CARE AND OUTCOME REVIEW OF HOSPITALISED PATIENTS WITH PARKINSON'S DISEASE (PD)

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Introduction

- *Parkinson disease is the second commonest chronic progressive neurodegenerative disorder; Prevalence is 100-150 per 100,000 & increasing. Patient with Parkinson's disease are more likely to get admitted to hospital. Once hospitalised it's not uncommon to find disruption of PD medication schedule; delay in physiotherapy as well as PD Specialist input.*
- *Compromise in PD Specific care could lead to poor PD symptom control, complications with potential impact on Length of stay (LOS), discharge destination with significant financial health care cost.*
- ***Although length of stay varies by study, a study of 367 PD patients and 246 emergency admission s in the UK found that mean LOS was longer for PD patients than for controls (21.3 vs 17.8 days). The finding may be underestimated as LOS may be shortened by discharge to a long term care facility.***
- ***Recommendations for care of PD patients during hospitalization have been developed by movement disorder specialists as well NICE CG71 - emphasising timely administration of PD medication as well as early therapy and PD Specialist input.***
- *Following attendance of Parkinson masterclass, I was enthused to find out how local hospital was doing for care of hospitalized patients with Parkinson disease.*
- *In MKUH, PD specialist service provided by Neurologist but in-patient care of patients with Parkinson's disease is provided predominantly in Geriatric department. As per 2011 census Milton Keynes has population of 248800. As prevalence of Parkinson disease is 100-150/100,000 it is estimated that there are about 375 patients with Parkinson disease in the area. As 35 % of affected patients are in Complex stage and 15% are in palliative stage it is estimated that about 180 with Parkinson's disease will be frequent user of in patient service either due to complications of Parkinson's disease or Comorbidity and care giver strain.*
- *Focus of study was about care of Hospitalised patients with Parkinson's disease and outcome –in terms of Length of stay (LOS), Change of Residence, Readmission and Mortality.*
- *Hopefully the study would identify local issues –where there is gap in service provision against NICE recommendations, so that action plan can be formulated for service improvement.*

Aim and Objectives

To: review – care standard PD patients received when admitted to hospital
1. Whether PD medications are prescribed & given (right dose, on time)
2. Whether patient received physiotherapy input to help recovery
3. Whether PD specialist team involved – in particular complex medication regime/unsafe swallow/complex symptoms
Analyse outcome –LOS /Discharge destination /Readmission /Motility - to see any correlation between care standard, reasons for admission

