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- Common reasons for hospital admissions of people with Parkinson's disease
- Implementing change in clinical practice
- Rationale behind the use of a pathway to manage acute deteriorations in Parkinson's disease

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**Parkinson’s disease in primary care: an acute deterioration pathway**

**Key points**

1. **Parkinson’s disease (PD)** is a progressive degenerative neurological condition that affects movement, cognition, mood, swallowing and communication.

2. Nurse specialists provide support and advice to patients and help them avoid unnecessary hospital admissions.

3. A PD-specific pathway can ensure that any underlying cause for exacerbations is diagnosed quickly and treated appropriately.

4. When implementing change, resistance should be expected so it is important to have strategies in place to help overcome that.

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**Abstract** Emergency hospital admissions of people with Parkinson’s disease are often unhelpful for patients and costly to the NHS. A nurse specialist has devised a pathway for community health professionals to take simple management steps when faced with an acute deterioration of a patient with the condition. This article explains the rationale behind the pathway, then describes the change and its implementation.

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**Innovation**

**Parkinson’s disease**

Parkinson’s disease (PD) is a progressive degenerative neurological condition that occurs when dopamine-producing cells of the substantia nigra degenerate and die, resulting in striatal depletion of dopamine. PD affects movement, cognition, mood, swallowing and communication (Noble, 2007). An estimated 127,000 people in the UK had PD in 2012; this is expected to increase by 28% to 162,000 by 2020 (Parkinson’s UK, 2012).

**Reasons for hospital admission**

People with PD are admitted to hospital more often, and for longer, than the general population (Gerlach et al, 2011). A study of 76 patients with PD found that the most common reason for acute hospital admission (51.6% of participants) was infectious disease (Gunayesel et al, 2008). Gerlach et al (2011) identified that urinary tract infections were responsible for 15% of admissions of PD patients. Woodford and Walker (2005) found the main reasons for emergency admissions were infections, traumatic injuries, poor control of PD and side-effects of PD treatment, psychiatric disturbances, and circulatory and digestive system diseases.

Temlett and Thompson (2006) reported that the main reasons for 761 hospital admissions of people with PD were falls leading to fracture and pneumonia, encephalopathy or dementia, and hypotension with syncope. Only 15% of admissions were primarily due to PD.

A report from the National Audit Office (2011) showed there had been a 38% increase in spending on neurological health services since the implementation of *The National Service Framework for Long Term Conditions* (Department of Health, 2005). It also reported a 31% increase in the number of admissions between 2005 and 2010, despite the fact that the 2005 framework focused on early detection of treatable complications to avoid admissions.

**Avoiding hospital admissions**

The NHS plans to make efficiency savings of £22bn by 2020/21 (NHS England, 2016). Reducing the number of avoidable hospital admissions can go a long way in helping achieve this. It is also important to avoid admissions due to their negative effect on patients’ quality of life; Gerlach et al (2011) found that people with PD experienced a deterioration in symptom control while hospitalised and that this was largely due to poor management of medication and infections.
**A pathway to manage deterioration**

When a patient with PD presents in primary care with a sudden deterioration in symptoms, PD nurse specialists (PDNSs) are not always best placed to screen for infections, prescribe antibiotics (which is likely to be outside their scope of practice) and provide emergency care. GPs should routinely screen PD patients who are acutely deteriorating for infection, constipation and contraindicated medication before referring them for specialist assessment.

In 2014, Peninsula Community Health (now part of Cornwall Partnership Foundation Trust) introduced a management pathway to which community health professionals could refer when a patient experienced an acute deterioration in PD motor symptoms. It comprised a flow chart and a list of medications associated with a worsening of symptoms in PD (Fig 1). Its aim was to ensure any underlying cause for the exacerbation is diagnosed quickly and treated appropriately to reduce the number of hospital admissions associated with organic causes or contraindicated medications.

**Managing change**

Before a service innovation is introduced, an assessment should be undertaken to determine the relative success of the change (Tiffany and Johnson Lutjens, 1998). Lewin (1951) devised the force field analysis, which examines the drivers and restrainers that exist in any change process. The principle is that the drivers for change must outweigh the restrainers for it to be successful.

