PDSA and Project Presentations

IA Wave 42

October 6, 2016
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Leader</th>
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<tbody>
<tr>
<td>3:00 BST</td>
<td>Welcome and Check-In Prep for WS2</td>
<td>Jane</td>
</tr>
<tr>
<td>3:15</td>
<td>Reflect on AP Assignments</td>
<td>Amar</td>
</tr>
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<td>3:25</td>
<td>PDSA Cycle Review</td>
<td>Jane</td>
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<td>3:45</td>
<td>PDSA Cycle Project Presentations</td>
<td>Emma Mukesh</td>
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<tr>
<td>4:25</td>
<td>Questions and Close</td>
<td>Jane</td>
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# Please Check In...

<table>
<thead>
<tr>
<th>IA</th>
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<tr>
<td>Akhnuwkh Jones</td>
<td>Harald Stordahl</td>
<td>Rachael Leaton</td>
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<tr>
<td>Anna Smith</td>
<td>Helen O'Kelly</td>
<td>Rachel Fletcher</td>
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<tr>
<td>Barbara Grey</td>
<td>Helle Bak</td>
<td>Rajesh Pai</td>
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<td>Blake Pritchard</td>
<td>Iyoni Ranasinghe</td>
<td>Sandra McConnell</td>
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<td>Breid O'Brien</td>
<td>Jimmy Noak</td>
<td>Sian Martin</td>
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<td>Cecilie Lund Murray</td>
<td>Margaret Rennocks</td>
<td>Stephen O'Connor</td>
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<td>Emma Binley</td>
<td>Mukesh Thakur</td>
<td>Suzanne Morton</td>
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<td>Geetika Singh</td>
<td>Polly Ragoobar</td>
<td>Suzie Bailey</td>
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<td>Hanne Miang</td>
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<td>Tammy Naidu</td>
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Where are you?
October Reporting

- Upload your WS2 Presentation to your Extranet page by October 14
- Include the cover-page with your updated project progress score (0.5 to 5 scale)
B. Project Sponsor and Advocate use assessment scale (0.5-5) to rate Project Progress.

Purpose: Raise awareness of project, remove barriers, gain leadership guidance and support

**Step 1:** Share leadership report, assessment scale and any other info with your Sponsor and Advocate so they can assess project.

**Step 2:** Note their assessment score on your Leadership Report (if you are using the PowerPoint template, there is a space at the top of the first page).

Any impact with sponsors, on project?
What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?
Repeated Use of the PDSA Cycle

Model for Improvement

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

Repeat Use

- **Hunches**
- **Theories**
- **Ideas**

Changes That Result in Improvement

- **Changes**

**Wide-Scale Tests of Change**

- **Follow-up Tests**

**Implementation of Change**

**DVT Prophylaxis**

**Beta Blockade Prop**

**SSI interventions**

**Use clippers instead of shaving site**

**Peri-op Harm Rate**

**Reduce Per-op harm by 30%**
The PDSA cycle for Learning and Improvement

**Plan**
- Objective
- Questions & predictions
- Plan to carry out: Who? When? How? Where?

**Do**
- Carry out plan
- Document problems
- Begin data analysis

**Study**
- Complete data analysis
- Compare to predictions
- Summarize

**Act**
- Ready to implement?
- Try something else?
- Next cycle

What’s next?

Did it work?

Let’s try it!

What will happen if we try something different?
Underlying Theory of Knowledge

PDSA – Deductive/Inductive Learning

FIGURE 4.4. THE ITERATIVE NATURE OF LEARNING AND IMPROVEMENT.

