UK PARKINSON'S Excellence Network

Appendix 2: Admissions checklists for people with Parkinson's

People with Parkinson's need their medication **on time–every time**

GET IT ON TIME

This document is intended to form the basis of a locally developed tool and so it has been built to be amended with relevant local information, contacts and referencing to local documents.

Please note the original document can be found at parkinsons.org.uk/excellencenetwork and is intended to be tailored locally. Actions taken in accordance with the document and any amendments are the sole responsibility of the local organisation.

Consider:

- Who should lead on its development (and subsequent review)?
- Who should also be involved?
- Once completed, who should this be communicated to?

Useful contact information

Contact	Contact information
Parkinson's consultant	
Parkinson's nurse	
Pharmacy department	
On-call neurology	
On-call pharmacy	

Checklist for the Initial Medical and Surgical Management of Patients with Parkinson's

Date/time: _____

Clinical area: _____

Staff member completing form: _____

Grade: _____

Stick patient label here

Remember

- **Do not** abruptly withdraw Parkinson's medication – this can lead to life-threatening Parkinsonism-hyperpyrexia syndrome
- **Do not** prescribe centrally-acting dopamine antagonists (ie any medication that blocks dopamine receptors), eg haloperidol
- Each person with Parkinson's has a unique presentation of symptoms so **maintain their usual medication routine as far as possible** (including supporting self administration of medication)
- **People with Parkinson's and their family/carers have valuable expertise** about the impact of the condition – make use of their knowledge

- Has the person taken their last scheduled dose of Parkinson's medication? (ask patient/family/carer)

No → **Ensure person gets their Parkinson's medication as a matter of urgency**

Yes ↓

- Is Parkinson's specialist service (to support administration of medication) available now?

No →

Questions to ask (see **Appendix 1a**):
- What is the current routine?
- How can this be initiated/maintained?
- If it can't be maintained, why and what not to do?
- What to do if it still can't be maintained?

Also consider use and impact of non-oral medications (see **Appendix 1b**)

Yes ↓

Refer to local specialist service
- Consultant
- Parkinson's nurse
- Specialist pharmacist
- Speech and language therapist

(if unknown, ask patient/family/carer for details)

And then →

Refer to local specialist service as soon as possible (if not done previously)

Continue recommended medication routine as part of a coordinated management plan until discharge (with ongoing consultation with patient and family/carers and specialist Parkinson's service as required – see **Appendix 1c**) – taking particular consideration of possible changes in medical status eg post-op

A) Clinical assessment of people with Parkinson's on admission

(Doctor to complete – circle Yes or No as appropriate)		
Questions	**Answer and Action**	**Sign and date (when completed)**
Maintenance of current medication routine		
What is the current medication routine? (need to know medication name (brand/ generic), preparation type, dosage, usual times taken at home – if patient/carer unable to give information, need to consult with specialist service/GP records	Complete relevant documentation [on] with information including **EXACT** times of usual administration told by patient/carer (if able) Liaise with pharmacy [on] re: suitability for medicines reconciliation	
Has their Parkinson's been well controlled recently? (minimal freezing, tremor, immobility, little change in ADLs)	**Yes:** no action **No:** **Urgent** referral to Parkinson's specialist [on]	
Can the patient self-administer their own medication?	**Yes:** Assess according to [trust policy reference] – will need to note and communicate any changes in status	
Has the patient brought their Parkinson's medication to hospital?	**Yes**: Check for suitability of use in hospital prior to administration **No:** Liaise with pharmacy [on] before next dose is due (utilising emergency drug cupboard [in] and/or on-call pharmacist [on] if required)	
Does the patient have sufficient supplies of the medication that they need?	**Yes:** Ensure medication stored appropriately **No:** Liaise with pharmacy [on] before next dose is due (utilising emergency drug cupboard [in] and/or on-call pharmacist [on] if required)	
Can the patient take their Parkinson's medicines in the same formulation as they would at home?	**Yes:** Prescribe usual medication **No:** investigate cause and treat accordingly **The patient MUST receive some form of dopaminergic Parkinson's medication** – if unable to swallow usual oral medication, will need to prescribe alternative forms of medication (see checklist B)	

