Medication Management of In-Patients with Parkinson’s Disease

**Background**
One in three people with Parkinson’s Disease (PD) are admitted to hospital each year. Concerns have been raised about the quality of care which hospitalised patients with Parkinson’s receive (Buetow et al. 2010; National Patient Safety Agency 2010; Parkinson’s UK 2010; Gerlach et al. 2012). As a result patients suffer unnecessary side effects, reduced effects of medication, delayed hospital discharge and long term deterioration of motor PD symptoms (Parkinson’s UK 2010; Gerlach et al. 2012).

**Literature Search Strategy**
Two online databases (Medline 1999-2012 and PubMed 2000-2012) were searched for studies reporting data on factors associated with medication non-compliance in in-patients with PD. The terms Parkinson’s disease, medication compliance, hospitalisation and management were used for the search. The articles selected for review were Buetow et al. (2010), Derry et al. (2010) and Gerlach et al. (2012). Peer reviewed practical guidelines known to the author were also included.

**Research Results**

<table>
<thead>
<tr>
<th>Study</th>
<th>Findings</th>
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<td>Buetow et al. 2010</td>
<td>• Buetow et al. (2010) carried out qualitative research exploring 20 lay perspectives of factors contributing to medication timing errors for patients with PD in hospital and community settings. Five themes were found to account for possible timing adherence errors: abrupt withdrawal of PD medication; wrong, vague or missed instructions; derailment of the lay role in managing PD medications; deficits in professional knowledge and in caring behaviour around PD in healthcare settings and lay forgetfulness.</td>
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<td>Derry et al. 2010</td>
<td>• Derry et al. 2010 carried out a retrospective study of in-patient PD medication management during surgical admissions. Of the 51 admissions in which patients were prescribed PD drugs, missed doses were documented in 36 (71%), 34% missed over 10% of prescribed doses. Overall 12% of all prescribed medication was missed (mean 0.7 missed doses per patient per day). Centrally acting dopaminergic drugs (mainly anti-emetics) were prescribed in 41% of cases and administered in 22%. The PD specialist nurse was under utilised being informed in only 2% of admissions.</td>
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<td>Gerlach et al. 2012</td>
<td>• Gerlach et al. (2012) collected data from 684 PD patients who had been hospitalised in the previous year. 21% experienced deterioration of motor symptoms, 33% had one or more complications and 26% had received incorrect anti-Parkinson’s medication. Wrong medication distribution was the most important risk factor for deterioration.</td>
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**Practice Guidelines/Protocols**

- Hospitals in England and Wales are required to comply with the National Patient Safety Agency (NPSA) Rapid Response Report (2010) on reducing harm from omitted and delayed medicines. This alert specifically recommends Parkinson’s medications are included as part of a list of critical medicines where timeliness of administration is crucial. NICE (2006) outlines the importance of collaborative care in which clinicians are seen as experts in medical conditions while people with a condition are seen as experts in living with their condition and are encouraged to identify their problems and define goals.

**Discussion**

The studies selected highlight problems in the hospital management of patients with PD but the limitations of the studies should be considered. Derry et al. (2010) used a retrospective study design and this, coupled with the small number of participants, means that the results should be treated with caution. Buetow et al. (2010) also had a small sample size, purposive sampling was used to select information-rich lay participants and participants reports in this study were subject to recall bias. The study by Gerlach et al. (2012) was also subject to recall bias as information from participants was requested from the previous year.

**Conclusion**

Research indicates that poor medicines management is common in the hospitalised patient with PD and measures to improve management should be identified.

**Proposed Recommendations for future research**

- Further research to establish whether the findings of these small scale studies can be replicated with larger, more representative samples.
- Development of educational tools for hospital staff to improve professional knowledge of PD and the importance of medication compliance.
- Development of warning systems to alert hospital teams of the vulnerability of this patient group and a multidisciplinary approach including both the pharmacist and multidisciplinary team should be evaluated.
- Further studies to explore the importance of shared decision making processes between health professionals, patients and caregivers.

**References**