Prediction (Based on a Hypothesis, Conjecture, Model, Theory)

Real world: Observation, carry out test, look for anomalies

PDSA Cycle 1  PDSA Cycle 2  PDSA Cycle 3  PDSA Cycle 4

Deduction  Induction  Deduction  Induction  Deduction  Induction  Deduction  Induction
To Be Considered A PDSA Cycle

- A plan was described, including a plan for collecting data
- Plan was carried out and data were collected
- Time was set aside to analyze data and study the results
- Action was based on what was learned
Presentation Process for the Call

- Start your presentation by sharing aim of your team (usually from DD) and your current project progress score (on 0.5 to 5 scale) and predicting what your PPS will be by WS 3. 30 seconds or less
- Share your Family of Measures (One slide: List of Outcome, Process, and Balancing Measures, don’t need to show data here) (2 Min)
- Show us your PDSA strategy (e.g. ramp of PDSA cycles planned/and or completed) One slide only (2 Min)
- Present one or more completed PDSAs on your project using PDSA form (15 Min)
  - The PDSAs can focus on learning, developing, testing or implementing a change
  - Testing a change preferred!
  - Tell us which change concepts you used in your test(s) of change (IG page 359)

Faculty and other IAs will use a PDSA evaluation form to provide feedback to the presenter. PDSA Feedback Form is on the Extranet.
Improvement Advisor Project
Progress Assessment Scale

0.5 - Intent to Participate
1.0 - Charter and team established
1.5 - Planning for the project has begun
2.0 - Activity, but no changes
2.5 - Changes tested, but no improvement
3.0 - Modest improvement
3.5 - Improvement
4.0 - Significant improvement
4.5 - Sustainable improvement
5.0 - Outstanding sustainable results
IHI IA Development Program - *PDSA CYCLE FEEDBACK*

**PURPOSE:** To provide helpful feedback on Workshop 2 project presentations focusing on use of PDSA cycles.

Presenter: ______________________    Reviewer: _______________________   Date ____________

Project (short aim): ________________________________________________________________________

Project (0-5 scale) Assessment:   Now: ______ at Workshop 3 ______

Family of Measures for the project

*Was the total number of measures appropriate?*

*Suggestions on balance between outcome, process, and balancing measures*

*Do these measures make the project aim tangible?*

**Linking Series of PDSA Cycles**

*What is the strategy for this series of linked, multiple cycles (replication, scale-up, wide-scale testing, multiple changes, etc.)?*

*Comment on the time frame for the series of PDSA cycles.*

*What other suggestions do you have on the series of PDSA Cycles planned for the project?*
PLAN:
Was the objective for this PDSA cycle clear to you? Is this cycle designed to build knowledge, develop a change, test a change, or implement a change?

Were the questions they were trying to answer stated clearly? How could the predictions be improved?

What change concepts were used in the plan for the PDSA?

What would you suggest they do to strengthen their plan for this cycle?

Will the planned data collection (qualitative and quantitative) answer the questions for the cycle?

Suggestions about the scale/scope of this PDSA?

DO:
Did they attempt to carry out their plan?

Did they document any problems or unexpected events?

Were they able to collect the data they planned?

STUDY:
Did they complete the analysis of the data (including qualitative feedback and observations)?

Did they compare the results to their prediction and summarize what they learned?

Did they update their theories for this project?

ACT:
Did they say what will happen in the next PDSA cycle (develop change further, test, implement?)

What suggestions do you have for scale, scope, sequencing of their next PDSA cycle(s)?

Subject Matter knowledge: Do you have an ideas they should test in this project?
# Project Presentations emphasizing use of PDSA

