Electronic Printed Ward Round Proformas: Freeing Up Doctors' Time

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ABSTRACT

The role of a junior doctor involves preparing for the morning ward round. At a time when there are gaps on rotas and doctors' time is more stretched, this can be a source of significant delay and thus a loss of working time. We therefore looked at ways in which we could make the ward round a more efficient place by introducing specific electronic, printed ward round proformas. We used the average time taken to write proformas per patient and the average time taken per patient on the ward round. This would then enable us to make fair comparisons with future changes that were made using the plan, do, study, and act principles of quality improvement. Our baseline measurement found that the average time taken to write up the proforma for each patient was 1 minute 9 seconds and that the average time taken per patient on the ward round was 8 minutes 30 seconds. With the changes we made during our 3 PDSA cycles and the implementation of an electronic, printed ward round proforma, we found that we were able to reduce the average time spent per patient on the ward round to 6 minutes 32 seconds, an improvement of 1 min 58 seconds per patient. The project has thus enabled us to reduce the time taken per patient during the ward round. This improved efficiency will enable patients to be identified earlier for discharge. It will also aid in freeing up the time of junior doctors, allowing them to complete discharge letters sooner, order investigations earlier and enable them to complete their allocated tasks within contracted hours.

PROBLEM

At Basildon and Thurrock University Hospitals Trust, there are many roles the junior doctor has that includes preparing for the morning ward round. In addition to this, junior doctors are also expected to review any unwell patients that have been seen overnight by the on call team and to address any concerns that the nursing staff may have. They may also be required to write discharge letters for patients who have been identified as being able to go home that morning. This can therefore mean that there is less of a priority for preparing for the ward round, with notes written during the round itself. At a time when there are gaps on rotas and doctors' time is more stretched, this can be a source of significant delay and thus a loss of working time. We therefore looked at ways in which we could make the ward round a more efficient place by trying to improve the time taken to prepare the ward round proforma in a 3 month period by changing from a hand written version to an electronic system.

BACKGROUND

A joint statement released in October 2012 by the RCP and RCN entitled "Ward Rounds in Medicine Principles for Best Practice" called for the medical ward round (WR) to become the cornerstone of inpatient care.[1] The statement describes "a clear paucity of quality indicators and evidence guiding best practice for medical ward rounds." We therefore have to continuously evaluate and improve our ward rounds, especially in the face of advances in information technology that is rapidly changing the way the hospital functions.

Basildon Hospital is a medium sized district general hospital in South West Essex, with a work force of 4,500 people. It serves a population of over 400,000 people, having treated 77,500 inpatients last year.[2] Given this high turnover of patients, improved efficiency during the ward round will enable patients to be identified earlier for discharge which we hope will enable a better flow of patients through the hospital, thus reducing bed waiting times.[3] It will also aid in freeing up the time of junior doctors, allowing them to complete discharge letters sooner, order investigations earlier and enable them to complete their allocated tasks within contracted hours.

MEASUREMENT

The problem of inefficiency due to ward round proformas has been brought up by many junior doctors at our hospital. These proformas are used to document the presenting complaint and diagnosis of the patient,

their medical co-morbidities as well as any new investigation results and clinical observations. They are also used to document any discussion had with the patient as well as the clinical examination. These proformas are also a way of devising a management plan that is easily accessible to other members of the healthcare team. We therefore looked to measure the time it currently took for juniors to write out proformas with the required information prior to the ward round beginning and the subsequent duration of the round.

There are many different factors that contribute to the length of the ward. These include:

▶ Number of Patients
▶ Grade of Doctor leading the ward round

As the number of patients varies day to day on the ward round, we used the average time taken to write proformas per patient before commencing the ward round and the average time taken per patient on the ward round after. This would then enable us to make fair comparisons with future changes that were made using the plan, do, study, and act principles of quality improvement.

Our baseline measurement was seeing 6 patients every day on Orsett Ward over 5 days on a Consultant led ward round. In the ward round proforma current format, which involves writing patient details, presenting problems and past medical history on a pre printed ward round proforma sheet during the ward round, we found that the average time taken to write up the proforma for each patient was 1 minute 9 seconds and that the average time taken per patient on the ward round was 8 minutes 30 seconds.

DESIGN

Having analysed our baseline measurement and receiving feedback from junior doctors, we identified that one area that led to a delay in time taken per patient on the ward round was writing up the proforma during the ward round. It was therefore suggested that junior doctors write up the proforma prior to the commencement of the ward round.

Another mooted suggestion was to link the electronic clinical portal that contains all admitted patient's presenting symptoms and medical history with a function to print in the ward round proforma format, allowing all the patient's current medical problems and past medical history to therefore be printed from a daily updated patient list.

STRATEGY

We measured the time taken each day to prepare the ward round proformas before starting the round. We also measured the number of patients seen during each ward round and then added together both these times before dividing by the total number of patients seen to establish the mean time taken to see each patient. We aimed to collect this data over several PDSA cycles that

would last one week each. It was hoped that by using these measures, we would clearly be able to see a reduction in time taken to see each patient, thus making the ward round more efficient.

Our baseline was measured by documenting the time the ward round started and the time that it finished with the ward round proformas being written during the round. The number of patients was also noted and the average time per patient calculated by dividing the total time of the ward round by the number of patients seen.

