Editorial

In this edition of the Parkinson’s Academy MasterClass in-house journal, now renamed MasterClass: Moving On, Doug MacMahon appropriately reflects on the last 12 years-plus and how we have gone from nothing to where we are now; Masterclasses 27 and 28 beckon in 2015.

The MasterClass is not formally, summatively assessed but to complete it participants deliver a piece of work to the group on the final day. Early participants will remember this as a descriptive piece on what they have (or have not) in their locality. Since 2006 this has often been a piece of work reflecting NICE guidelines and up until last year even the formal audit using the framework developed by the BGS Movement Disorders Section and Parkinson’s UK, in collaboration with colleagues from the Association of British Neurologists, the Parkinson’s Disease Nurse Specialists Association and therapy colleagues. Most recently we ‘raised the game’ another notch and 2014 saw the most original and frankly useful projects we have yet had. What characterized all of them and particularly the winner’s and runners’ up was a real sense of participants’ immersion in their services – as one of my ex bosses/mentors puts it “they see patients”. Hence there is a passion, a desire to see things done better and a great willingness to listen to others’ voices to achieve that.

Do read the contributions in this edition of the Journal and in every case there is a contact email address. For me this piece of work is the pinnacle of what has been learned in the first module and represents synthesis in Bloom’s hierarchical taxonomy of knowledge, comprehension, application, analysis and synthesis. (http://www.learningandteaching.info/learning/bloomtax.htm) perhaps with a little seasoning of evaluation - a sign surely of cortical activity and much more use than passing an examination.

And so back to where we started. It was a pleasure tinged with sadness at the end of the final day of Masterclass 25 to thank Doug MacMahon for all that he has done to make the Parkinson’s Academy and the Masterclasses the huge success they are. My first recollection of what might be possible came after an SpR study day held in Birmingham in 2001. We had stretched the envelope somewhat and strayed from delivering factual content into issues around personal development and how it might underpin service development. I recall sitting down afterwards with Doug and some of the colleagues he mentions in his piece. We were slightly shell shocked first at what we had attempted to do and second over how well it had been received; we had discovered that there truly was a different way of delivering clinical education; welcome to the MasterClass.

Peter Fletcher
On Swans and Swansongs: Reflections on a decade of the MasterClass

We had just entered the new millennium when a small group of like-minded geriatricians decided that something should be done to enhance the training of colleagues in the area of Parkinson's disease.

I recall a pub-lunch at the curiously named ‘Swan with Two Nicks’ conveniently situated near Manchester airport where we fleshed out ideas, not only for ‘A BGS Special Interest Group for Parkinson's Disease’ (later Movement disorders Section) but also for what soon became ‘The Academy of Masterclasses’. We thought, erroneously as it now seems, that there would only be a short term need for such a concept – maybe one or two years! How wrong we were – as the Academy goes into its second decade, over 700 graduates – from not only the British Isles, but also Ireland, the Antipodes, Canada, and Singapore. Additionally, Advanced Academies have been held to update previous graduates and a total of around 300 attendees have attended these and participated in lively discussions around more specialised controversial areas such as surgical treatments, intrajejeunal drug administration and clozapine treatment.

Our faculty has continually changed. Initially, David Stewart and John Hindle joined Peter Fletcher and myself as core faculty, and we invited an array of established experts – including Professors David Burn, David Brookes, Carl Clarke, Ray Chaudhuri, etc as guest speakers. We have been delighted to have welcomed previous graduates who now play increasingly important roles as faculty members alongside Iracema Leroi, Chris Gordon, Graeme Macphee and other colleagues too numerous to name individually – but our heartfelt thanks go to all.

Particular thanks are due to Peter Fletcher, who, alongside a busy clinical job in Cheltenham and also with his academic responsibilities in Bristol, has been a tower of strength in developing our academic agenda and methodology. He performs a thorough needs analysis prior to each meeting which is circulated to faculty and informs and hones our teaching. Almost every attender recalls his ‘Hard hat of Experience’ and the ‘Curve of expectations’ rising with the peak of inflated expectations, and falling to the trough of disillusionment as reality hits the newly appointed consultant typically around 18 months later.

We carefully evaluate the performance of all our speakers – the most memorable success was that of David Stewart who scored 100% for a humorous talk he managed to deliver without any PowerPoint slides when a technical hitch befell the projector! A lesson we could all learn from, indeed!!

