Document Control

Title **Acute Medicines Management of Inpatients with Parkinson's Disease Guideline**			
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CONTENTS

1. Purpose

1.1. The purpose of this document is to detail the process for optimising the medical management of patients with idiopathic Parkinson's disease during an acute hospital admission

1.2. The policy relates to all medical and nursing staff and non-medical prescribers employed or contracted by the Trust to look after inpatients with Parkinson's.

1.3. Implementation of this policy will ensure that:

- Parkinson's drug administration errors are avoided thereby reducing the risk of delayed recovery, delayed discharge and poor outcomes.

2. Definitions

2.1. PD Parkinson's disease

2.2. CR Controlled release

3. Responsibilities

Role of medical staff

- Responsible for writing medication chart with accurate list of current Parkinson's medication paying particular attention to the administration timings.
- Responsible for ensuring stat dose of Parkinson's medication is written up to avoid delay on day 1 of hospital admission
- Responsible for ensuring drugs which have extrapyramidal side effects are avoided where possible

Role of nursing staff

- Responsible for timely administration of correct Parkinson's disease medication
- Responsible for timely ordering of Parkinson's disease medication if not available

Role of pharmacy staff

- Responsible for timely supply of correct Parkinson's disease medication.
- Responsible for provision of accurate advice for alternative routes/formulations of Parkinson medication when a patient is unable to swallow
- Responsible for monitoring of missed doses of Parkinson's disease medication via missed dose audit
- Responsible for ensuring a 'Get it on Time' sticker is placed on the front of the Prescription and Medicine Administration Record (PMAR)

4. Introduction

4.1. If a patient with Parkinson's disease (PD) is admitted acutely the presenting complaint is rarely their PD, but any intercurrent illness will make PD symptoms worse. Associated complications of PD may lead to admission. These include falls secondary to postural hypotension, constipation or hallucinations, chest infections and delirium.

4.2. Aim to keep PD regimes constant and focus on the presenting illness.

4.3. Ensure patients get their normal PD medication at the usual times.

4.4. If a new patient presents with possible PD, do not start PD medication acutely but ask the Parkinson's team for advice.

4.5. It is advisable for inpatients with Parkinson's to be under the care of an elderly care specialist, preferably Dr Mervyn Dent

5. Writing up of a Drug Chart

5.1. Check dosage and times with patients and carers and clinic letters.

5.2. Prescribe drugs by the exact preparation (e.g. Sinemet comes as Sinemet 62.5, 110, plus, Half CR, and Sinemet CR) and at the exact times patients usually take them NOT as per times of ward drug rounds.

5.3. Madopar (Combination of L-dopa and Benserazide) and Sinemet (Combination of L-dopa and Carbidopa) can be interchangeable when only one is available if the equivalent dose of L-dopa is used. L-dopa is the active drug (precursor of Dopamine) and Benserazide and Carbidopa stop the peripheral side effects.

5.4. For example;

5.5. Sinemet 62.5mg = Madopar 62.5mg

5.6. Sinemet Plus = Madopar 125

5.7. Half Sinemet CR = Madopar CR (both 125mg in controlled release)

5.8. Sinemet CR (250mg) = 2x Half Sinemet CR

5.9. There are also Madopar 250mg capsules and Sinemet 275 mg tablets.

5.10. Madopar also comes in both capsules and dispersible form.

5.11. If Parkinson's disease medication is not available it can be obtained by contacting the on-call pharmacist out of hours.

6. Difficulty Taking Oral Medication

6.1. It is CRUCIAL NOT TO STOP ALL PD DRUGS for a significant length of time as there is a risk of Neuroleptic Malignant-like Syndrome. Missed and delayed doses (by more than 4 hours) can also increase the risk of aspiration pneumonia, falls due to freezing, increased dependency and delayed rehabilitation.

6.2. All common PD drugs are oral only. If a patient is nil by mouth but can be fed via a nasogastric tube then Madopar (in equivalent dosages) dispersible tablets can be used.

