list at the end of each week.
  - Provide additional education to inpatient discharge nurse on best way to schedule referred patients for diabetes education.
Next Steps/Lessons Learned

- Lessons Learned
  - There are no national comparisons for this process.
  - 83% of patients attending group or individual sessions based on this project have improved their A1c or achieved an A1c ≤7.0 post class.

If you want the A3 form....

E-mail: lisa.shelley@BSWHealth.org
Subject: A3 form

Common A3 Project Pitfalls

- Using A3 for projects that are too big
- Not understanding the process – “GO SEE”
- Not including the right team members
- Attempting to solve the symptoms instead of the root cause
- Jumping to Solution too soon
- Not aligning with system goals
- Not getting a coach involved to help you (if needed)
- Not sharing issues or concerns until late in the project