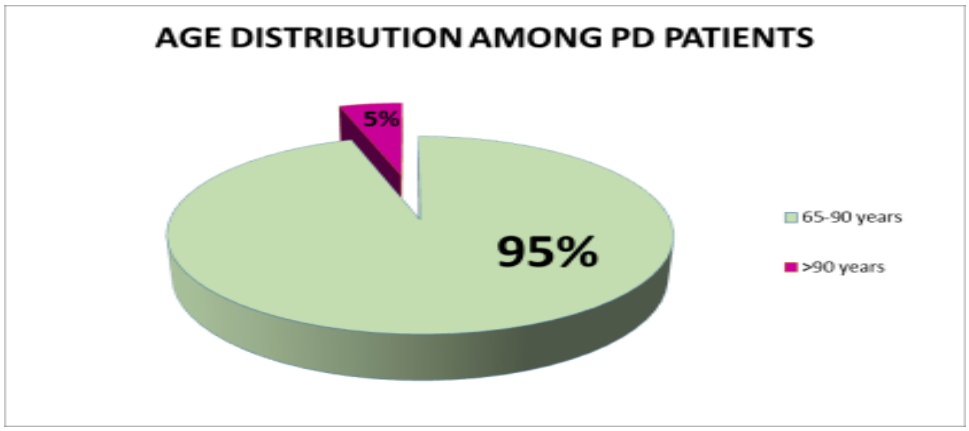
Methods

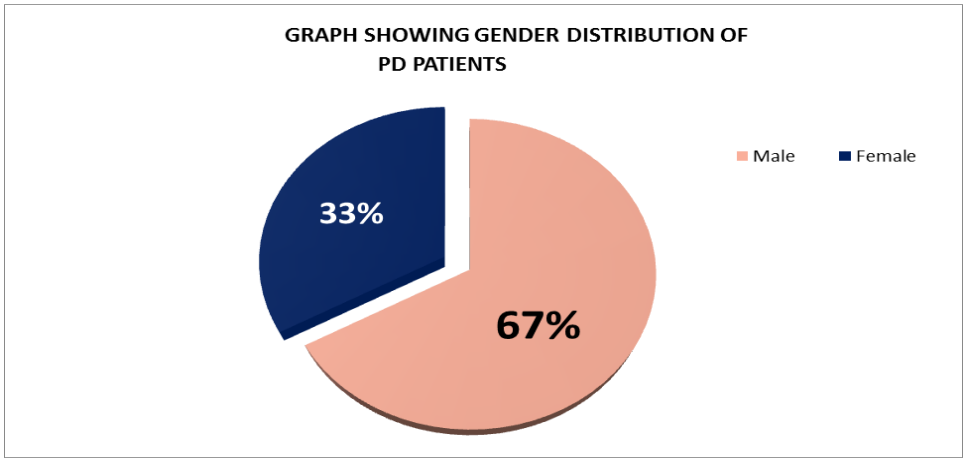
Case Selection *Parkinson's disease (PD) patients discharged from Geriatric wards from 1st July 2018 to 30th September 2018* ***(total = 21)***

- *Identify those on PD medication as well as Diagnosis of Parkinson's disease as index case* ***Review case notes retrospectively*** *– for Reason for admission (PD related or not), medication management, Ongoing Care – physiotherapy/PD specialist, Length of Stay (LOS), Discharge destination*
- *Evaluate correlation between LOS / change in discharge destination & domain of care ,reason for admission*

