EARN MOC PART 4 CREDIT WHILE IMPROVING YOUR GLOBAL HEALTH EDUCATION PROGRAM

Sabrina Butteris | Adelaide Barnes | Nikki St. Clair | Mike Pitt | Maneesh Batra | Joanne Mendoza
HELLO
WHY QI in Ed?
Typical Approach to Research

Problem → Idea → Solution
Typical Approach to Research

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Typical Approach to Research

Problem → Idea → Solution
“If you give me a problem to solve in an hour, I would spend 55 minutes to understand the essence and characteristics of the problem, and only 5 minutes to solve it.”
QI Paradigm Shifts

Problem → Idea → Solution
Act
Plan
Study
Do
Case Study

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?

Act  Plan  Do  Study

Wakanda University
First, take Aim. . . .

Specific
Measurable
Actionable
Realistic
Time-Bound
Increase the number of pediatric residents who complete their pre-travel requirements at least 2 weeks prior to departure from 60% to 90% by December 31st, 2018.
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?

Act

Plan

Study

Do
Aim Statement

Fishbone

Process Map
Process Map

K.I.S.S.

Talk to the front line

Seek Multiple Perspectives

Who is engaging with the process?
Process Map Conventions

- Start and end point
- Activity or task
- Decision point (usually yes or no)
• Identify many causes that go into the perceived problem

• Identify which areas to address

• Get people on your team engaged who are more visual thinkers

• Prevents everyone from jumping to obvious interventions/solutions and forces the team to think about more options.
The diagram illustrates a cause and effect analysis for improving Pre-Travel activities for residents across GME.

**Team:** Wakanda

**Project:** To improve the standardization of Pre-Travel activities for residents across GME

**Problem:** There is no GME wide pre-travel expectation

**Root Causes:**
- Policy:
  - Individual programs
  - GME doesn’t have responsibility
- Procedure:
  - Lack of checklist
  - No explicit expectation for timing of checklist completion
  - Program admin are in different places
  - Travel clinic is not open late or on weekends
- Plant:
  - Program admin are in different places
- People:
  - Residents are busy
  - Residents have multiple responsibilities and are used to being told what to do and when/where
  - Not all residents going on international rotations are on global health tracks
- Environment:
  - GME office does not have easy access to travel clinic records
  - There is no current checklist to use
  - There is no current expectation to submit anything to GME pre-travel

**Outputs:**
- Need for a standardized checklist for Pre-Travel
- Clear expectations for timing of checklist completion
- Access to travel clinic records
- A comprehensive checklist to be used
- Guidelines for international rotations

This diagram helps identify areas for improvement and prioritize actions to enhance Pre-Travel planning and execution.
Key Driver Diagram

Way to keep track of the project

Important to think about the “why” not just the “what”
Improving Pre-departure Travel Clinic Utilization
Key Driver Diagram (KDD)

Project Leader(s): Nakia and Okoye
Revision Date: 03/06/2018 (v#1)

SMART Aim
To increase the number of Pediatric Residents who complete their pre-travel requirements at least 2 weeks prior to departure date from 60% to 90% by December 31st, 2018.
Popn: Any resident travelling internationally for an elective in any month of the year for any duration.

Global Aim
To improve the standardization of Pre-Travel activities for residents across GME

Key Drivers (why)
- Residents are busy
- Need for universal expectations
- Need for easy access to resources
- Improve faculty knowledge of process
- Residents get care other than in institutional travel clinic
- Need for awareness of necessity

Interventions (what)
- Development of GME-wide pre-travel checklist
- Prereavel checklist on line and provided to faculty
- Travel clinic awareness of timeline for resident travel (i.e. scheduling)
- Universal orientation of pre-travel checklist and expectations for any GH faculty
- Streamlined process for GME to access records
- Change requirements to institutional travel clinic with mandatory report back/records

Key:
- Gray shaded box = completed intervention
- Green shaded box = what we’re working on
Measures

# of residents who complete their Pre-travel checklist and submit it to GME office >2w prior to departure

# of residents departing on rotations that month

(if they submitted the checklist within 2w of departure it was considered a failure)
<table>
<thead>
<tr>
<th>Measure Type</th>
<th>Measure Name</th>
<th>Goal</th>
<th>Exclusion</th>
<th>Numerator/Denominator</th>
<th>Data Collection</th>
<th>Data Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>Measure A</td>
<td>90%</td>
<td>None</td>
<td># of patients/# of patients seen</td>
<td>Visit template</td>
<td>Monthly run chart</td>
</tr>
<tr>
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<tr>
<td>Outcome</td>
<td>Pre-travel checklist completion</td>
<td>90%</td>
<td>None</td>
<td>#residents who complete the pre-travel checklist/ #residents who participate in global health rotations</td>
<td>Review all pre-travel checklists</td>
<td>Monthly run chart</td>
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</tbody>
</table>
| Process      | Checklist item completion (are some items harder to achieve than others?) | 100% | None | N/A (using Pareto chart)
Left Y axis: frequency each checklist item is being completed
X axis: # checklist items
Right Y axis: % items being completed | Review all pre-travel checklists | Pareto chart |
| Process      | Travel clinic visit (are residents completing the travel clinic visit?) | 100% | None | #residents traveling abroad who complete the travel clinic visit/#residents who participate in global health rotations | Review EMR documented travel clinic visit | Monthly run chart |
| Balancing    | Resident track attrition rate (#) | 0%   | None       | # of residents registered by GME on track prior to checklist standardization and # post (rate of attrition) | GME records and individual program # | Yearly |
Key Drivers

PDSA

Measures
PDSA Cycles

- Allow for rapid improvement (rather than waiting for a RCT to come out and tell you what to do)
- Start SMALL – one resident, one encounter, one time
- Be flexible – understand that your intervention likely needs to change
- Remember to do the “S”
PDSA WORKSHEET

Team Name:  
Date of test:  
Overall team/project aim:  
What is the objective of the test?