Mentorship has been an important feature, and we owe a huge debt of gratitude to all our mentors around the country who have nurtured these developing specialists.

We are delighted that the Independently audited evaluation by the Royal College of Physicians of London has shown a fantastic 100% score (4/4) for all 12 MasterClass events during 2014 - something all our faculty should be truly proud of!

Sarah at RED Events (UK) Ltd has been fantastic in coping with the logistics of these meetings. Our sponsors have also been tremendous – having started with Pharmacia, then Pfizer, Boehringer Ingelheim, Teva, Lundbeck, Medtronic, MSD, Britannia and UCB. We also enjoy major support and encouragement from Parkinson’s UK.

Overall, it has been a fantastic decade, and a tremendous thrill to look back on the colleagues who have returned to their workplaces to develop their services, many of whom have appointed Parkinson's Specialist Nurses, and many now appear regularly themselves on conference agenda. I sincerely hope and expect that they will further develop with Professor David Burn who is leading the Excellence Network for Parkinson's UK. I have been privileged to have been able to be part of it, and as I bow out, I really sincerely hope that it continues to deliver first class educational experiences, and also further to grow and develop in the future.

Doug MacMahon
Consultant MasterClass Audit Awards for 2014

The consultants on the Academy for 2014 have produced some stunning work this year.

The outstanding winner of the audits overall was Dr Naomi Fox (pictured here) for her development of the Optimal online guideline and calculator for Parkinson’s (See article below).

There were three runners up:
1. A joint submission from Dr Asim Majeed and Dr Huma Naqvi Consultant Geriatricians, Sandwell and West Birmingham NHS Trust.
2. Dr David Ahearn, Consultant Physician, University Hospital of South Manchester.
3. Victoria Haunton, NIHR Academic Clinical Lecturer Geriatric Medicine, Leicester.

Development of the OPTIMAL Online Guideline and Calculator for Parkinson’s Medication in Inpatients

**Medicines management is crucial in the care of the patient with Parkinson’s when they are admitted to hospital either electively or in an emergency.**

Missed doses can impair patients’ swallow, increase their risk of aspiration, render them immobile and prone to falls and fractures and – at worst – lead to Neuroleptic Malignant-Like Syndrome, which can result in coma and death. Particular problems arise if a patient is placed nil-by-mouth, or is unable to take their usual Parkinson’s medication due to their concurrent illness.

Guidelines for inpatient Parkinson’s medication management painstakingly developed by various acute Trusts around the country are not available or collated nationally. Furthermore, existing drug conversion tables and algorithms for patients who cannot take their usual Parkinson’s medications are complex, cumbersome and carry a high risk of calculation errors. In this digital age, surely there is a better way?

The OPTIMAL online guideline and drug conversion calculator were originally developed at University Hospital Southampton and Poole Hospital, to help non-specialist clinical staff to better manage patients with Parkinson’s when admitted, better plan for elective admissions and direct staff to sources of specialist support.

With the support of Parkinson’s UK and the British Geriatrics Society (BGS) Movement Disorders Group, we hope soon to make this resource available nationally and freely, and all at the click of a mouse.

**Background**

The scenarios are all too familiar: the septic and delirious patient with Parkinson’s admitted to the acute medical unit on a Friday evening and unable to swallow their Parkinson’s medication; or the peri-operative Parkinson’s patient who is nil-by-mouth or unable to absorb their medication due to gastrointestinal issues. We as Parkinson’s specialists are often consulted some time down the line, usually after the patient has developed complications as a result of missing their medication. Worse still, signs of dopamine withdrawal can go unrecognised or be misinterpreted as deterioration in the patient’s intercurrent illness. It was just such a scenario that prompted the development of the OPTIMAL online guideline at University Hospital Southampton. to say that guidance is not already available to assist in these situations. Many trusts have developed their own clinical guidelines for medicines management in Parkinson’s, displayed on posters or intranet sites. It is the accessibility of this advice that is the problem. How many of our surgical or junior colleagues know where to find guidance on Parkinson’s medication? And if a hospital does not have its own guideline, what then?

It doesn’t stop there. Once a guideline has been located, using the accompanying tables or algorithms to convert patients’ usual medication to a dispersible preparation via a nasogastric (NG) tube or to a parenteral alternative can be arithmetically challenging even for Parkinson’s specialists, and vulnerable to error.