<table>
<thead>
<tr>
<th>Aim (Driver Diagram)</th>
<th>Duration Minutes</th>
<th>Time Minutes</th>
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<tbody>
<tr>
<td>Current Project Score (0.5 to 5 Score)</td>
<td>1</td>
<td>0-1</td>
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<tr>
<td>Predicted Project Score (WS 3)</td>
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<tr>
<td>Family of Measures</td>
<td>2</td>
<td>1-3</td>
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<tr>
<td>One slide: List of O, P, B Measures</td>
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<td>PDSA strategy (Ramp of planned/completed)</td>
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<td>3-5</td>
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<td>One slide only</td>
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<tr>
<td>Present 1+ completed PDSAs using PDSA form</td>
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<td>5-15</td>
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<td>Change concepts used? (IG page 359)</td>
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<tr>
<td>Feedback</td>
<td>5</td>
<td>15-20</td>
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<td>Time</td>
<td>Day 5</td>
<td>Day 6</td>
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<tr>
<td>7:30</td>
<td>Continental Breakfast</td>
<td>Continental Breakfast</td>
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<td>8:30</td>
<td>Introduction and Overview</td>
<td>Lingering Questions, Reflection, IA Grads Presentation (if any)</td>
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<td></td>
<td>Difficult Conversations - Connection to Working Styles</td>
<td>Participant Presentations on PDSA Cycles (Break out)</td>
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<td>Introduction to Creativity Creativity</td>
<td>Introduction to Creativity Creativity</td>
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<td>Provocation Techniques: Random Word Exercise</td>
<td>Understanding Variation</td>
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<td>Six Thinking Hats: Intro</td>
<td>Introduction to Shewhart Control Charts</td>
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<td>Six Thinking Hats: Exercise and Application</td>
<td>Types of Shewhart Charts</td>
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<td>Shewhart Charts for Continuous Data</td>
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<td>Participant Presentations on PDSA Cycles (Break out)</td>
<td>Shewhart Charts for Continuous Data: Case Studies</td>
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<td>Tools for Understanding Variation</td>
<td>Shewhart Charts for Continuous Data:</td>
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<td>Pareto, Frequency Plot, Scatter Plot</td>
<td>Attribute Data</td>
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<td>Building the Basic Toolkit with SPC Excel</td>
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<td>Questions and Assignments</td>
<td>Project or Assignment Work time</td>
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<td>Project or Assignment Work time</td>
<td>Project or Assignment Work time</td>
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Prep for WS 2---PreReading

In your reference books:
- *Health Care Data Guide*, Chapters 4 and 5
- *Improvement Handbook* (Merlot book), Chapter 2, Teamwork and Chapter 16, Creativity Methods
- *Difficult Conversations*

On the Extranet *(resources/article to support the curriculum/workshop 2)*
- *Controlling variation in health care: a consultation from Walter Shewhart*, Berwick, Med Care, 1991
- *Revenge of the Right Brain*. Daniel Pink

On Youtube
Prep for WS 2---SPC Fluency

- Please make certain you are comfortable, even fluent, with your SPC software
- We will building run charts, Shewhart charts of every flavor (P, C, U, I and X bar and S), Pareto, Scatter plots and Histograms (AKA frequency or distribution plots)

**Your practice database is on the Extranet** (Resources/SPC Software/SPC Assignments/SPC Exercises 2016)
Workshop 2 Project Presentation Assignment

**IA Project Presentation Guidelines:** 20 min. for each IA for presentation and discussion

**Purpose:** to hone our skills related to designing and running PDSA cycles

- Start your presentation by sharing aim of your team (usually from DD) and your current project progress score (on 0.5 to 5 scale) and predicting what your PPS will be by WS 3. (Sept 2015) 30 seconds or less
- Share your Family of Measures (One slide: List of Outcome, Process, and Balancing Measures, don’t need to show data here) (2 Min)
- Show us your PDSA strategy (e.g. ramp of PDSA cycles planned/and or completed) One slide only (2 Min)
- Present one or more completed PDSAs on your project using PDSA form (need 14 paper copies of your presentation) (15 Min)
  
  - The PDSAs can focus on learning, developing, testing or implementing a change
  - Testing a change preferred!
  - Tell us which change concepts you used in your test(s) of change (IG page 359)

Faculty and other IAs will use a PDSA evaluation form to provide feedback to the presenter. PDSA Feedback Form is on the Extranet.
Project Presentation Example: 3 Slides and a PDSA Form

1: Driver Diagram (plus current and predicted progress scores)

2: Project Measures (outcome, process, balancing)

- Outcome:
  - Unplanned extubation (UE) rate – events per 1000 ventilator days
  - Ventilator days between UE events
  - ...

- Process:
  - Percentage of infants who are positioned appropriately during x-ray procedures
  - Percentage of infants with a morning x-ray in which the entire multidisciplinary team viewed the images together

- Balancing:
  - Increase in UE during tube re-taping
  - Increased use of x-rays or sedation medications

3: PDSA Strategy (a ramp, for example)

4: Completed PDSA Form (at least 1)
IHI IA Development Program - PDSA CYCLE FEEDBACK

PURPOSE: To provide helpful feedback on Workshop 2 project presentations focusing on use of PDSA cycles.