Please turn over

• Is this because the patient is having problems swallowing?	**Yes:** Where possible, refer to SALT [on] for urgent assessment; otherwise perform basic swallow assessment [give details of local advice] • May need to use thickened fluids or soft foods • **NEVER** crush/split modified release preparations (labelled CR, MR, XL or PR) • Consider dispersible/liquid versions of preparations (see Section 1) but ensure no residue left • May need to consider use of nasogastric tube (in accordance with local protocol [reference])	
• Is this because the patient is experiencing nausea and/or vomiting?	**Yes:** Consider possible underlying causes and treat accordingly • **AVOID** metoclopramide (Maxalon®) and prochlorperazine (Stemetil®) due to anti-dopaminergic action • Consider domperidone (noting cardiac profile)	
• Is this because the patient is experiencing confusion/ agitation/hallucinations/altered level of consciousness?	**Yes:** Consider possible underlying causes (including history of cognitive impairment and recent drug changes) and treat accordingly • Refer to trust policy on management of delirium [reference] as required • Check impact of medications including those contributing to anticholinergic burden and consider reducing these (note these may include Parkinson's medication – do not adjust these without consultation with specialist) • **AVOID** haloperidol (Serenace®/Haldol®) and chlorpromazine (Largactil®) and other anti-psychotics with anti-dopaminergic action • Consider benzodiazepines	
Is the effectiveness of Parkinson's medications compromised by gastrointestinal issues such as constipation?	**Yes:** Consider possible underlying causes and treat accordingly May need to consider non-oral administration of medication if treatment not effective	

B) Management of patients with Parkinson's with non-oral medications

- Objective – to enable **short-term** management of Parkinson's with most appropriate therapy (prioritising dopaminergic medication) considering available access with return to usual medication routine (and route of administration) **as soon as clinically possible**

- As the dosages administered by mechanisms not usually used, the patient might tolerate these differently compared to their usual routine. So it is **important to treat and monitor each person individually and adjust doses accordingly** (particularly if dementia or delirium noted)

- NB Commencement of longer-term, non-oral medications needs to be in consultation with specialist Parkinson's service

Section 1 – Administration via NG/NJ/PEG tube

- Sensitively speak to the patient and their family/carers about any anticipatory care plans about the use of feeding systems
- Assess for any contraindications
- Insert as per local protocol [reference]
- Use medications as outlined in Table below
- Following administration, flush tube afterwards to ensure complete dosage

Table – Parkinson's medication for NG/NJ/PEG tube use
Note identifies licensed proprietary use of each medication [speak to local pharmacy to update with agreed organisational advice]

Levodopa	
Co-beneldopa (Madopar®)	• Use dispersible versions • For CR doses, because of reduced bioavailability, convert to dispersible equivalent by multiplying total daily levodopa dose by 0.7 and rounding to nearest available dispersible preparation
Co-careldopa (Sinemet®/Lecado®/Caramet®)	• Use dispersible co-beneldopa versions (using equivalent dosage of levodopa) • For CR doses, use co-beneldopa dispersible equivalent conversion equation
Co-careldopa and entacapone (Stalevo®)	• Treat co-careldopa constituent of Stalevo® as above (ie administer equivalent dispersible co-beneldopa dose) • Entacapone not licensed for use in enteral feeding systems – can be usually safely omitted temporarily (see MAO-B/COMT inhibitors)
Dopamine agonists	
Pramipexole (Mirapexin®) Ropinirole (Requip®) Bromocriptine (Parlodel®) Cabergoline (Cabaser®) Pergolide	• Not licensed for use in enteral feeding systems. Therefore, consider rotigotine patches as substitute for dopamine agonist medication