A nationally available guideline with an electronic drug conversion calculator has the potential to address these clinical issues, and provide an educational resource for Parkinson’s specialists and non-specialists alike.
The OPTIMAL Guideline

The basic guideline is shown in Figure 1, below. The user is led through a 7-point flow diagram reminding them of the importance of an accurate and specific drug history and prescription with attention to the patient's usual timings, drugs to avoid, and links to drug conversion calculators for patients who are nil-by-mouth or cannot absorb enteral medication. Finally there are prompts to resume the patient's usual Parkinson's medication regimen as soon as possible, and to contact a Parkinson's specialist at the earliest opportunity.

Figure 1: The OPTIMAL Guideline for the Management of Parkinson’s Medication in Inpatients

**STEP 1: OBTAIN AN ACCURATE DRUG HISTORY**

from the patient, carer, GP or Electronic Health Record. Include drug names, preparations (eg, controlled release) and usual timing of medication when at home.

**STEP 2: PRESCRIBE USUAL MEDICATION ACCURATELY AND PROMPTLY**

Prescribe their usual Parkinson's medication at the times when they would normally take them at home, NOT just standard drug round times. Ensure this medication is obtained and administered promptly.

**STEP 3: TAKE CARE TO AVOID DRUGS THAT WORSEN PARKINSONISM OR CONFUSION**

Do not give metoclopramide, cyclizine, prochlorperazine (Stemetil), haloperidol or riseridone. Domperidone (PO/PR) or ondansetron can be used for nausea and vomiting. Avoid anticholinergics.

**STEP 4: IF THE PATIENT HAS POOR SWALLOW OR IS NIL BY MOUTH**

Insert an NG tube if appropriate. Use Calculator 1 to convert the patient's usual Parkinson’s tablets to dispersible or liquid preparations, which can be given via the tube. SALT review as soon as possible.

**STEP 5: MANAGING PATIENTS WHO CANNOT HAVE ENTERAL MEDICATIONS**

For those who cannot have an NG tube or with GI failure, use Calculator 2 to convert their usual PD medication to a transdermal patch. Apomorphine injections should only be initiated by a PD specialist.

**STEP 6: AIM TO RESUME THE PATIENT'S USUAL MEDICATION REGIME AS SOON AS POSSIBLE**

Remember to prescribe the usual drug name, preparation (eg, controlled release) and timing according to their home regime. Seek help from the Pharmacist or Medicines information where needed.

**STEP 7: LIAISE WITH A PARKINSON’S DISEASE SPECIALIST AT THE EARLIEST OPPORTUNITY**

Contact a Parkinson's specialist Consultant, Parkinson's Nurse Specialist or Pharmacy.
Step 7 could be adapted by individual hospitals to include names and contact numbers for local PD specialists.

The Calculators

Worked examples are shown below for a patient who usually takes Stalevo 100/25/200 three times daily, Requip XL 4mg once daily and Half-Sinemet CR nocté. Figure 2 (below) demonstrates use of Calculator 1 to convert the patient to preparations that can be passed down an NG tube if their swallow is poor or they are nil-by-mouth, with attention to timings.

Figure 2: Calculator 1, for patients who have poor swallow or are nil-by-mouth

### Calculator for patients with an NG Tube
Select your patient's usual medication regime and timings from the drop down menu below. After each selection click "Add Drug". When you have entered all of the Parkinson’s medication in their regime click "Calculate" to see what to prescribe via the NG tube. Click "Reset" to clear all selections.

<table>
<thead>
<tr>
<th>Drug:</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requip XL 4mg</td>
<td>08:00</td>
</tr>
</tbody>
</table>

