

Research Round Up- Challenges in Prescribing Practice

Introduction

The last research round up provided you with an overview of articles looking at prescribing practices in hypertension. This month we look at some articles which report on barriers and challenges in prescribing practice. The first article looks at error reporting in primary care and the identified barriers and facilitators to reporting. The second looks at the complexities of prescribing for Parkinson's disease in an unplanned care setting. The final article looks at strategies to improve prescribing of anticholinergic drugs in an elderly population.

Exploration of prescribing error reporting across primary care: a qualitative study

N. Hall, K. Bullen, J. Sherwood, N. Wake, S. Wilkes, & G. Donovan (2022) *Exploration of prescribing error reporting across primary care: a qualitative study* BMJ Open: 12: e050283

<https://bmjopen.bmj.com/content/bmjopen/12/1/e050283.full.pdf>

This piece of original research published in the BMJ Open online in January 2022, sought to explore the barriers to and facilitators of reporting of detected prescribing errors in a primary care setting. This setting was to include General Practices, community pharmacies and other community care settings in the Northeast region of England with a view to generating a greater understanding of factors that may influence error reporting behaviours in this sector.

Data was collected using semi-structured interviews which were qualitative in nature and conducted either face-to-face or where this was not possible, over the telephone.

Recruitment was through professional bodies and local, regional, and national networks as well as through wider promotional activities, such as electronic newsletters and mailings and social media. This resulted in 25 participants being interviewed from a range of backgrounds and organisations in the primary care setting. The topics discussed were informed by the COM-B model of behaviour, based on evidence that a person is more likely to enact a behaviour when they have the capability and opportunity to engage in the behaviour and there is a greater motivation to enact that behaviour than any others (Michie, van Stralen & West 2011). All of those who were interviewed gave examples of prescribing errors they had encountered and their experiences of reporting systems and events. Influences described by participants were mapped to constructs from the COM-B model (these being capability, opportunity, and motivation) and were separated into barriers and facilitators where identified. A range of influences were identified by the participants and categorised by the researchers under nature of prescribing, priorities for reporting and infrastructure. These included barriers and facilitators.

Barriers to reporting were felt to include fear of reprisal, stigma, and blame (including medico legal aspects) as well as the belief this would negatively impact on working relationships and confidence. Facilitators described included the necessity to uphold professional standards and the belief that reporting errors can have positive consequences and improve confidence and self-efficacy. In general however, the findings suggest that there is a lack of consistency in how, when and by whom, prescribing errors are reported across primary care.

The authors conclude that further research is required in the area of prescribing error reporting to identify cross-organisational and interprofessional information and how best to facilitate a more collaborative approach to reporting and learning. They suggest the potential for an increased role of community pharmacy in prescribing error reporting to support future learning.

Parkinson's Disease Medication Prescribing and Administration During Unplanned Hospital Admissions

G. Richard, A. Redmond, M. Penugonda, D. Bradley (2022) *Parkinson's Disease Medication Prescribing and Administration During Unplanned Hospital Admissions* *Movement Disorders* 9(3): 334–339.

https://movementdisorders.onlinelibrary.wiley.com/doi/epdf/10.1002/mdc3.13408?saml_referrer

This research article published online in January 2022 in the journal of *Movement Disorders*, clinical practice, aimed to look at the accuracy of prescribing and administration of time-critical medication during hospital admissions and stays that were unplanned. Parkinson's disease is a common neurodegenerative condition and the importance of correct and timely medication use is well known. The medication used is primarily drugs which influence the levels of dopamine transmission, examples being supplementing the dopamine pathway with the precursor in the form of levodopa or by use of dopamine agonist preparations. For both of these types of medication in Parkinson's disease, correct prescribing and administration is vital to avoid an increase in morbidity and mortality during hospital admission and beyond.

The researchers in this study included patients with Parkinson's disease and being administered these time critical medications during an unplanned hospital admission. They included patients at a single hospital site in Ireland between November 2018 and March 2020 who met the inclusion criteria and retrieved data from inpatient electronic records. This data was then reconciled to assess accuracy of prescribing and administration. For prescribing accuracy, pharmacist records were accessed and compared. With regard to administration, time given related to time due was assessed.