Resistance to change is common so it is important to plan strategies to overcome that (Upton and Brooks, 1995). Health professionals can view change as threatening, especially if they have not been involved in decision making or perceive the change as a criticism of their practice. Team members need to recognise that the change is needed and share the vision of the person(s) driving it. People are more likely to accept change if they have identified and planned it themselves (Kitson et al, 1996). Strategies to reduce potential resistance include involving people and introducing the change slowly.

**Involving future users**

In the case of the pathway, one driver was the expected reduction in the number of emergency hospital admissions and the related reduction in costs. I also hoped it would mean PDNSs would spend less time reviewing patients who could be more appropriately managed by their GP, and improve patients' quality of life by ensuring...
the underlying causes for sudden deteriorations were managed more promptly.

The idea of the pathway was presented at a PD team meeting, allowing the team to discuss it and, consequently, recognise that the change was needed. There was continuous communication about the change so team members were able to express their ideas and voice concerns.

GPs represented a large portion of the community health professionals likely to use the pathway. I therefore submitted a draft version to a sample of approximately 20 GPs for feedback. Their comments were encouraging and slight amendments were made accordingly. The pathway was then presented to lead GPs during one of their forum meetings.

Asking GPs to use the pathway each time they come across a patient with PD who is acutely deteriorating could be perceived as time consuming, especially if GPs were uncertain about the rationale for the pathway. A way of overcoming this was to nominate a workplace champion who would help present the innovation in a positive light, thereby influencing the way it was going to be used in practice (Cork, 2005). I approached the deputy head of pharmaceutical advising, who had a close working relationship with GPs as well as expertise in PD management that had been gained via a monthly pharmacist-led Parkinson’s clinic. This workplace champion would be an ideal ally in promoting the use of the pathway.

A change of direction

The pathway has been rolled out to a wide range of health professionals across the south-west of England including GPs, community matrons, district nurses, other PDNSs, allied health professionals, ambulance trust staff, and nursing and residential homes. Unfortunately, aside from keen nursing staff, it did not appear to be used as much as had been hoped. This is evident from continued referrals to the PDNS of patients with an acute deterioration in motor symptoms, which are then referred back to the GP surgery for an infection screen.

This lack of engagement, which may be due to the lack of statistical evidence supporting the use of the pathway, has prompted a change in direction towards patient empowerment and the pathway has been adapted for their use. The patient version (Fig 2) features in the leaflet routinely given to patients alongside information on what to do in the event of a sudden exacerbation of their symptoms.

Conclusion

It is hoped that the pathway will give patients the necessary tools to recognise when there is an acute change in their condition that requires prompt intervention, empowering them to take control and contact the most appropriate health professional at an early stage. This fits in with the plans of the Parkinson’s UK Excellence Network to help patients self-manage and take control of their condition [bit.ly/ParkinsonsUKexcellence].

The drive towards self-management of patients with long-term conditions is a key objective of the NHS. This shift in responsibility will hopefully help improve the quality of life of people with PD and bring about significant cost savings, particularly through the avoidance of emergency hospital admissions.

Fig 2. Managing an acute deterioration in your Parkinson’s disease symptoms

- Have your symptoms become noticeably worse within the last month? (Symptoms include tremor, stiffness, slowness of movement and poor speech)
- Do you have an infection?
  - Take a urine sample to your GP surgery for testing
  - Your GP may also want to examine your chest and any skin rashes, and/or take bloods (full infection screen)
- Are you constipated?
  - Has it been more than two days since you last opened your bowels?
- Medication
  - Have you bought or been prescribed any new medications?
  - Are you taking your medication as prescribed?
- If you have an infection
  - Take the treatment prescribed to you. Once your infection has been treated you should start to feel better after a couple of weeks. Your PD medication will not be changed during infection treatment. If you have ongoing concerns with your bladder, ask your PD nurse for a bladder questionnaire
- If you are constipated
  - Increase fluids to eight glasses a day and increase your fibre intake. If you find there is no improvement, you may need to see your GP to talk about whether you need a laxative. If you have persistent constipation, ask your PD nurse for a bowel questionnaire
- Medication aids
  - If you are having difficulties remembering to take your medication on time, speak to your community pharmacist about medication aids

Speak to your PD nurse

PD = Parkinson’s disease.

Source: Adapted from the Peninsula Community Health patient leaflet.

References


Parkinson’s UK (2012) Number of People with Parkinson’s in the UK set to Rise. Bit.ly/ParkinsonsUKNumbers2012


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