## Stoke visit on 18/10/2019

## Meeting 1: Customization for PICANET

This meeting took place in a seminar room on Ward 215 (PICU). The meeting was attended by 2 consultants (Joh Alexander and another consultant who attended for a few minutes then had to leave and came back toward the end of the meeting) and 1 audit coordinator (Kelly Mcardle) attended the meeting.

### Meeting highlights:

ME started by explaining where the development of QD stands at the moment and that the purpose of this meeting is to collect feedback on ways to make it more usable and useful for them and identify any barriers or challenges to its use.

Participants explained that use of QD is most critical for Kelly as she wants to use it to enter data into a database that is collected by NHS England for billing (I believe it is called SPC dashboard) every 3 months. Data is submitted manually in an aggregated form to this database.

The deadline for submitting the data on this database is approaching and this is why Kelly is very keen on using QD to upload the most up-to-date information by viewing it on QD. She said that ***this process used to take her up to two hours and now with the use of QD, she is able to do this within 10 minutes.***

Another database that was mentioned is the PCCMDS which is also submitted manually on the portal of Picanet Web (used to be separate but now hosted on the Picanet portal). Unlike the NHS England dataset which is reported in an aggregated format, the PCCMDS records daily intervention data at the patient level.

### Discussion of individual QualCards:

* Mortality:
  + Kelly mentioned that viewing deaths in the month of admission doesn’t make sense to her. There was no comment on that from the consultants. Kelly and I had a follow-up discussion about this later in her office and we came to agree that in order to show her deaths in the months in which they occurred, we may need to show the deaths on a separate chart from total admissions because it will be using a different variable to calculate the x-axis. She accepted this suggestion as long as she gets to see the deaths in the corresponding months in which they occurred.
  + **ACTION**: ME to look into the separation of mortality and admission from the config file).
* Bed days and extubation:
  + This took most of the discussion. The daily activity table of Picanet keeps record of the date of a ventilation event as was pointed out by John. He mentioned that some bigger sites may not record the daily activity very accurately depending on demand and resources available but since they have someone who is dedicated for this (Kelly) and they are a relatively small unit with less pressure, they are able to record these daily activities with high accuracy.
  + He asked Kelly how often she would be willing to upload data into QD in order to maintain an up-to-date dashboard. Kelly agreed that she’s happy to do so on a weekly basis (even lightly mentioned a daily basis). This issue was crucial for John as he is very keep on understanding what he refers to as “rare events”. These events are usually regarded as a rate so for accidental extubation, for example, he wants to know a ratio with the denominator being the number of ventilation days in a months and the numerator the number of accidental extubation (no bed days).
  + He also mentioned the idea of run-charts to show how long it has been since the last rare event occurred. I explained that we have frozen QD at this point so it is difficult to introduce a new visualization technique, but I can look into adding a textual message on the Bed days and extubation card that shows time since last event. John welcomed this suggestion.
  + **ACTION**: ME modified the R script on-site to read from the daily interventions table and record the date when ventilation started. Next step is to look into ways of reflecting this new data piece into the dashboard.
* An additional card for ventilation days: Kelly suggested that a card showing total bed days and total ventilation days would be helpful. It would be essentially showing the total bed days while breaking it down to ventilation and non-ventilation days. We could also have a category for noninvasive ventilation days in this card. This is in-line with the suggestion by Catherine and Elizabeth in Leeds.
  + **ACTION**: ME to look into the possibility of adding this new card.
* 48-hour readmission:
  + Similar to the bed days card, John explained that 48-hour readmission is a rare event. He doesn’t mind being shown the total number of such events on a monthly basis but prefers to see the time elapsed since the last event, as this gives him a better indication of how things are running at the moment in the unit and helps him motivate his co-workers for QI by saying “alright our last extubation was a week ago, let’s not have an extubation this week”.
  + **ACTION**: ME to look into adding a text message on the QualCards for bed days and 48h readmission that display the time since the last event.

## Meeting 2: Kelly + Adrian + Luke (IT)

This meeting took place in Kelly’s office in the PICU. Adrian and Luke were very kind to come to her office and so we had a productive time using 3 computers: Kelly’s computer + 2 of her colleagues’ computers.

Luke used one of the computers to setup shared access to the server for both Kelly and Adrian. I have adjusted the R script to dump the generated data from their computers directly to the QualDash server. Now every time they run the script, they will not need to perform any further steps and IT won’t be involved in the data upload process for QD. I explained to Luke that I may need his help over the next couple of month to copy files to the server. He said this is fine.

Adrian had some issues with the R script. These were due to a modified field name in his new data export. We spotted the issue together and fixed it. He mentioned one customization issue about viewing data grouped by consultant and I said this can be added by modifying the tabs in the pie subview. He said he will check for this and follow it up with me. In the end, Adrian said he is very optimistic about use of QD.

Both Picanet and MINAP R scripts were tested for uploading new data to the server from Kelly’s computer and were successful.

This second meeting was more technical in nature and generally had little discussion about data analysis and dashboard customization.