The results of 70 different patients over 102 admission episodes were included for analysis. This included 47 men and 23 women with an average age of 78.7 years on an average of 1.6 time-critical medications, with levodopa being present in 99% of cases and dopamine agonists in 9.9%. Administration of these medications occurred on average 4.1 times per day. It was found that medication reconciliation on admission by pharmacists occurred in 94% of cases. It was noted that time-critical medications were prescribed correctly on admission in 50% of the 102 admission episodes. Analysis of medication prescribing revealed that errors in medication timing were most common (31.6%) prescribing issue.

Of all doses recorded as being administered to patients, 51.7% were administered >30 minutes late, and 29.7% of doses were administered >1 hour late. Further analysis of these late administration events revealed that female sex, being on multiple medications, and more frequent administration times were significantly associated with the rate of medication time administration error.

The authors conclude that this study demonstrates that there are high rates of inaccurate prescribing and inaccurate administration of time-sensitive medication in this cohort of patients with PD admitted acutely to this single hospital site and that this is associated with a longer length of hospital stay. They recommend an increased need for awareness of these time-critical medications and their prescribing and administration requirements and that a multidisciplinary and collaborative approach may hold the key to improving medication management in this group of patients.

Effectiveness of Interventions to Improve the Anticholinergic Prescribing Practice in Older Adults: A Systematic Review

M. S. Salahudeen, A. Alfahmi, A. Farooq, M. Akhtar, S. Ajaz, S. Alotaibi, M. Faiz, & S. Ali (2022) *Effectiveness of Interventions to Improve the Anticholinergic Prescribing Practice in Older Adults: A Systematic Review* 11, 714.

<https://www.mdpi.com/2077-0383/11/3/714>

This publication about anticholinergic medication prescribing effectiveness was published in the *Journal of Clinical Medicine* in January 2022. The purpose was to retrieve and document the available and used interventions aimed at reducing anticholinergic prescribing in older adults. It also sought to assess the current evidence surrounding the quality of single and combined interventions. Prescribing and medication use in the elderly population has its challenges. As a rule, they are more prone to the incidence and occurrence of side effects, adverse effects, and interactions. It is known that anticholinergic medications show poorer outcomes and increased drug burden in this population, and this was a driver for this review. The authors conducted a systematic review of the existing literature using PRISMA Guidelines (Moher et al 2009) with rigorous screening, selection and inclusion and exclusion criteria and conducted quality appraisal. They searched literature published between 1990 and 2021 examining the effect of interventions in older people aimed at improving compliance with anticholinergic prescribing guidelines. The primary outcome of interest was to find the effectiveness of interventions that enhance the anticholinergic prescribing practice in older adults. This process resulted in the inclusion of 23 studies in the review.

The review found only single-component interventions to reduce anticholinergic prescribing errors in older people. It was noted that in nearly half of the studies (n = 11), pharmacists implemented interventions without collaboration. A further factor was that medication review (43%) and education provision (26%) to healthcare practitioners were the most common interventions. Sixteen studies (70%) reported significant reductions in anticholinergic prescribing errors.

Interventions were primarily effective in reducing the burden of anticholinergic medications and assisting with deprescribing anticholinergic medications in older adults. The authors recommend that in future studies there is also the need to ascertain how often the healthcare practitioner performs interventions that may reduce anticholinergic prescribing errors in older people.

Conclusion

Although prescribing itself can never be considered a simple and straightforward process, there are many areas of prescribing practice that present unique and complex challenges and in some cases errors can and do occur. What is important is that prescribers should only work within their area of clinical competence and scope and be aware of strategies and guidelines to assist with clinical decision making. When errors do occur, it is vital that a robust mechanism for reporting and management is in place with patient safety at its core.

Additional References

Michie, S., van Stralen, M.M. & West, R. (2011) *The behaviour change wheel: A new method for characterising and designing behaviour change interventions*. *Implementation Sci* 6, 42.

Moher, D.; Liberati, A.; Tetzlaff, J.; Altman, D.G. (2009) *Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement*. *PLoS Med.* 2009, 6, e1000097.