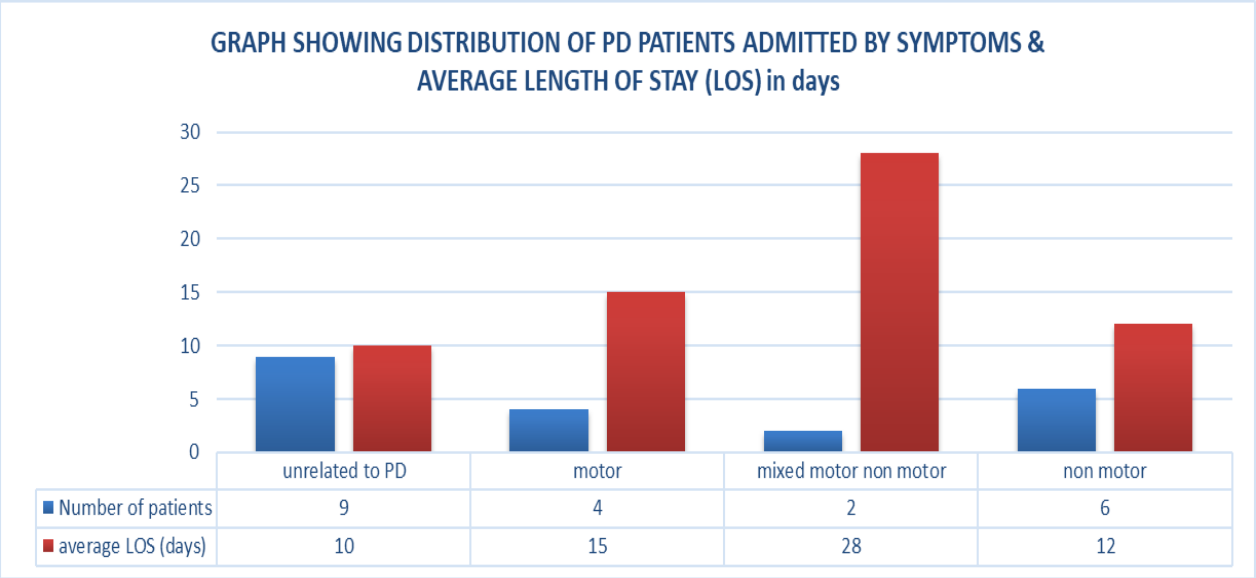
RESULTS

Demographics

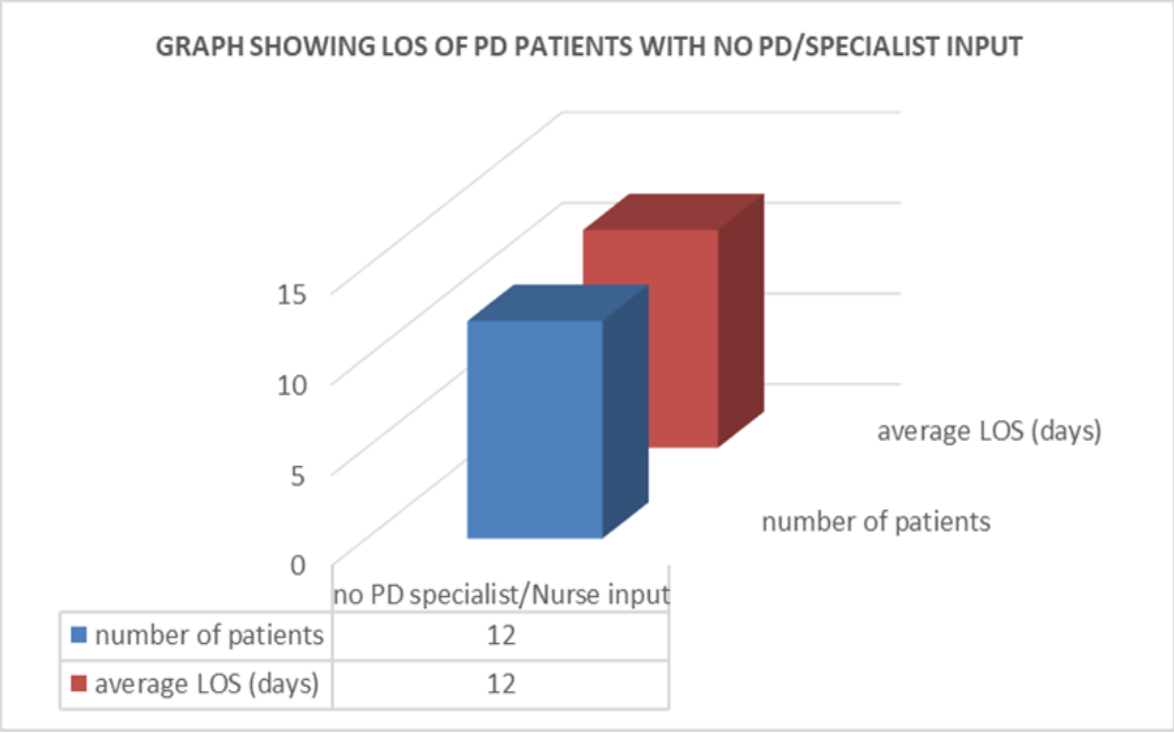


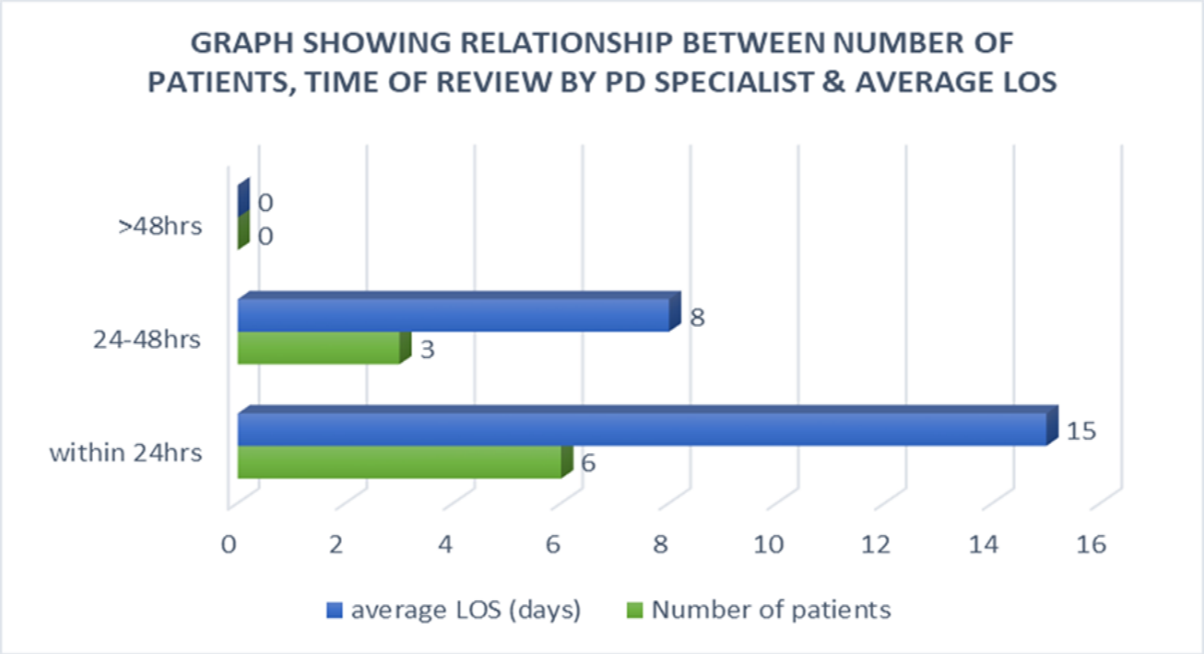