Add Drug  Calculate  Reset

<table>
<thead>
<tr>
<th>Patient's Usual Drug/Dosage</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stalevo - 100/25/200</td>
<td>08:00</td>
</tr>
<tr>
<td>Stalevo - 100/25/200</td>
<td>12:00</td>
</tr>
<tr>
<td>Stalevo - 100/25/200</td>
<td>17:00</td>
</tr>
<tr>
<td>Half Sinemet CR - 25/100</td>
<td>21:30</td>
</tr>
<tr>
<td>Requip XL 4mg</td>
<td>08:00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patient's Original Regime</th>
<th>Patient's New NG Regime</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stalevo - 100/25/200</td>
<td>Madopar Dispersible 25/100</td>
<td>08:00</td>
</tr>
<tr>
<td>Requip XL 4mg</td>
<td>Ropinirole crushed 1mg</td>
<td>08:00</td>
</tr>
<tr>
<td>Stalevo - 100/25/200</td>
<td>Madopar Dispersible 25/100</td>
<td>12:00</td>
</tr>
<tr>
<td>Requip XL 4mg</td>
<td>Ropinirole crushed 1mg</td>
<td>14:00</td>
</tr>
<tr>
<td>Stalevo - 100/25/200</td>
<td>Madopar Dispersible 25/100</td>
<td>17:00</td>
</tr>
<tr>
<td>Half Sinemet CR - 25/100</td>
<td>Madopar Dispersible 25/100 (30% dose reduction recommended)</td>
<td>21.30</td>
</tr>
<tr>
<td>Requip XL 4mg</td>
<td>Ropinirole crushed 1mg</td>
<td>22.00</td>
</tr>
</tbody>
</table>
In Figure 3, below, a similar regimen (this time with Madopar 25/100 CR rather than Half Sinemet CR) is converted using Calculator 2 to an equivalent dose of transdermal rotigotine for patients with enteral failure or in whom NG intubation is not appropriate or technically feasible.

**Figure 3: Calculator 2, for patients who cannot have an NG tube or enteral medication**

<table>
<thead>
<tr>
<th>Drug:</th>
<th>Frequency:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requip XL 4mg</td>
<td>4mg/day</td>
</tr>
</tbody>
</table>

Select your patient's usual medication regime and timings from the drop down menu below. After each selection click "Add Drug". When you have entered all of the Parkinson's medication in their regime click "Calculate" to see what to convert to. Click "Reset" to clear all selections.

Original Drug | Frequency
--- | ---
Stalevo | 100/25/200 TDS
Co-beneldopa (Madopar) | 25/100 CR
Requip XL | 4mg/day
Convert to: Rotigotine Patch 16mg/24 hrs

Please note: maximum dose of Rotigotine is 16mg in 24 hours. Do not cut patches to achieve required dose.

**Challenges and Next Steps**

**OPTIMAL** is currently being piloted locally and audits of Parkinson’s medication errors and complications before and after its introduction being undertaken. Getting to this stage has been no mean feat: reaching agreement on the guideline and drug conversions amongst local Parkinson’s steering groups, developing the online software and gaining local Drugs and Therapeutics Committee approval to list but a few of the challenges. It is for this reason that we are keen to save others from duplicating this work and are liaising with Parkinson’s UK to make the resource available nationally via their website, as part of the UK Parkinson’s Excellence Network. Both the BGS Movement Disorders Group and the Association of British Neurologists have expressed their support for this endeavour.

Fine-tuning of the resource is ongoing, and it is hoped that a mobile app could also be developed in the future. Additional functionality including the ability to obtain printouts, the potential to link in with online prescribing software and its educational role are also being explored.

**So watch this space. The future’s bright. The future’s OPTIMAL.**

**Acknowledgements:**
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James Allen, Senior Pharmacist, University Hospital Southampton NHS Foundation Trust
Suma Surendranath, Parkinson’s UK

Correspondence to: naomi.fox@poole.nhs.uk
Developing integrated care pathways in Parkinson’s – the story continues

Understanding the elements of a Parkinson’s patient pathway is vital to improve patient experience, maximising beneficial outcomes and reducing economic burden.

True integration includes vertical integration, for example from secondary to primary, or tertiary to social care; and horizontal integration, for example across different teams, agencies, or individuals. Sharing information, communicating ‘vertically’ and ‘horizontally’ and working collaboratively are key; all features that an integrated care pathway both supports and encourages. ‘An ICP is a document that describes a process within health and social care. ICPs are both a tool and a concept which embed guidelines, protocols, and locally agreed, evidence-based, patient-centred, best practice into everyday use for the individual patient.’ (Davis: 2005)

People living with Parkinson’s do not all follow the same care pathway and pathways need to be localised to meet the needs of patients and services, so it’s important to find out what your own pathways are to make sure they are not uncoordinated and fragmented. Additionally, staff resources are not always used to best effect despite working to maximum capacity.