During PDSA Cycle one, the ward round proformas were written before the ward round had started. Therefore the total time to write all the proformas was documented. The time that the ward round started and finished was also noted and added to the total time taken to write the proformas. The average time per patient was then calculated as previously by dividing this overall time by the number of patients seen.

PDSA Cycles Two and Three followed similar data collection methods to PDSA Cycle one. However, during these cycles the proformas were being printed. PDSA Cycle two was with the proformas being printed separately per patient and the time taken to print all proformas whilst PDSA cycle three involved printing all the proformas together at once and measuring the time taken to do this.

Our data was recorded using a run chart tool which allowed us to measure the progress of our intervention and whether our changes made any significant difference (see supplemental material).

RESULTS

PDSA cycle 1 (30 May 2016 to 3 June 2016) The lesson we learnt from the baseline measurement was that time was being lost during the ward round looking for notes of patients and then writing up their current medical problems and previous medical history. We therefore introduced writing up the proformas before the start of the ward round and re-evaluated the time taken per proforma and per patient on the ward round. During this cycle there were 5 patients under our care on Orsett Ward. We found, however, that our change had little impact with the time taken to write proformas per patient increasing by 13 seconds from 1 minute 9 seconds to 1 minute 22 seconds, although the average time per patient on the ward round improved marginally by 4 seconds being 8 minutes 30 seconds at baseline to 8 minutes 26 seconds at PDSA cyle 1.

PDSA cycle 2 (27 June 2016 to 1 July 2016) Ways in which we could improve the efficiency of the ward round were re-evaluated after cycle 1. It was deemed too long a process to write up the ward round proforma during or before the ward round and that valuable time of doctors was therefore being lost. A meeting was thus had with the information technology department at the hospital, who manage the central software system of the trust. Different possibilities of how we could adapt the

current ward round proforma to include current patient information from the Electronic Clinic Portal were discussed and it was suggested that the proforma be linked to the clinical portal with information that has already been inputted and updated on a daily basis, that can then be printed off without the need to add any further information. We therefore predicted that by doing this, the time to create proformas would be reduced. A print function was thus enabled on the clinical portal that allowed doctors to print the ward round proforma that included all patient details, presenting complaint and past medical history. It was also able to include any important investigations and results that had been inputted by the medical team. During this cycle there were 7 patients under our care on Orsett Ward. As hypothesised, we found that the efficiency of the ward round had greatly improved, with the time taken to print the proforma per patient as 8 seconds and the average time per patient on the ward round being 6 minutes 47 seconds, an improvement of nearly a minute per patient.

PDSA cycle 3 (11 July 2016 to 15 July 2016) The introduction of the printed ward round proforma was well received by the doctors involved in its pilot with ward rounds becoming more efficient. It was found from a group discussion with them that one improvement that could immediately be made was to add a 'print all proformas' button on the clinical portal which would mean that proformas would not then need to be individually printed. Again, we hypothesised that this would further improve ward round efficiency, even if only by a few seconds. During this cycle there were again 7 patients under our care on Orsett Ward. The time taken to print all the proformas was 25 seconds in total, therefore on average being 3.57 seconds per patient. This also led to a further reduction in the average time spent per patient on the ward round being 6 minutes 32 seconds, a further reduction of 15 seconds from cycle 2 (See supplementary - Run Chart of Ward Round Proforma Data).

LESSONS AND LIMITATIONS

One of the main limitations of our project is the small sample size that we had when collecting data. A larger sample size would have made the data more reliable, however, we were not able to do this as the software was not ready to be rolled out on a larger scale. It would have also required time to train many of the juniors as to how the system worked and we felt it an inappropriate use of resources as the proforma was still being developed and not finalised.

Another limitation of our project was that the data collected was based on patients from one ward, the majority of whom were medium to long term patients. The time we therefore saved is based on this and so we have assumed that this will be reflective for patients on other wards. However, this will vary depending on the specialty of the ward and the complexity of cases that the ward will thus have. It will also vary according to the turnover of patients on that ward, for example the Acute Medical Admissions Unit or the Medical Short Stay ward who are likely to have higher turnover of patients.

CONCLUSION

The project team was able to identify areas within the ward round that could become more efficient. Through discussion, we were able to develop an electronic ward round proforma that encompassed these ideas. The project has enabled us to reduce the time taken per patient during the ward round, freeing up junior members of the team to complete other jobs earlier, such as booking investigations and writing discharge summaries. To sustain the continued improvement and to ensure the project continues to grow within the hospital, the ward round proforma is set to go live to several other medical and surgical wards. Junior doctors have been taught about their use and function and it is hoped that their input will lead to further improvements in the future, with ongoing monitoring set to occur once per 4 month junior doctor rotation. We also intend to have regular feedback sessions with junior doctors to discuss any positive or negative findings that they may have had with the proforma and software.

REFERENCES

1. Royal College of Physicians, Royal College of Nursing. *Ward rounds in medicine: principles for best practice.* London: RCP, 2012.
2. Basildon and Thurrock University Hospitals NHS Foundation Trust Annual Report and Accounts for the year ended 31 March 2014.
3. Appleby J, Thompson J and Jabbal J. *The King's Fund Quality Monitoring Report 18.* February 2016.