LOS in relation to reason for admission

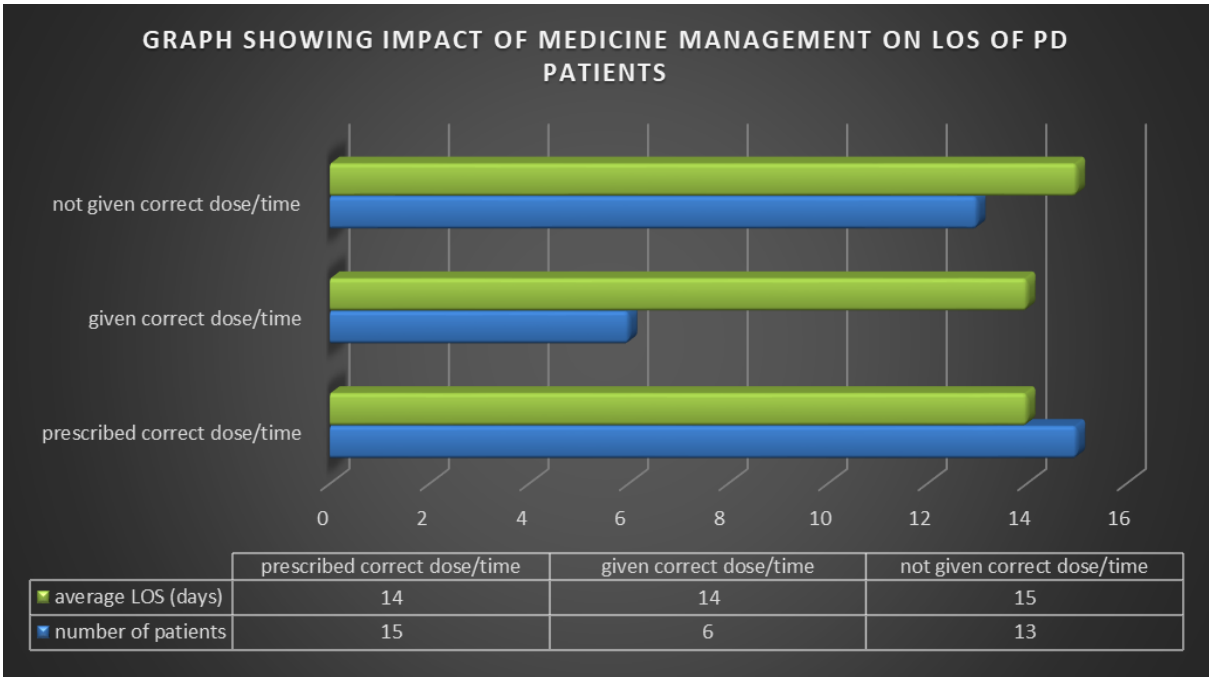


LOS in relation to PD specialist input