Presenter: ____________________ Reviewer: ____________________ Date ___________

Project (short aim): ________________________________________________________________

Project (0-5 scale) Assessment:  Now: _____ at Workshop 3______

Family of Measures for the project

Was the total number of measures appropriate?

Suggestions on balance between outcome, process, and balancing measures

Do these measures make the project aim tangible?

Linking Series of PDSA Cycles

What is the strategy for this series of linked, multiple cycles (replication, scale-up, wide-scale testing, multiple changes, etc.)?

Comment on the time frame for the series of PDSA cycles.

What other suggestions do you have on the series of PDSA Cycles planned for the project?
Specific PDSA presented (please add suggestions in the appropriate step of PDSA)

PLAN:
Was the objective for this PDSA cycle clear to you? Is this cycle designed to build knowledge, develop a change, test a change, or implement a change?

Were the questions they were trying to answer stated clearly? How could the predictions be improved?

What change concepts were used in the plan for the PDSA?

What would you suggest they do to strengthen their plan for this cycle?

Will the planned data collection (qualitative and quantitative) answer the questions for the cycle?

Suggestions about the scale/scope of this PDSA?

DO:
Did they attempt to carry out their plan?

Did they document any problems or unexpected events?

Were they able to collect the data they planned?

STUDY:
Did they complete the analysis of the data (including qualitative feedback and observations)?

Did they compare the results to their prediction and summarize what they learned?

Did they update their theories for this project?

ACT:
Did they say what will happen in the next PDSA cycle (develop change further, test, implement?)

What suggestions do you have for scale, scope, sequencing of their next PDSA cycle(s)?

Subject Matter knowledge: Do you have an ideas they should test in this project?
Workshop Pre-Work Checklist:

- Prepare to present your project PDSA cycle(s) using a PDSA form
  - Bring 14 paper copies of your presentation
  - Can use powerpoint as well if you like (if you upload your presentation to the your extranet page you will be able to access it easily at the workshop).

- Continue to gain fluency in your SPC Software.

- Bring the following (required) materials:
  - Bring your laptop. With SPC software loaded onto the C drive. Remote access to your SPC software on a shared drive will not work. SPC software must be on your C drive.

- Bring a list of actual or potential measures for your project. Bring any data you have for these measures (data in electronic format best).

- Bring all books you received at Workshop I (Improvement Guide, HCDG, Difficult Conversations)

OPTIONAL: Bring examples of SPC in your organization (Shewhart control charts, run charts, Pareto, histogram, scatter plot or other graphical display).
Emma Binley

- QI Lead
- East London NHS Foundation Trust

- Reduce the % of ‘Did not attend’ appointments (DNA) by 50% by December 2016.
IA Wave 42
Emma Binley
East London NHS Foundation Trust
Driver Diagram: Reduction in DNAs in Enhanced Primary Care Liaison

**Aim:**
Reduce the % of ‘Did not attend’ appointments (DNA) by 50% by December 2016.

**Progress Score:**
2.5

**Prediction by WS 3:**
3.0

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**Primary Drivers**

1. **Referrals**
   - A. Current referral pathway (Referrals from General Practitioners (GP) & Referrals from Community Mental Health Teams)
   - B. Inappropriate Referrals
   - C. Inadequate information (referrals)
   - D. Referral forms/communication

2. **Capacity**
   - A. Appointments offered
   - B. Availability of clinicians and staff
   - C. Administrative staff capacity

3. **Discharges**
   - A. Preparation and support leading towards discharge
   - B. Discharge pathway
   - C. Discharge pathway for those who DNA

4. **Communication**
   - A. Reminders – text message, telephone call
   - B. Information about service and types of appointments
   - C. Communication with GP practices

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**Secondary Drivers**

- Text message reminders (manual and/or automated)
- Welcome telephone calls – explaining purpose of appointment and who will be seeing
- Information leaflet about the service and what will be offered
- Explaining how many appointments will be offered and structure of the service at first appointments
- Information leaflet on other services (voluntary) available
- Welcome letter
Family of Measures

**Outcome Measure:**
% of “Did not attend” appointments

- **Numerator:** Total no. of did not attend offered appointments per week
- **Denominator:** Total no. of offered appointments per week

**Operational Definition:** 'Did not attend' appointment is defined as when a service user does not attend their allocated appointment, does not make contact with the service to inform them and does not answer their phone when the service makes contact with them. If they contact the service or answer their phone when the service contacts them then this is classified as a cancellation not a DNA.

