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BACKGROUND

The introduction of electronic medicines ordering (EMO) has been a gradual process at the QE hospital (QE), Gateshead. Before this wards were required to handwrite a temporary stock order and deliver it to the inpatient dispensary, if they wanted to order medicines. In summary, a slow paper based process; consequently it was error-prone due to factors such as handwriting which reduced the safety and effectiveness of medicines ordering. The aim of introducing EMO was to counteract the current issues of medicines ordering by producing a fast and efficient method of ordering medicines for inpatients. At the QE a system called JAC was used, allowing users to prescribe, monitor and order medications while also aiding in the administration of medicines to inpatients. Most recently EMO was introduced onto the admissions unit and select medical wards at the QE, the purpose of this audit was to assess whether the new system resulted in a more effective, safe and fast way of ordering medicines to wards which hopefully would result in an improved level of patient centred care.



OBJECTIVES

- To measure the average time taken between a medicine being ordered on a ward and a prescription being printed in the inpatient dispensary
- Explore nurse's experience around medicines ordering at the QE – Pre and Post EMO introduction
- Overall to assess whether EMO resulted in a more effective, safe and fast way of ordering medicines to wards, hopefully resulting in an improved level of patient centred care

METHOD

Using quantitative and qualitative measures the medicines ordering at the QE was analysed to determine if EMO was as effective as suggested (1). Surveys were distributed across the admissions unit as well as some of the medical wards to gather information on how the nurses felt pre and post introduction of EMO. Our EMO system also allowed data to be collated to show the average time it between a medicine being ordered on a ward to a physical prescription being printed in the inpatient dispensary.

RESULTS

Our EMO system allowed for the time between a nurse ordering a medication on the ward and a physical prescription being printed in the inpatient dispensary. This data was collated from the admissions unit and the medical wards using EMO, resulting in an average time difference of **26 minutes and 8 seconds**. Despite it being difficult to measure the time difference between temporary stock orders being written and sent to the pharmacy via the pod system to compare against, it does set a reasonable bench mark to begin measuring dispensary turnaround times.

RESULTS

Eleven nurses across the admissions unit and select medical wards were distributed surveys to assess whether the introduction of EMO had been successful in creating a more efficient medicines ordering system.

Analysis showed that 10 of 11 nurses asked, 92%, believed electronic ordering has been a more efficient method of medicines ordering.



NURSES EXPERIENCE

Nurses were given the opportunity to provide feedback on their experience of the past and present medicines ordering system.

Some responses are shown in the graphics below:

Since its introduction, has electronic ordering been a more efficient way of ordering medicines?

"It's a far more efficient way to order medicines for patients, especially during meds rounds"

"The electronic system has been good to quickly order medication, but I don't feel it comes any quicker than ordering it on a temp stock order form"

Is the current system of handwriting temporary stock orders for patient's medication is an efficient way of ordering medicines?

"It's time consuming, there is an increased chance of mistakes and we can never find temp stock book"

CONCLUSIONS

Unfortunately at present at the QE we have no set KPI for the time taken for a JAC order to be fully processed, which is certainly something that should be explored in the future. Despite this, JAC orders are on average being printed in under 30 minutes of being ordered and 92% of the nurses surveyed believe EMO has improved the medicines ordering system at the QE. The overall picture from this project suggests that the introduction of EMO, albeit with some flaws, does allow for a more streamlined and efficient way of ordering medicines within an admissions and a wider hospital setting. With Gateshead Health NHS Trust being a Fast Following Trust this is a highly promising conclusion showing that the Trust is looking well equipped to move into a fully digital healthcare setting.

LIMITATIONS & FURTHER WORK

This service improvement certainly had areas for improvement, such as physical distribution of the surveys onto an admissions unit during a highly stressful time. Therefore, for future improvements alternative ways of survey distribution should be explored. Also, during quantitative data collection any electronic medicines orders after 5pm were excluded. Currently within the dispensary the time between the order being printed, dispensed and then checked is unable to be tracked therefore this should be the next area of investigation.

REFERENCES

- Vermeulen, K., van Doormaal, J., Zaal, R., Mol, P., Lenderink, A., Haaijer-Ruskamp, F., Kosterink, J. and van den Bemt, P., 2014. Cost-effectiveness of an electronic medication ordering system (CPOE/CDSS) in hospitalized patients. *International Journal of Medical Informatics*, [online] 83(8), pp.572-580. Available at: <<https://www.sciencedirect.com/science/article/abs/pii/S1386505614000963>> [Accessed 9 March 2021].