**PDSA Cycle [1]**

**Aim:** what are you trying to accomplish?

Prototype test of medication wizard

**Plan:** what will your test be?

Ask an F1 who has not seen this software to use the prototype Medication Input Wizard to enter the medications information on a TTO

**Prediction:** what do you think will happen as a result of your test?

I predict they will find the tool easy to use, and efficient

**Do:** what happened when you carried out your test?

The F1 used the tool, and reported that it was faster to use than the current system. However, they did report that the design, which showed two text boxes at all times (one for input medication, the other for a change to the medication if needed) wasn’t entirely clear.

**Study:** how did the results of your test compare with predictions?

The speed aspect was as expected, and I understood that having several text boxes available when they weren’t necessarily needed was cluttered and potentially confusing

**Act:** how will you change your previous test in light of what you have learned?

I changed the code to only display one text box at all times (to input a medication), and reveal the text box for the changed medication only if the options increase/decrease

**PDSA Cycle [2]**

**Aim:** what are you trying to accomplish?

Evolutionary prototype testing of medication wizard

**Plan:** what will your test be?

Ask an F1 who has not seen this software to use the prototype Medication Input Wizard to enter the medications information on a TTO

Demonstrate the Medication Input Wizard to the Divisional Director of Medicine to ask for feedback and suggestions

**Prediction:** what do you think will happen as a result of your test?

I predict they will find the tool easy to use, and efficient

**Do:** what happened when you carried out your test?

The F1 used the tool, and reported that it was faster to use than the current system.

The updated design (with text box for new medication only appearing if needed) made things easier to understand.

The Divisional Director of Medicine asked if we could add a text box for Reason that medication has changed.

**Study:** how did the results of your test compare with predictions?

The speed aspect was as expected, and the new design was easier to understand.

The request for a separate text box for Reason for medication change was a logical one, that would require some more work.

**Act:** how will you change your previous test in light of what you have learned?

I will create a text box for Reason for Medication change, which will appear if a medication has been started, stopped, or dose increased/decreased.

**PDSA Cycle [3]**

**Aim:** what are you trying to accomplish?

Evolutionary Prototype test of medication wizard

Test of Follow Up Arrangements Guide

**Plan:** what will your test be?

Ask an F1 who has not seen this software to use the prototype Medication Input Wizard to enter the medications information on a TTO

Ask an F1 to look at the Follow-Up Arrangements guide, and ask if they find it useful.

I will email the content of the Follow-Up Arrangements guide to all F1 Doctors in the Trust, to ask if there is anything on the guide they would like to add, or edit.

**Prediction:** what do you think will happen as a result of your test?

I predict they will find the medication input wizard easy to use, and efficient

I predict that the Follow-Up Arrangements guide will be deemed helpful, particularly for new Doctors to the Trust.

**Do:** what happened when you carried out your test?

The F1 used the tool, and reported that it was faster to use than the current system.

A bug was discovered due to the version of Internet Explorer being used on the hospital computer (Internet Explorer 6). This affected the javascript function when a medication is increased or decreased, when selecting the characters relating to the dose (e.g. if you input “digoxin 62.5 micrograms PO od”, the characters “62.5” will be selected) so that the user can immediately type in a new dose, without having to select and delete characters manually.

The Follow-Up Arrangements guide was met with approval, and some suggestions for additional procedures.

**Study:** how did the results of your test compare with predictions?

The speed and design of the Medication Input Wizard was now satisfactory, with no further suggestions to improve it. The Reason for medication changes was working as designed.

The bug discovered would require some javascript code changes.

**Act:** how will you change your previous test in light of what you have learned?

The javascript was amended to solve the bug discovered.

The Follow-Up Arrangements guide was amended as suggested.

**PDSA Cycle [4]**

**Aim:** what are you trying to accomplish?

Evolutionary Prototype test of medication wizard

Test of Follow Up Arrangements Guide

**Plan:** what will your test be?

Ask several F1s who have not seen this software to use the prototype Medication Input Wizard to enter the medications information on a TTO

Ask F1s to look at the Follow-Up Arrangements guide, and ask if they find it useful and have any suggestions to add/amend info.

**Prediction:** what do you think will happen as a result of your test?

I predict they will find the medication input wizard easy to use, and efficient

I predict the Follow-Up Arrangements guide will work as expected, with relevant info.

**Do:** what happened when you carried out your test?

The F1s used the tool, and reported that it was faster to use than the current system.

They noted the warning messages that appear when entering Controlled Drugs, and Warfarin, and thought they were useful.

The Follow-Up Arrangements guide was thought to be useful, particularly when in a new job, and unfamiliar with how to order certain tests.

**Study:** how did the results of your test compare with predictions?

This feedback along with my own testing showed we were ready to implement the changes in Live.

**Act:** how will you change your previous test in light of what you have learned?

No further changes are indicated, just full end to end testing of the changes

**PDSA Cycle [5]**

**Aim:** what are you trying to accomplish?

Evolutionary Prototype test of medication wizard

Test of Follow Up Arrangements Guide

Full End to End Regression testing of TTO writing system

**Plan:** what will your test be?

Do full testing of Development Environment with changes applied. Make sure that no functionality has been adversely affected by implementing these changes. Ensure that all other areas work as before, and there are no bugs with changes.

**Prediction:** what do you think will happen as a result of your test?

I predict both developments (Medication Wizard, Follow-Up Arrangements guide) will work as expected, and no bugs will have been introduced.

**Do:** what happened when you carried out your test?

Full testing over several days, covering many scenarios showed that there were no bugs as a result of these changes.

**Study:** how did the results of your test compare with predictions?

As predicted.

**Act:** how will you change your previous test in light of what you have learned?

Ready to go Live.