**Process Measures:**
- % of inappropriate referrals
  - **Numerator:** total no. of inappropriate referrals per week
  - **Denominator:** total no. of referrals per week
- Total number of appointments offered per week (count)
  - **Operational Definition:** Appointment offered can be defined as any appointment booked for a service user which is added to a clinic diary on RiO.
- Total number of text message reminders received per week (count)
- % of appointments offered were sent a text message reminder
  - **Numerator:** Total number of those with an appointment on RiO clinic received a text message reminder per week
  - **Denominator:** Total number of appointments offered according to RiO per week
- % of DNAs was a fourth/final appointment
  - **Numerator:** Total number of fourth/final appointments DNA per week
  - **Denominator:** Total number of DNA per week

**Balancing Measures:**
- Total no. of referrals per week (count)
  - **Operational Definition:** Any referral received from a local GP connected to Newham’s EPCL service and/or referral from any of Newham’s community mental health teams.
- % of cancellations
  - **Numerator:** total no. of appointments offered were cancelled per week
  - **Denominator:** total no. of appointments offered per week
- Average length of time from referral to first face to face contact (per week)
  - **Numerator:** Total length of time in days from referral to first face to face appointment per week
  - **Denominator:** Total number of cases seen per week
- **Operational Definition:** length of time is calculated in days from the date of referral (stated on RiO) and the total number of cases seen per week is calculated by the date of the appointment on RiO.

*Measures do not have data for yet
PDSA Cycle Strategy

Telephone calls to inform and reassure

Telephone calls to find out reason for DNA

Automated text message reminders

One psychiatric liaison nurse to call group of service users attending on one specific day

Nurse to call service user when they DNA appointments to find out reason why and if received text message

One psychiatric liaison nurse to call group of service users who DNA on one specific day

Send text message reminders to all appointments at each if the different GPs for one week

A different staff member to try sending the text message reminders

One nurse sending personalized text message reminders for all appointments at the different surgeries for one week

Sending text message reminders two days before appointments – using EE messaging not iPlato. One nurse and his clinics
**PDSA Aim:**
Do manual text message reminders sent using an EE platform reduce face to face DNAs?

**Cycle 1:** Sending text message reminders two days before appointments – using EE messaging not iPlato. One nurse and his clinics

**Cycle 2:** Continue sending EE text message reminders two days before appointments – send to another nurses clinics

**Cycle 3:** Continue sending EE text message reminders two days before appointments – send for all each day of the week (each GP)

**Cycle 4:** Continue with text message reminders and ask service users to speak with reception after their appointment if they have changed their mobile numbers and/or address

**Cycle 1:** Sending text message reminders two days before appointments – using EE messaging not iPlato. One nurse and his clinics
OBJECTIVE FOR THIS PDSA CYCLE:
Preparing team and RiO records for iPlato text messaging system

Is this cycle used to develop, test, or implement a change?
This cycle is being used to develop a change; it is being used to prepare the team and RiO records for testing text message reminders.

What question(s) do we want to answer on this PDSA cycle?
Are we able to prepare our RiO system for using a text message reminder system?
Are we able to data cleanse our RiO records and organize mobile phone numbers to make it easier to use the text message reminder system?
Will this mean that when we start using text message reminders the process is more efficient and reliable?

Do:
Carry out the change or test; Collect data and begin analysis.
The team has been working to update patient’s records and prepare the system for testing text message reminders.
This identifies that for some cases, patients can no longer be reached using the mobile numbers provided. It’s also been reported that even when the mobile number is correct some patients are hard to reach using just one number. iPlato will only send a standardized message to a single mobile number per service user.

Study:
Complete analysis of data;
The staff agrees that text message reminders could lead to reduce the DNA’s but they suggested that they would need to be able to send the message to more than one contact number per patient. At the moment RiO can only send messages to the mobile number recorded in the patient’s record.