Dr Neil Archibald (Archie) is another clinician who has this year, with the help of Neurological Commissioning Support and Lundbeck Ltd, developed his own integrated care pathway for South Tees NHS Foundation Trust. See it here:

http://southtees.nhs.uk/services/neurology/parkinsons-disease-service/pathway/

The NCS team have also been busy with the help of Prof K Ray Chaudhuri, Dr Paul Worth and Neil Archibald producing a more comprehensive Advanced Parkinson’s pathway to supplement the Deep Brain Stimulation pathway developed last year. The new Duodopa section will be launched in the New year and a further Apomorphine pathway will follow.

The Deep Brain Stimulation Pathway
(See page 8)

Sue Thomas
Chief Executive of Neurological Commissioning Support
PD Masterclass Faculty

References
Deep Brain Stimulation (DBS) Pathway

- **Patient**
- **Consultant Neurologist**
- **Neuroscience Centre**
- **Specialised functional neurosurgery unit / Consultant neurosurgeon / Consultant neurologist**
- **MDT Assessment including neurophysiological assessment, neuro-imaging, lab investigations**
- **Elective DBS surgery scheduled / DBS procedure conducted**
- **Multi-disciplinary team**
- **Satellite DBS clinic**
- **Assessment of DBS outcomes and device programming optimisation with decisions around the best medical treatment**

**DBS is a specialised service commissioned by the NHS Commissioning Board (not CCGs)**

**Referrals to adult neurospecialist centres are accepted from primary, secondary and tertiary care.**

**Where available, follow ups at local satellite clinics should take place, with liaison with the local MDT.**

**Follow ups should be regular, and adjustments should be made as needed to the device and medication.**

**Ongoing management**

**Patient unsuitable for DBS**

**Post op assessment**

**Consultant Neurologist**

**GP**

**Consultant Neurologist**

**Neuroscience Centre**

**Specialised functional neurosurgery unit / Consultant neurosurgeon / Consultant neurologist**

**MDT Assessment including neurophysiological assessment, neuro-imaging, lab investigations**

**Elective DBS surgery scheduled / DBS procedure conducted**

**Multi-disciplinary team**

**Satellite DBS clinic**

**Assessment of DBS outcomes and device programming optimisation with decisions around the best medical treatment**

**Ongoing management**

**Patient unsuitable for DBS**

**Follow ups should be regular, and adjustments should be made as needed to the device and medication.**

**Where available, follow ups at local satellite clinics should take place, with liaison with the local MDT.**
Parkinson’s Excellence Network

The new UK Parkinson’s Excellence Network launching on February 3rd 2015 in London will bring together health and social care professionals to transform the care that people with Parkinson’s receive.

It will be the one-stop-shop for Parkinson’s education, collaboration, evidence and resources to drive service improvement.

This dynamic network provides an unprecedented opportunity to share expertise, and to work alongside peers, and people affected by Parkinson’s, to develop good practice.

From early 2015, key tools, education and opportunities for professionals will be shared online, including:

- The UK Parkinson’s clinical audit - the recognised quality improvement tool in the field of Parkinson’s
- Evaluation, benchmarking and service improvement tools
- Up-to-date evidence to underpin clinical practice
- Information about education and professional development opportunities
- Chance to influence through campaigns and debate
- Opportunities for collaboration in research and service development
- Q&As with leaders in Parkinson’s care
- Opportunities for peer-to-peer support and networking
- Tools to improve skills in involving users to shape services

The Excellence Network is championed by leading professionals, with internationally renowned neurologist Professor David Burn as the network’s clinical director.

To find out more contact professionals@parkinsons.org.uk.

Duodopa Update

Duodopa survey

Parkinson’s UK received 63 responses to their survey of neurologists and geriatricians on their experiences of accessing funding of Duodopa which closed at the end of September. The key finding was that applications for funding for Duodopa are being made due to no other viable treatments being available.

- The process of making the applications is very time-consuming – 10 hours per person was mentioned more than once – and obviously takes the clinician away from other activities

- Duodopa has made a significant difference to those able to access it – one quoted “Completely life changing for one patient who had failed on apomorphine - improved her motor control and independence, reduced her care needs and she indicated it ‘gave her back her life’. Improvement noted in all other patients in terms of motor control. Significant improvement in neuropsychiatric complications by facilitating withdrawal of apomorphine/other meds.”
Many unsuccessful applications were because patients did not fulfil the criteria for exceptionality although as one clinician reported “no-one seems to know what these criteria would be.”

The impact of not receiving Duodopa is wide-reaching:

“Loss of all hope. We have no other treatment options for those who were unsuccessful.”