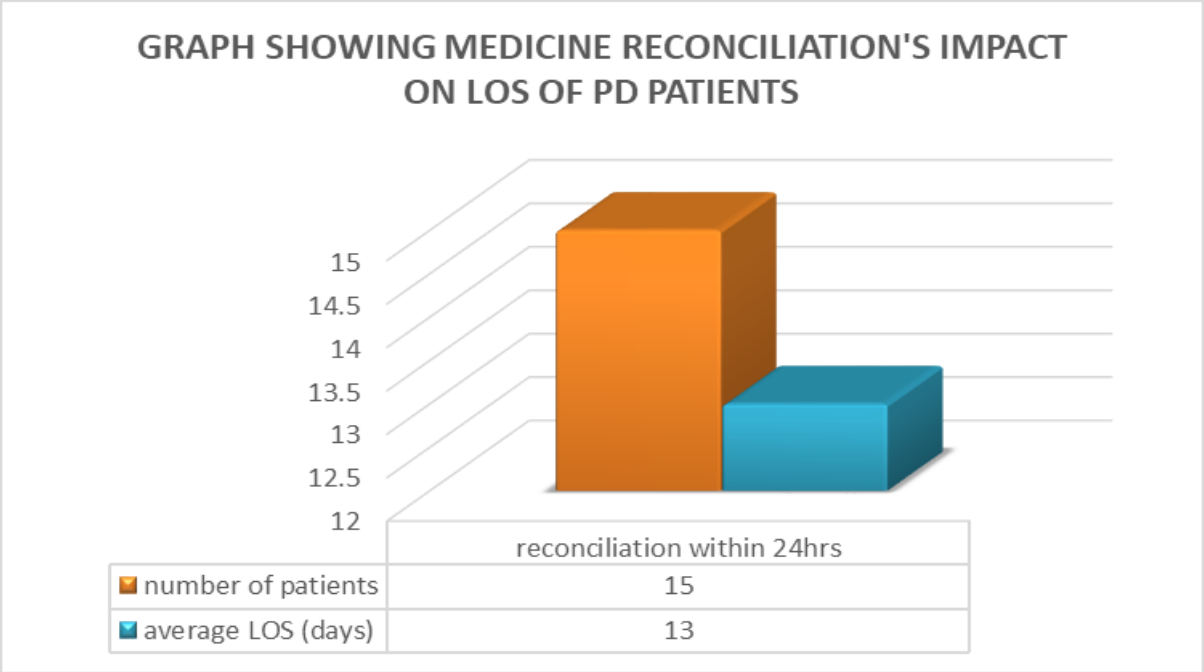




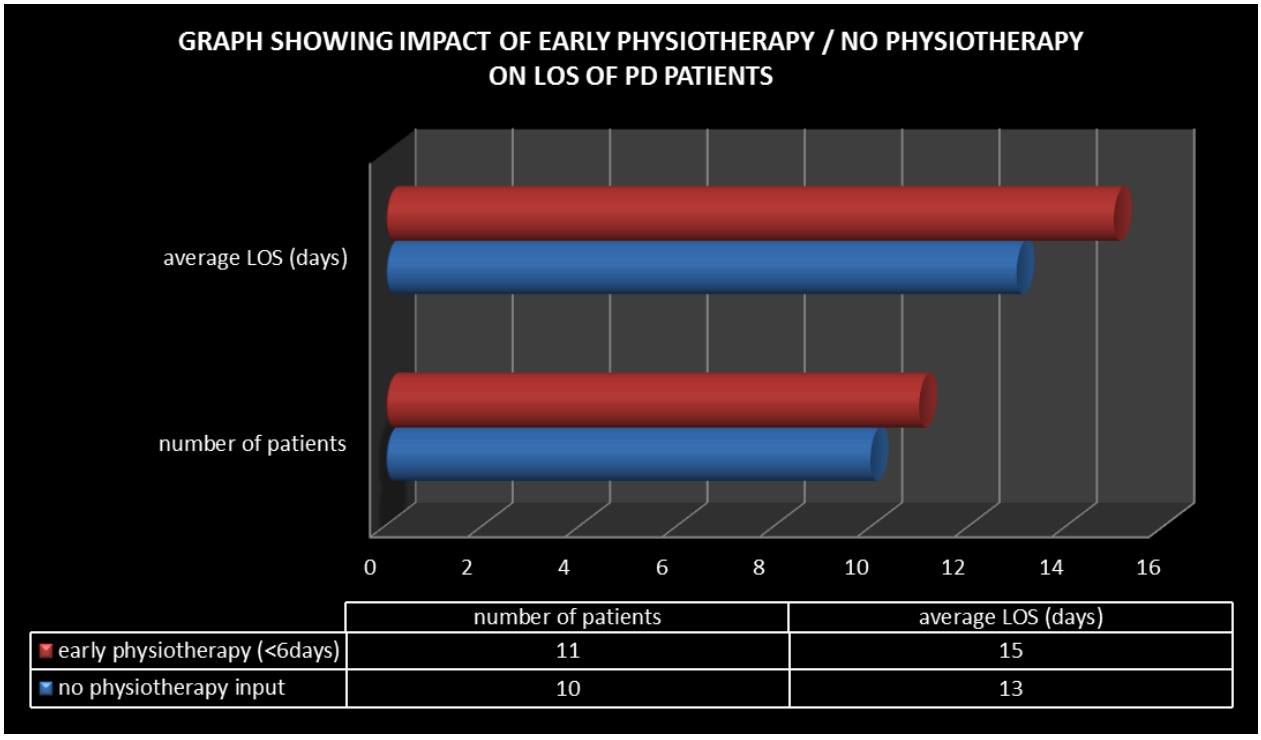
Impact of medication management on LOS



	prescribed correct dose/time	given correct dose/time	not given correct dose/time
average LOS (days)	14	14	15
number of patients	15	6	13