Compare the data to your predictions and summarize the learning

Act:
Are we ready to make a change? Plan for the next cycle
The team felt that the EE platform would be more suitable for testing/sending text message reminders. This allows the staff member to send the reminders to more than one number per patient and personalize the content of the message. The team agreed to test EE messaging but at the same time continue to update RiO records.

Plan:
Plan to answer questions: Who, What, When, Where

Who – Members of each of the separate GP teams within the main EPCL team

What – Data cleansing of RiO, this means checking that mobile numbers are entered correctly on clients records, that there is a single mobile number and all other characters are removed from the mobile number box.

When – The plan is to have this complete by the time the QI lead meets with the team again in July. July was chosen as this allows the team time to do this data cleansing following the CQC visit. The clinicians will need to check with their clients that they have the correct mobile number on their records when they meet with them.

Where – The data cleansing is going to be done on RiO, the clinical records system.

Plan for collection of data: Who, What, When, Where

Who – Matthew will check with team that this is complete and then arrange a meeting together in July to plan the next PDA (iPlato).

What – Have clinicians completed data cleansing, did they experience any problems or difficulties in doing this. QI lead to speak with informatics to help get team set up on iPlato. QI lead to raise with data analyst in QI team to collect baseline data, plan is to look at DNA data when previously using NHS.net and when not texting.

When – During month of June.

Where – QI team and EPLC team

Predictions (for questions above based on plan):
MODEL FOR IMPROVEMENT

DATE 26.07.16  (start)  26.08.16  (update)

Objective for this PDSA Cycle: Test the EE platform to send pre-consultation reminder messages

Is this cycle used to develop, test, or implement a change?
This cycle is being used to learn how the EE platform works for sending test reminders to patients.

What question(s) do we want to answer on this PDSA cycle?
Is the EE platform useful for sending message reminders?
Does the use of EE for sending reminders facilitate the process of sending messages to more than one number per patient?
Can EE be used as a complement to iphato in order to use more than one number when trying to send test reminders?

Plan:
Who: Nurse E agreed to use EE platform to send reminders for his own future care.
What: Use the EE platform to send reminder messages. It was agreed to use a central inbox to send the messages. A database with patient’s phone numbers is arranged in a way that works for the EE platform.
When: From this date on. A meeting was arranged for 12/08/2016 to discuss the progress.
Where: EPCL Team

Data Collection Plan
Who: EPCL Team
What: Number of DNA’s and a report with issues regarding the use of the EE platform
When: During the month of August
Where: EPCL

Predictions (for questions above based on plan):
The first use of the platform may be slow and issues may arise. These issues will have to be analyzed to see if it’s viable to sort them out and continue using it in the future.

Do:
Carry out the change or test; Collect data and begin analysis.
Test the change.
Review and refine the data collection to ensure it is relevant to this exercise.
Outcome measure: % First Appointment Face to Face DNAs (Bi-weekly - P Chart)

Percent

QI project began and project lead attended Improvement Science in Action Training

Rio Cleansing in preparation for automated text message reminders

Manual text message reminders with one to two patients

Manual text message reminders with more GP surgeries
Restructuring of Community Mental Health Teams resulting in increase in referrals to EPCL

Average waiting time from referral to first face to face appointment (monthly - I chart)

Number of referrals (monthly - I chart)

Need to create charts on process measures in particular text message reminders
Key Learning

• Engagement from project lead is important – without this there is the risk that the team will not meet and/or commit to testing – team did not meet at all throughout September and therefore did not study any tests they planned in August.

• Sponsor plays an important role in overcoming challenges – sponsor helped encourage the team to meet and the project lead to be more engaged.

• Team need to meet regularly to be able to do the study section of PDSAs, once a month and/or adhoc meetings wasn’t working for this team. When they met weekly/fortnightly they were able to run some great PDSAs and identify key learning.

• Team need to own the PDSA cycles and the change ideas need to come from the team.

• Team need to be able to see their data otherwise they can make assumptions about the impact the change is having.