“Decline in moral. Loss of faith in our healthcare system. Continued struggle with disabling symptoms of advanced PD with no prospect currently of any likely improvement.”

“They have had to continue on oral drug therapy with ongoing compromises in function and deteriorating physical and mental health and significant dependence on family or external carers.”

In spite of the difficulty, many clinicians would still apply for funding for Duodopa as it needs to be evidenced that this treatment is still required: “Will continue to apply, even though I feel at present that there is an automatic policy of rejection for the rest of this financial year (a stalling process), as there are patients who will benefit from this treatment. The more applications that are submitted, the sooner will NHS England realise that the funding process has to be changed.”

Parkinson’s UK are using the responses in their campaigns and parliamentary work.

Developing a Guideline for the inpatient management of patients with PD

Like all those who attended the PD Masterclass in 2014, I left the first module challenged, enthused, and motivated to undertake a quality improvement project within my own NHS Trust. It quickly became apparent that the best QIPP would be to develop a local guideline for the inpatient management of Parkinson’s patients; the need for this having been highlighted by the sub-optimal management of several Parkinson’s patients recently admitted to the Trust.

I first discussed my plans for an inpatient guideline with my medical, nursing and pharmacy colleagues across the Trust who share an interest in Parkinson’s. This proved to be a key first step; there were a wealth of differing experiences and ideas, and an infectious mutual desire to make things better. Together we decided that the QIPP should have four main components: The first step should be to establish the scale of the problem within our Trust; how many patients with Parkinson’s are admitted each year, and why? Once this data was known, a retrospective audit of their inpatient care should be conducted. In tandem with the audit, a guideline should be developed to support the management of Parkinson’s inpatients. In due course a re-audit should then be undertaken.

Coding records were used to establish baseline data regarding the number of Parkinson’s admissions to the Trust each year. In brief, we identified all patients discharged from all specialties with a coded main or co-morbidity diagnosis of Parkinson’s. Although evaluation of the data highlighted several coding inaccuracies, and there was a concern that we might be missing some patients due to the omission of Parkinson’s as a coded co-morbidity, our data suggested that there were approximately 1000 Parkinson’s related admissions to University Hospitals of Leicester NHS Trust in 2013, two thirds of which were emergency admissions and one third elective admissions. Common reasons for emergency admissions were respiratory disorders including pneumonia and lower respiratory tract infections, cardiac disorders, urinary tract infections and falls. Importantly, a significant number had also presented with surgical and psychiatric diagnoses. Elective presentations were most commonly for insertion and changing of urinary catheters, surgical and orthopaedic procedures, and oncology related disorders. The average length of stay was 10.1 days and 1.5 days for emergency and elective admissions respectively. Readmission rates were disappointingly high; 208 within 28 days. This data raised several important issues. Firstly, Parkinson’s patients are presenting to a range of specialties and services across the Trust and not just to general medicine and neurology. Secondly, elective patients are often staying in hospital overnight, which has implications for the administration of medications. Length of stay and readmission data suggested room for improvement in service provision.

In devising an audit tool to evaluate these findings in more detail, I discussed with my Masterclass mentor who kindly shared his own inpatient audit tool which I modified for use in my own Trust. I also checked with our Trust audit team who informed me that an inpatient Parkinson’s audit had been conducted in 2010. By obtaining the details for this, I was able to incorporate some of their standards
to enable comparison.

In drafting the guideline, discussion with colleagues across the Trust was again key. We were all agreed that the guideline should be an ‘acute’ guideline, able to support the management of all PD inpatients, and not simply a ‘nil by mouth’ guideline. We are very grateful to colleagues from across the UK, many from the PD Masterclass, who shared their own guidelines with us. Reviewing these proved invaluable, and made us look critically at other areas of our service.

The audit is now underway and the guideline is being refined. We hope to launch the guideline Trust wide in February 2015, to coincide with the launch of the Parkinson’s Excellence Network, when PD will be highly topical. Plans for the future include an educational programme for nurses and junior doctors and aspirations to link up with mental health services. The quality improvement project has become a programme!

**Key points:**

1. Be clear about what you want to achieve and why. If this is a guideline, is it a nil by mouth guideline, or something with a broader scope?

2. Establish what’s been done already; are there pre-existing audits or guidelines within your Trust?

3. Involve all potentially interested parties within your area. Differing backgrounds, ideas and experiences are invaluable and mutual enthusiasm is infectious. Meet regularly.