PLAN
Briefly describe the test:

How will you know that the change is an improvement?

What driver does the change impact?

What do you predict will happen?

<table>
<thead>
<tr>
<th>List the tasks necessary to complete this test (what)</th>
<th>Person responsible (who)</th>
<th>When/Where</th>
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Plan for collection of data:

DO: Test the changes.

Was the cycle carried out as planned?  □ Yes  □ No

Record data and observations.

STUDY:

Did the results match your predictions?  □ Yes  □ No

Compare the result of your test to your previous performance:

What did you learn?

ACT: Decide to Adopt, Adapt, or Abandon.

☐  Adapt: Improve the change and continue testing plan.
Planned changes for next test:

☐  Adopt: Select changes to implement on a larger scale and develop an implementation plan and plan for sustainability

☐  Abandon: Discard this change idea and try a different one
PDSA WORKSHEET: Checklist #1

Team Name: Wakanda-Forever  Date: April 2018
Overall team/project aim: To improve the standardization of Pre-Travel activities for residents across OME
What is the objective of the test? To institute a pre-travel checklist and see if the resident makes an appointment with travel clinic

PLAN:
Briefly describe the test.
We will draft a pre-travel checklist and provide it to a surgical faculty member who has a resident travelling in the next 2 months.
How will you know that the change is an improvement?
The resident will complete all items on the checklist by the time they meet with GME staff to review
What driver does the change impact?
Need for easy access to resources and universal expectations
What will you predict will happen?
The resident will meet with the faculty member and receive the checklist, the resident will complete the checklist and will review with GME staff prior to departure.

- List the tasks necessary to complete this test (what) | Person responsible (who) | When | Where
1. Create checklist | Naka and Okoye | Next 2 weeks |
2. Identify resident and faculty member who will participate | Naka | Next week |
3. Provide checklist to faculty member | Naka | In 2 weeks |
4. Confirm checklist was received by resident | Naka | In 1 month |
5. Confirm that resident met with GME staff member to review checklist | Naka | In 1 month |
6. Follow up with Faculty member and resident about feedback about the utility of the checklist | Okoye | In 3 months |

Plan for collection of data: in person by Naka

DO:
Test the changes.
Was the cycle carried out as planned? X Yes □ No

Report data and observations.
It was hard to identify which surgery faculty member was assigned to mentor the resident. The resident was grateful to have the checklist and asked if it was available online. The resident successfully scheduled and attended an appointment.

STUDY:
Did the results match your predictions? X Yes □ No

Compare the result of your test to your previous performance.
N/A this is the first PDSA

What did you learn?
That the travel clinic does not have after hours or weekend hours and that makes resident's scheduling an appointment challenging.
That there are a couple of checklist items unique to each residency program e.g., a surgery resident needs to take their own supply of scrubs and gloves and iodine solution,

ACT:
Decide to Adopt, Adapt, or Abandon.
X Adapt: Improve the change and continue testing plan.
Plan/changes for next test: Update the checklist with suggestions from faculty and resident, publish the checklist online and send it to 5 next faculty for feedback. Follow up with travel clinic about scheduling appointments and getting note.

□ Adopt: Select changes to implement on a larger scale and develop an implementation plan and plan for sustainability

□ Abandon: Discard this change idea and try a different one
Resident Checklist Completion

• Annotate – every time you see a shift in your data you should have a reason why...this is where annotation becomes really important. You want to “tell the story” of your data. Good reminder to write down the date of when you do things!

• Low tech – this doesn’t have to be done in Excel!
RUN CHART RULES

1. Shift: 8 points above or below the median line
2. Trend: 6 points going up or down consecutively
3. Alternating points: zigzag pattern of at least 14 points.

Resident Checklist Completion

Baseline (Jul-Dec 17) Intervention (Jan-Dec 18)

% Residents completing travel clinic appointment >2w prior to departure

Goal Median
Resident Checklist Completion

- % Residents completing travel clinic appointment >2w prior to departure
- Goal
- Median

Baseline (Jul-Dec 17) vs. Intervention (Jan-Dec 18)
1. **Shift:** 8 points above or below the median line.
2. **Trend:** 6 points going up or down consecutively.
3. **Alternating points:** Zigzag pattern of at least 14 points.
Residents completing their checklist >2w prior to departure

Published new GME Predeparture checklist

Travel Clinic opens on late spot/hold for residents

2017 "Baseline"

2018 "Intervention"
Will post these resources and example at PedsGlobalHealthEd.com