• Qualitative feedback from the team and/or service users is important.
Your Questions
Mukesh Thakur, FRCP

- Consultant, Internal & Acute Medicine
- Hamad Medical Corporation

To reduce referrals to radiology for uncomplicated procedures by 50% by the end of Jan 2017
IA Wave 42

PDSA cycles

Mukesh Thakur
High Level Process Map: referral from ED - patient leaves the medical ward

1. **Referral**
   - ED referral to Medical team

2. **Decision to admit**
   - Medical team accept + decision to admin
   - Patient moved to Inpatient bed (or remains in ED or AMAU)

3. **1st Consultant contact**
   - 1st Consultant contact + Daily [review] (team)

4. **Supporting services**
   - Diagnostics Allied Health Support services

5. **Decision to discharge**
   - Patient moved to Home / Discharge locations

**Details:**
- **ED referral to Medical team**
- **Decision to admit**
- **Move to bed**
- **1st Consultant contact**
- **Supporting services**
- **Decision to discharge**
- **Leave ward**
Aim

- To reduce the time taken from the decision to discharge till the patient actually leaves the ward.
Discharge decision to patient leaving the ward

Process Map:

1. Decision to discharge
2. TTO + Meds ordered
3. Meds delivered
4. EMS ordered
5. Pt leaves ward
Family of Measures

- Time taken for patients to leave the ward after discharge decision (p/o)
- Delay in care of inpatients (b)
- Compliance with discharge process (o/p)
- Compliance with communication tools (o/p)
- Patient satisfaction (b/p)
- Staff satisfaction (b/p)
Project Progress

• **Current PPS:**

2, Initial cycles for team learning have begun (project planning, measurement, data collection, obtaining baseline data, study of processes, surveys, etc.)

• **Predicted PPS by WS3:**

4, Expected results achieved for major subsystems. Implementation (training, communication, etc.) has begun for the project. Project goals are 50% or more complete.
<table>
<thead>
<tr>
<th>Date: 11/09/2016</th>
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</thead>
<tbody>
<tr>
<td>PDSA Cycle #: 1</td>
</tr>
<tr>
<td>Team: M Thakur + team</td>
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**OBJECTIVE OF THIS CYCLE:**

- Collect data
- Develop a change (or modify a previous change)
- Test a change
- Implement a change
<table>
<thead>
<tr>
<th>QUESTIONS TO BE ANSWERED FROM THE DATA OBTAINED FROM THIS CYCLE:</th>
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<tbody>
<tr>
<td>1. Are there any waste in this process?</td>
</tr>
<tr>
<td>Prediction: Yes</td>
</tr>
<tr>
<td>2. Do we have a standard discharge process that we follow?</td>
</tr>
<tr>
<td>Prediction: Yes</td>
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<tr>
<td>3. Are there variations in the steps of this process?</td>
</tr>
<tr>
<td>Prediction: Yes</td>
</tr>
<tr>
<td>4. How is the planning?</td>
</tr>
<tr>
<td>Prediction: poor</td>
</tr>
<tr>
<td>5. How effective is the communication with cerner’s introduction?</td>
</tr>
<tr>
<td>Prediction: poor</td>
</tr>
</tbody>
</table>

- Are historical data available to answer the questions above?  [ ] YES  [x] NO
- Does the team agree on the predictions?  YES for question(s) ___  NO for question(s) ___
DEVELOP A PLAN TO ANSWER THE QUESTIONS:

**Who:** Charge Nurse, Case Manager, Staff Nurses, Medical Teams

**What:** Collect data for all the identified steps of the current decision to discharge till patient leaves the ward for a random sample of discharges

**Where:** 5 North 1, Female Medical Ward

**When:** For 2 weeks from 11/09 2016

The plan considered the following methods:

- Data Collection Forms
- Pareto Diagrams
- Control Charts
- Frequency Plots
- Planned Experimentation
- Survey Methods
- Simulation/Modeling
- Scatter Diagrams
- Run Charts
- Engineering Analysis

- Did you assign responsibilities for collection and analysis of data? ☑ YES ☐ NO
- Is training needed? ☐ YES ☑ NO
- Is the plan consistent with the charter? ☐ YES ☑ NO
- Can the plan be carried out on a small scale? ☐ YES ☑ NO
- Have you considered people outside the team who will be affected by this plan? ☑ YES ☐ NO
OBSERVATIONS IN CARRYING OUT THE PLAN:

- Things observed that were not part of the plan:
  1. We noticed that the Cerner was not updated even though the patient has left the ward. This means that the bed would still remain unavailable to use

- Things that went wrong during the data collection:
  1. We did not look at the time of the day and day of the week. This might have an impact on the variations observed in the data.