4. Obtain baseline data, although be aware that coding data may not always be accurate and reliable.

5. Don’t be afraid to ask colleagues elsewhere to share their own examples of audit tools and guidelines; the PD community is friendly, supportive and helpful and there is a current drive to avoid duplication of work.

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**Continence assessment in Parkinson’s Disease**

In Parkinson’s disease the non-motor symptoms which accompany and often precede motor features are increasingly recognised as a significant predictor of patients’ disease-perception and quality of life (1,2). Urinary tract dysfunction is a very common non-motor symptom which has been highlighted as being under-diagnosed and undertreated in clinical practice(3,4). It encompasses a spectrum of urinary symptoms, from nocturia and frequency (relatively benign, although in clinical practice these commonly contribute to falls), to full incontinence. Such conditions can be highly functionally limiting, patients may feel embarrassed, be unable to travel far in case of accidents, and become socially isolated; quality of life is therefore substantially reduced (5). Urinary incontinence is also a common factor for admission to a care home. For all these reasons, effective and ongoing management of lower urinary tract dysfunction is highly desirable.

Current NICE guidance for Parkinson’s disease (GG35) (4) discusses urinary tract dysfunction but there is only limited focus on assessment of this aspect of care. However, NICE guidance (CG148) for management of neurological disease (including Parkinson’s disease) (6) recommends that urinary tract function should be assessed throughout the period of care: as a new patient, at routine assessment at least every three years, and in the case of any changing symptoms. A full history and physical examination should be taken and any particular Parkinson’s-related challenges noted: for instance, mobility and easy access to the toilet. In symptomatic patients, urinalysis should be performed, a post-void residual volume measured, and a three day frequency/volume chart completed.

Our concern was that continence issues may not be treated adequately in clinical practice. To investigate this, assessment of urinary symptoms at a multidisciplinary geriatrician-led movement disorders clinic was audited.

**Aims**

1. Investigate how closely clinicians are adhering to NICE CG148 in the assessment of urinary tract dysfunction.

2. Examine how clinicians can improve the standard of assessment.

**Audit standards – to ascertain whether:**

1. Patients are asked whether they suffer from lower urinary tract dysfunction.

2. In patients suffering with lower urinary tract dysfunction the type of dysfunction is further characterised.

3. In patients suffering from lower urinary tract dysfunction symptoms are further investigated – as appropriate a dipstick test, a bladder scan, and/or the completion of a frequency/volume chart. If not, the reasons for this should be noted in the patient’s record.

4. Written or verbal information about their continence management plan is provided to patients suffering from lower urinary tract dysfunction.

**Results**

20 consecutive patients attending clinic were audited. All 20 (100%) patients were asked about the presence or absence of lower urinary tract symptoms including incontinence. 18 (90%) were found to have symptoms. Of these, 33% had a urine dipstick test, 11% underwent a bladder scan, and none had a frequency/volume chart completed. In 7 patients with urinary dysfunction, their symptoms were...
Further categorised (stress, urge, functional, mixed etc) and in 5 of these (71%) some form of bladder management plan was commenced. The corresponding figure for treatment in the remaining patients whose dysfunction was not further characterised was only 18.

Finally in only 22% of patients suffering from urinary tract dysfunction there was a record of the patient having received written or verbal bladder management information.

Discussion
It is clear that the majority of patients suffering symptoms of urinary incontinence are not being assessed according to NICE guidelines. Urinary tract dysfunction can be a difficult condition to assess, often reliant on patients’ self-reporting of subjective symptoms. However, these results also show that while continence problems are identified in patients, further investigation of symptoms is suboptimal and urinary tract dysfunction is being undertreated.

Future plans
1. Education: Raising awareness amongst members of the Parkinson’s team (and beyond) of the need for more detailed assessment of urinary tract dysfunction through education sessions including presenting these results.
2. Proforma: Developing the standard patient assessment form so that consideration of further investigations (post-void residual volume ultrasound scan, urine dipstick test, and frequency/volume chart) are prompted in patients with urinary tract dysfunction.
3. Improved access to investigations: The presence of a new bladder scanner at the clinic will make the investigation of symptoms quicker and easier.

More detailed and accurate clinical assessment of patients’ urinary tract symptoms should lead to more focused management. The initial assessment and interventions recommended by NICE do not require highly specialised equipment and can be carried out as part of routine input in a multidisciplinary clinic. Ignoring treatable or potentially reversible urinary tract symptoms represents a wasted opportunity to greatly improve quality of life, without a large outlay of resources, for patients living with this chronic disease.