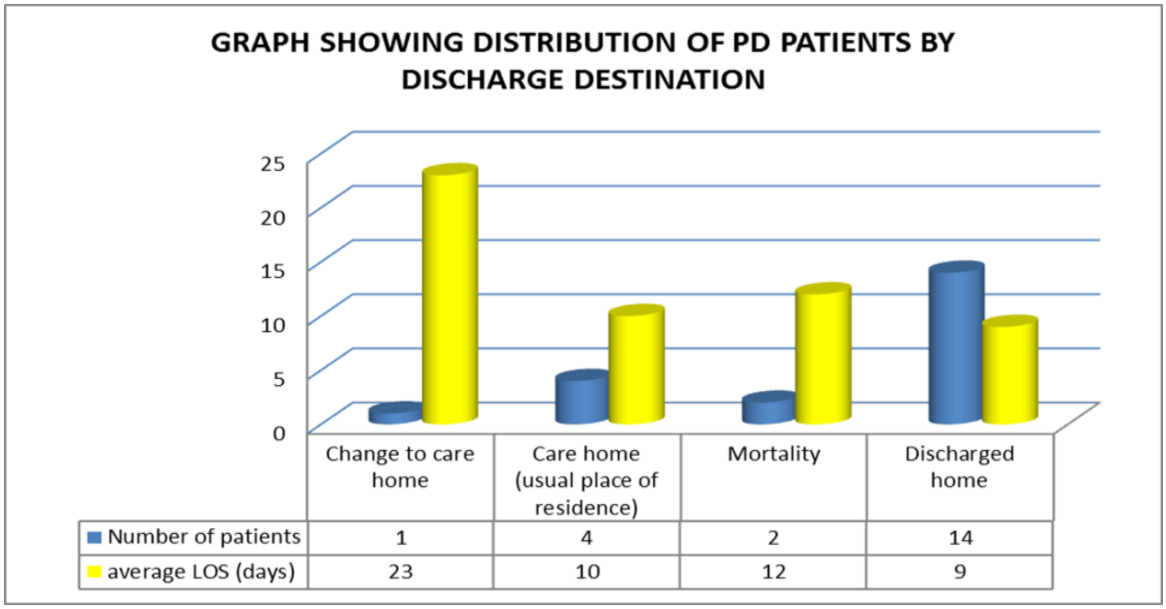


LOS in relation to Physiotherapy



Number of PD patients who received physiotherapy input after 6days = 0

Discharge destination



LOS >20 DAYS (Case studies)

- *Case 1 -Elective Total Knee Replacement – missed PD medications for 48hrs – Developed pneumonia leading to long LOS 27days, subsequently readmitted with length of stay 22days (Medication compromise)*
- *Case 2 - Ongoing psychosis – unable to cope at home even with a live-in carer plus dedicated partner – admission for placement – length of stay 23days*
- *Case 3 – End stage (mixed motor/poor swallow & confusion); developed sepsis, was NBM – missed PD medication due to delayed NG tube placement subsequently developed pressure sore; total length of stay 37days (medication compromise)*
- *Case 4 – New onset parkinsonian feature with concomitant dementia; had medication trial started 2days after Neurology review; LOS 27days, Physiotherapy input on day 4 of admission; on discharge had PD specialist review in follow up clinic*

Readmission

- *2 patients*
  - *Case 1 –Medication compromise during Elective TKR –subsequent complication – pneumonia LOS both admissions >20 days*
  - *Case 2 –Readmission –medical issue un related to PD*

Mortality

- *2 patients died –both end stage PD*
- *Severe frailty with associated multi co morbidity*
- *Received appropriate Palliative care*

Dopamine Agonist Patch in Elderly

- *Case – Elderly patient with advanced PD , presented with unsafe swallow – Levodopa equivalent patch tried and discharged as per patient and dedicated family wish – developed acute psychosis post discharge – but readmission avoided with family support and Community PD Specialist Nurse input*
- *Patch or NG tube as alternative route? When NBM –Need to exercise Judicious use of DA patch in Elderly confused patient with unsafe swallow , because of risk of developing worsening confusion with DA patch*

Conclusion

- *Study is limited by small sample size (due to case identification –coding issue)Case identification from Geriatric unit only so it's not representative of care across different clinical area and hence unable to analyse skill mix relevant to Parkinson Disease across Physicians*
- *With regard to care standard - Medication administration remain issue in spite of reasonably good compliance with reconciliation and accurate prescription*
- *Practical issues of medication administration are –patient refusal to take medication / concern for swallowing / lack of clarity of alternative route when NBM–highlight need for PD Specialist input*
- *Limitation of DA Patch use particularly in confused elderly patients*
- *Long LOS as well as readmission clearly link to medication compromise*
- *Clear correlation between reason for admission (example–psychiatric and behavioural manifestation, carer strain) and outcomes LOS/Change of Residence*

Recommendations

- *Improve PD specific competencies – Medical /Nursing –training /dissemination of knowledge*
- *Promote awareness –role of Therapy and Parkinson's specialist team /Timely administration of PD medication*
- *Develop local guideline - protocol when NBM*
- *Surgical liaison - Geriatrician of the day*
- *PD service incorporate - Geriatricians*

References

- *NICE CG 71*
- *Parkinson UK Get it on time campaign*
- *In patient management of Parkinson disease .Current challenges and future directions Odin chi Ogun and Alexander Videnovic Neurohospitalist 2012 Jan 2(1)28-35*
- *Management of Hospitalized patient with Parkinson's disease ;Current state of the field and need for guidelines Michael J Aminoff and Co Parkinsonism Related Disorder 2011 Mar,17(3);139-145*
- *Neurology Academy Parkinson s masterclass*