☐ Used a Control Chart  ☒ Identified special causes as data was collected

  1. The pharmacy remains closed from 2pm to 5pm
  2. The patient transport system gives no priority to discharges after 1pm to 5pm
Discharge decision to patient leaving

Time from Decision to discharge to patient leaving

Discharge decided time - patient leaving time median
Discharge decision to Discharge order

Patient 52  outlier data point removed (420 mins)
Discharge Order to Medication order

Time from Discharge order to Medication order

For patients requiring medication (patient entries with no time recorded removed from dataset)
Medication order to Medicines delivered

For patients requiring medication (patient entries with no time recorded removed from dataset)
Discharge order to EMS order

For patients requiring EMS transport only (patient entries with no time or zero time recorded removed from dataset)
EMS order to patient leaving

For patients requiring EMS transport only (patient entries with no time or zero time recorded removed from dataset)
ANALYSIS OF DATA:

1. Are there any waste in this process?
   
   Prediction: Yes
   
   Result: Yes

2. Do we have a standard discharge process that we follow?
   
   Prediction: Yes
   
   Result: No

3. Are there variations in the steps of this process?
   
   Prediction: Yes
   
   Result: Yes

4. How is the planning?
   
   Prediction: poor
   
   Result: No discharge planning for the discharges observed during this PDSA

5. How effective is the communication with Cerner’s introduction?
   
   Prediction: poor
   
   Result: Mostly ineffective and no use of standard visual communication aid by either teams or nurses
PDSA

COMPARE THE ANALYSIS OF THE DATA TO THE CURRENT KNOWLEDGE:

- Do the results of the cycle agree with predictions made in the planning phase? ☒ YES ☐ NO

- Under what conditions could the conclusions from this cycle be different?
  - On weekends and morning/afternoon discharges

- What are the implications of the unplanned observations and problems during the data collection?
  - These may be the bottlenecks and require further investigations

- Do the data help answer the questions posed in the plan? ☒ YES ☐ NO

SUMMARIZE THE NEW KNOWLEDGE GAINED IN THIS CYCLE:

- Flowcharts reflect what was learned ☒
- Cause and effect diagrams reflect what was learned ☐

☐ What was learned can be applied in another area. Comments:
Discharge decision to patient leaving the ward

Process Map:

1. Decision to discharge
2. Update on Cerner
3. Decision communicated to Nurse
4. TTO + Meds ordered on Cerner
5. Communicated to Nurse
6. Nurse informed Pt/Family/Sponsor/EMS
7. Meds delivered
8. EMS/Family/Sponsor/Pt leaves ward
A new focus on communication

• Analysing the root causes of communication delays/difficulties using the fishbone diagram
**ACT**

**WHAT CHANGES ARE TO BE MADE TO THE PROCESS:**

- Standardise the discharge process
- Visual communication aid with prompts

**List other organizations and people that will be affected by the changes:**

- All the medical teams
- Nursing staff on ward 5 N1
- Case managers, pharmacists

- The cause system is sufficiently understood.
- An appropriate action or changes has been developed or selected.
- The changes have been tested on a small scale.
- Change responsibilities for implementation and evaluation completed.
- Actions or changes will improve performance in the future.
- Completed an analysis of forces in the organization that will help or hinder the changes.
<table>
<thead>
<tr>
<th><strong>OBJECTIVE OF NEXT CYCLE:</strong></th>
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<tbody>
<tr>
<td>✗ Collect data</td>
</tr>
<tr>
<td>✗ Develop a change</td>
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**Description:**

1. Collect data for 1 week for all the discharges from 5N1 with date and time
2. Develop and test a standardised discharge process
3. Develop and test a visual communication aid with prompts
Your Questions
Wave 42 Workshop 2
October 10-13, 2016

Location:
CIWEM Services Ltd
106-109 Saffron Hill
London
EC1N 8QS

Faculty: Robert Lloyd, Jane Taylor
IA Grad Support: Amar Shah, James Innes