6.3. There is also a transdermal dopamine agonist patch called rotigotine (Neupro). This patch has special administration issues and only certain parts of the body can be used and sites need rotating. If a patient has not received an agonist before, start with the lowest dose and watch for nausea (use domperidone if nausea), confusion, skin reaction (occur in 30%). Seek further advice if unfamiliar with this. There is an online calculator for interim conversion to nasogastric dispersible Madopar or rotigotine patch dose (go to www.parkinsonscalculator.com). Please refer to Parkinson's team for review at earliest opportunity.

6.4. Please contact pharmacy for advice on medication administration. Modified release preparations should not be crushed or split. Sinemet immediate release, pramipexole immediate release, ropinirole immediate release and selegiline will disperse in water. Entacapone will slowly disperse if placed in an oral syringe with 10ml water. Rasagiline can be crushed and mixed in water.

7. Apomorphine

7.1. The only non-oral drug that can be used other than the patch is Apomorphine, which is also known as Apo-go.

7.2. Apomorphine is administered subcutaneously.

7.3. This is a dopamine agonist and is not morphine based, is not an analgesic, and is not a controlled drug.

7.4. This drug should only be initiated with the guidance of a Parkinson's Specialist. It is not suitable for emergency administration in a drug naive patient. If a patient is already established on it then it can be continued. It can be given through the patient's own Apo-go pump with a care plan on how to use it. If you are not familiar with this a Trust approved pump can be used in its place with the drug administered at the same rate as already prescribed (please refer to Injectable Medicines Policy)

7.5. Do not change the settings on the pump unless requested to do so.

8. Common Complications

8.1. Neuropsychiatric (e.g. confusion/hallucinations/agitation)

- Check if the patient has a history of cognitive impairment.
- Only if necessary treat with benzodiazepines or new atypical antipsychotic quetiapine orally. If using quetiapine use lowest possible dose to start e.g. 12.5 to 25 mg once or twice a day initially and put a review date of 48 hours with it.
- AVOID typical antipsychotics e.g. haloperidol, chlorpromazine.
- Always check for underlying causes e.g. chest or urinary infection, constipation, dehydration, any recently commenced medications.

8.2. Nausea and Vomiting

- Exclude constipation.
- If there is a catheter in-situ and by-passing check for blockage and check for constipation and UTI.
- Use oral domperidone (Motilium) (current advice is that this should be given at the lowest effective dose and for the shortest duration)
- AVOID metoclopramide (Maxalon) and prochlorperazine (Stemetil).

8.3. Dizziness and Falls

- Remember to check for postural hypotension.
- Try to avoid drugs which precipitate postural hypotension e.g. anti hypertensives, heart failure drugs, tricylics, anticholinergics.
- Check the times of the falls and the times medications are taken as there may be a link especially if too many medications are being taken at the same time of the day such as first thing in the morning.

9. Contacts

- Please contact Lynn Gill, PD Specialist Nurse (tel 01271 322361 or for internal calls ext 2361) when a patient with PD is admitted. For patients known to Dr Julia Saunders in the community she can be contacted on 01271 341566

10. Monitoring Compliance with and the Effectiveness of the Guideline

Standards/ Key Performance Indicators

- Key performance indicators comprise:
- Missed dose audit

Process for Implementation and Monitoring Compliance and Effectiveness

- Contact Pharmacy Medicines Management Team

11. References

- NICE guidance Parkinson's in over 20s diagnosis and management (CG35)2006

- Parkinson's UK website:www.parkinsons.org.uk/content/get-it-time Get it on Time campaign, medicines Management for patients with Parkinson's
- North and East Devon Formulary - Chapter 4; Parkinson's Disease section
- RD&E Policy Guidelines on Acute Management of Inpatients with Parkinson's Disease
- RD&E Emergency Management of Patients with Parkinson's disease
- www.parkinsonscalculator.com

12. Associated Documentation

- Omitted and delayed medicines Standard Operating Procedure
- Self-administration of medication for adults Standard Operating Procedure
- Getting Medicines Right for In-patients with Parkinson's Disease (January 2015)
- Injectable Medicines Policy (Prescribing, Preparing and Administering Injectable Medicines Policy)