Please turn over

MAO-B/COMT inhibitors	
Selegiline (Eldepryl®/ Zelapar®)	• Use Eldepryl® (as also available in liquid form) – for NJ tubes, dilute with equal volume of water immediately prior to administration
Rasagiline (Azilect®) Tolcapone (Tasmar®) Entacapone (Comtess®)	• Not licensed for use in enteral feeding systems – can usually be safely omitted temporarily
Glutamate Antagonist	
Amantadine (Symmetrel®)	• Use liquid version
Anticholinergics	
Orphenadrine hydrochloride (Disipal®)	• Use liquid (generic) version
Procyclidine (Kemadrin®)	• Use liquid (generic or Arpicolin) version

Section 2 – Administration via rotigotine patch

OPTIMAL calculator enables online calculation of appropriate dosage of rotigotine patch based on current medication

Guide to estimating equivalent levodopa dosages for rotigotine patches (Brennan and Genever, 2010)

1. Calculate Adjusted Levodopa Equivalent Daily Dose (LEDD):

$$[(\mathbf{A}) + (\mathbf{B})] \times 0.55 = \_\_\_\_\_ \text{mg}$$

(A) Total adjusted daily levodopa dose

Total daily levodopa dose in mg (excluding benserazide or carbidopa)
[eg Madopar 125mg QDS = 4x100=400mg/24h]
X 0.7 (if MR/CR preparation) or
X 1.3 (if on COMT inhibitor) or
X 0.91 (if MR/CR preparation and on COMT inhibitor)
= _____mg

(B) Total adjusted daily dopamine agonist estimate levodopa equivalent dose

Total daily dopamine agonist in mg
X 100 (if on pramipexole/ cabergoline/pergolide)
X 20 (if on ropinirole/rotigotine)
X 10 (if on apomorphine/bromocriptine)
= _____mg

(the above figures refer to each medication's levodopa equivalent factor)

NB (**A**) or (**B**) = 0 if not taking that type of medication

2. Calculate dosage for rotigotine patch = Adjusted LEDD /20 = _____mg

- Round to nearest 2mg (to max of 16mg) and prescribe as 24-hour patch
- DO NOT cut patches – available as 2mg/4mg/6mg/8mg patches (can use more than one patch).
- Treat each patient individually and adjust doses accordingly:
  - if increased stiffness/slowness observed, increase dose and review daily
  - if increased confusion/hallucinations observed, decrease dose and review daily
- If adjusted LEDD >350mg, use rotigotine 16mg and consult with specialist regarding administration of apomorphine

C) Surgical management of patients with Parkinson's

(Doctor to complete – circle Yes or No as appropriate)	
Action	**Sign and date (when complete)**
Operating List: Place first on list (where possible)	
Review dosing regimen: If timing of Parkinson's medication is going to clash with surgery, regimen needs adjustment. Ask Parkinson's nurse [on] or pharmacy [on] for advice on dosing regimen	
Review regular medication prior to surgery ie morning dose(s): Ensure morning dose(s) of all Parkinson's medication are prescribed. Clearly mark drug chart that they must be given prior to surgery	
Duration of surgery: If the total duration of surgery and NBM period will be > 6 hours, get further advice from Parkinson's nurse [on] or pharmacy [on] about use of a rotigotine patch or other alternative medication regimens	
Post surgery review: If surgery > 3 hours and you are concerned about post-operative Parkinson's related complications, arrange post-surgery review by patient's usual Parkinson's specialist [on]	
Deep Brain Stimulation: If patient has had previous DBS, ensure surgeon is aware pre-surgery (electrocautery diathermy may be contraindicated – if absolutely necessary use bipolar mode)	
If unsure, please contact patient's Parkinson's consultant [via] or Parkinson's nurse [on] Out of hours – contact Neurological Specialist Registrar on-call [via]	

The UK Parkinson's Excellence Network is the driving force for improving Parkinson's care, connecting and equipping professionals to provide the services people affected by the condition want to see.

The tools, education and data it provides are crucial for better services and professional development.

The network links key professionals and people affected by Parkinson's, bringing new opportunities to learn from each other and work together for change.

Visit parkinsons.org.uk/excellencenetwork