# SAFETY ALERT

**Alert 4 in a series of PD alerts**

# Optimising Medication at End-of-Life for People with Parkinson's Disease/Parkinsonism

## ISSUE

To avoid harm from inappropriate discontinuation of Parkinson's Disease (PD) medications (particularly **levodopa**) and the inadvertent use of medications for symptom management at end of life, which may worsen parkinsonism. The overall aim is to keep the person as comfortable as possible. Parkinsonism refers to Parkinson's Disease and other conditions including Multiple System Atrophy (MSA), Progressive Supranuclear Palsy (PSP) & Lewy Body Dementia.

## EVIDENCE OF HARM

The following is a real-life experience reported to Parkinson's Ireland by a carer of a Person with Parkinson's (PwP) Disease: *"The clinical team made the decision to stop my husband's Parkinson's medications at end of life, after which he became stiffer and more uncomfortable in his final days."* Use of alternative formulations or routes of administration could have prevented harm.

## HOW TO REDUCE THE RISKS - *OPTIMISING MANAGEMENT IN PARKINSON'S DISEASE/PARKINSONISM AT END OF LIFE*

**Where PwP can take oral medication, DO NOT STOP PD Medication ABRUPTLY**

| Consideration | Advice: contact PD specialist team for guidance and liaise with family |
|---|---|
| Abrupt withdrawal / Deprescribing<br>PD medication list | Abrupt withdrawal of PD medication can cause inadvertent harm, including acute akinesia or neuroleptic malignant syndrome. Check for potential reversibility, as missed doses can be mistaken for end-of-life decline. Continuation of **levodopa** medication and/or **dopamine agonists** is recommended however sometimes at reduced doses due to loss of efficacy and/or increased undesirable effects. Use of pump systems (e.g. **apomorphine**) and Deep Brain Stimulation (DBS) devices should be continued. Consider stepwise deprescribing of **MAO-B inhibitors, COMT inhibitors** and **anticholinergic medication.** |
| Symptom management | End of life symptoms may be harder to recognise in PwP due to possible reduced facial expression, speech difficulties and immobility. See guidance below & QR Code: Alert 2. |
| Oral to Transdermal Route | Patients who are unable to take PD medication orally, consider transdermal route. Use an approved PD dose conversion calculator (e.g. www.pdmedcalc.co.uk) to aid conversion. Note: patch dose equivalence is conservative given 0.25 correction factor (for patients who are not taking dopamine agonists) i.e. result is a quarter of equivalent dose. Dose escalation may be required and clinical judgement is recommended. Seek advice from Neurology or Geriatric Medicine if required. |

| Symptom | Recommendation |
|---|---|
| Dysphagia | • Prioritise and optimise **levodopa medication.**<br>• Consider change to equivalent doses of **levodopa** immediate release formulations/dispersible options (use www.pdmedcalc.co.uk )<br>*Note: Crushing/dissolution of medicines will speed up onset of action but also shorten duration of action, so more frequent/lower doses may be needed.*<br>• Ensure medication is prescribed and administered correctly as swallowing difficulties are exacerbated by medicines not being given on time.<br>• Consider changing to an equivalent dose of transdermal **rotigotine** where oral/NG route is not possible *(see above).* |
| Rigidity / Bradykinesia | • **Midazolam** 5-10mg/24 hours by continuous subcutaneous infusion (CSCI) may help relieve rigidity but will not replace PD medication. |
| Tremor & Dyskinesia | • Reassure and manage anxiety, stress and pain.<br>*Note: Tremor and dyskinesia are not present during sleep.* |
| Secretions | • Consider antisecretory medication e.g. **glycopyrronium**. |
| Pain | • Identify type and cause of pain through regular pain assessment. Optimise PD medication; consider transdermal route. Adjuvant analgesics may be needed in PD-related pain, e.g. anti-spasticity drugs or management of neuropathic pain. |
| Nausea and Vomiting (N&V) | • Avoid antiemetics: **metoclopramide, haloperidol** and **prochlorperazine** (QR Code: Alert 1).<br>• Safer alternatives include **domperidone, ondansetron** and **cyclizine**.<br>• For intractable N&V where other options are unsuccessful, **quetiapine** (least likely D2 antagonist to cause extrapyramidal sides effects) or **levomepromazine** may be considered in a specialist setting.<br>• Where patient is unable to take PD medication orally, consider transdermal route (see above). |
| Terminal Agitation | • Avoid **haloperidol.**<br>• Consider **quetiapine, midazolam** subcutaneous/buccal or **lorazepam** sublingual.<br>• **Levomepromazine** where further intervention is required in a specialist setting. |

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