

A QUALITY IMPROVEMENT PROJECT ASSESSING THE TIMELY ADMINISTRATION OF ANTI-PARKINSONIAN MEDICATIONS FOLLOWING AN ACUTE ADMISSION



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INTRODUCTION

Parkinson's disease (PD) is the fastest growing neurological condition in the world and currently has no cure¹. In the UK, there are roughly 153,000 people living with PD, with roughly 18,000 people being diagnosed each year¹. It is reported that patients who have delayed administration of their medications may experience an immediate increase in their symptoms². For example, by delaying medications by more than 1 hour, patients may have worsening tremors, increased rigidity, loss of balance, confusion, agitation and difficult communicating².

The National Institute for Health and Care Excellence (NICE) recognises the importance of administering anti-parkinsonian medications on time and recommends a delay of no more than 30 minutes. Being admitted to hospital, both acutely and electively, poses a particular risk to these patients with the potential of missing doses, being nil by mouth (NBM), and having medication interactions. Therefore, at the Queen Elizabeth Hospital, we created a project to analyse our current adherence to standards, reflect on areas of improvement and implement strategies to both improve our safety and quality of care for these patients.

AIMS AND OBJECTIVES

The aims of this audit, and subsequent quality improvement project, were to determine whether the admission and care of patients with Parkinson's Disease is meeting the standards set by trust guidelines of prescribing and administering their anti-parkinsonian medications in the appropriate timeframe within the Emergency Department. With aims to further improve patient care in accordance with national guidance.

The objectives of this were to further quantify any delays in medication administration, establish causes of these delays and assess the accuracy of the prescription on EPMA and paper drug charts.

METHODOLOGY

We audited a sample of patients who were admitted to hospital through the emergency department, with a diagnosis of Parkinson's disease and currently receiving anti-parkinsonian medications; between September – November 2023 in cycle one and April – August 2024 in cycle two. Overall, 65 notes were studied between the two cycles, each being examined against the audit tool created. The audit tool was developed following the criteria set for the project which was derived from the standards of the QEHKL Trust Guidelines and the PHE / NICE expectations. Two reviewers evaluated individual patient notes, EPMA records, EDIS notes and System One records and collated a database record which detailed the audit criteria.

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TABLE 1: AUDITABLE CRITERIA / STANDARDS AND RESULTS

CRITERIA	TARGET (%)	CYCLE 1 RESULTS (%)	CYCLE 2 RESULTS (%)	EXCEPTIONS
Patients with Parkinson's Disease admitted to the emergency department should have their anti-parkinsonian medications administered on-time and not delayed for more than 30 minutes.	100	21.0%	65%	None
Patients with Parkinson's Disease admitted to the emergency department should have their medications prescribed correctly on EPMA, with regards to type of medication, dosage, timing and frequency.	100	58.6%	88.5%	None

RESULTS

The results from audit cycle 1 showed a poor compliance of 21% of patients receiving their anti-parkinsonian medications within the 30 minutes recommendation from NICE. Furthermore, only 58.6% of anti-parkinsonian medications were prescribed correctly on EPMA with regards to type of medication, dosage, timing and frequency. After cycle one, strategies were implemented to improve these criteria and compliance, including regular teaching sessions to doctors and nurses across departments, new mandatory training for Parkinson's disease and medication, addition of 'give it on time' stickers to be placed on notes / drug charts, posters displayed in clerking areas (ED, medicine, SDEC and SAU), liaison with pharmacy for a stock of common anti-parkinsonian medications to be kept in ED and new guidelines published to the intranet for reference on Parkinson's disease and anti-parkinsonian medication administration.

Following these implementations and presentation at grand rounds, the local clinical audit symposium and departmental meetings the criteria were re-audited. Results of audit cycle 2 showed an improved compliance of 65% of patients receiving their medications on time and within 30 minutes, and 88.5% of medications being correctly prescribed on EPMA / drug charts. Another positive shown from the data included 36% patients and relatives being empowered to self-administer their anti-parkinsonian medications which was detailed in the new guidelines published.

CONCLUSIONS

This audit aimed to assess the compliance of the prescribing and administering anti-parkinsonian medications in the emergency department at Queen Elizabeth Hospital, against the recommendation from NICE of the medication not being delayed by more than 30 minutes. Causes for the delays included missed doses due to delayed prescriptions, lack of prescriptions from the ED doctors on paper drug charts, delayed admission clerking from the acute medics / surgeons, prescription errors, unawareness of the importance of giving the medication on time and drug unavailability.

The second cycle overall found better compliance with 88.5% of medications prescribed correctly, 65% compliance of timely administration, an improved 20.6% of patients having their anti-parkinsonian medications prescribed on their paper drug charts in ED, 8.3% of patients having alternative patches prescribed whilst NBM, and 36% of patients administering their medication.

FUTURE RECOMMENDATIONS

Since cycle 2 of the audit, we have continued the regular teaching of new rotating cohorts of doctors and nurses on the importance of anti-parkinsonian medications and signposted to the updated guidelines on the intranet and stocks of common anti-parkinsonian medications in ED. Next, we will be conducting cycle 3 of the audit in April 2025 to reflect on the sustainability of the implementations initiated. In the future, we will continue the progress of conducting a full quality improvement project to ensure the ongoing safety of our patients and improved quality of care.

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