Bethan England, 4th year medical student, University of Manchester

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References
(4) National Institute for Health and Care Excellence. Parkinson’s Disease: Diagnosis and management in primary and secondary care. 2006;CG35.
Improving Inpatient Management of Parkinson’s at SWBH

**Background**

The 2006 NICE guidelines for Parkinson’s offer advice for the best management of hospital inpatients with Parkinson’s. The guidance advises that Parkinson’s drugs should not be withdrawn abruptly or changed suddenly on admission to hospital. This involves making every effort to give Parkinson’s drugs at the usual time and at the patient’s usual dosage. Adjustments to their medication or their normal regime should only occur after discussion with a Parkinson’s specialist. The guidance also advises that Speech and Language therapy (SLT) input should be available to inpatients where necessary. The importance of local application of NICE guidelines is well recognised and has been audited nationally.

**Aim**

The aim of this audit was to evaluate our Trust’s Parkinson’s Service against the national guidelines. Currently, within the Trust there are no local guidelines in place for the inpatient management of this complex disease.

**Method**

The Trust’s coding department identified all patients with Parkinson’s that had been admitted over a one year period between July 2013 - July 2014. 207 of the 560 patients identified were selected for audit with the remaining 353 patients excluded because they were: elective admissions, admissions less than 24 hours or where a formal diagnosis of Parkinson’s had not been made.

Data was collected by retrospective audit of 40 admissions, using a proforma tool based on NICE guidelines for Parkinson’s.

**Results**

**PD Medications administration**

117 doses of various Parkinson’s medications were missed during in patient stay. 37% of patients brought their medication into hospital with them. Doses were also missed due to incomplete prescribing in 30% of cases, despite 92% of patients had a medication list available at the time of admission; either they were not prescribed or were prescribed incorrectly. Of those prescriptions that were incomplete, the majority took more than 48 hours to be corrected. Where the drug was non-formulary, it was often not immediately available, leading to delays in receiving their medication.

**Referrals to Parkinson’s Specialists**

Patients were admitted for a range of clinical reasons and were managed by a mix of specialities. Of the 40 patients, 9 were managed on elderly care wards with direct input from a Parkinson’s specialist with the remainder of patients managed on other wards. 65% of patients were not referred to a Parkinson’s specialist. However, where referrals were made to a Parkinson’s specialist, the time to review was efficient: 50% of referrals being made were within one day of admission and 57% were reviewed by a Parkinson’s specialist less than 48 hours later.

**Nil-By-Mouth Decisions**

Nearly half of the patients were made nil-by-mouth at some point during the admission. However, only 37.5% were referred to SLT and, of those, less than half were seen within 24 hours. Alternative routes of Parkinson’s medications were considered; of the 19 patients nil-by-mouth, 8 had nasogastric tube in place, 5 had Madopar dispersible tablets and 6 had a Rotigotine patch.

**Discussion**

Parkinsons medications are being missed inappropriately. There is a lack of referral to Parkinson’s specialists in the Trust even though Parkinson’s is a very complex disease to manage. These findings reflect a lack of knowledge of Parkinson’s management amongst allied healthcare professionals and need for development of an inpatient pathway.

**Recommendations**

The Trust is developing an inpatient management of Parkinson’s pathway to improve patients’ continuity of medications on admission and to facilitate the direct admission of Parkinson’s patients to elderly care wards which have input from a Parkinson’s specialist. This will be made available to access via the Trust’s intranet. It is also necessary to liaise with pharmacy and the drug and therapeutic committee to improve availability of Parkinson’s medications on wards.

To improve understanding of Parkinson’s, the audit findings were presented on the elderly care ward alongside an informative poster to educate allied healthcare professionals about Parkinson’s. Ward based education on nil-by-mouth decisions took place to ensure nurses are aware of the importance of prompt referral to SLT, who should prioritise Parkinson’s referrals to be seen within 24 hours. To improve knowledge of Parkinson’s amongst junior doctors, teaching sessions will be delivered to raise awareness on the complications associated with abrupt withdrawal or sudden changes of Parkinson’s medications.

E Baker, A Majeed, N Afshin, H Naqvi

**References:**

1. Parkinson’s disease -- Diagnosis and management in primary and secondary care, NICE clinical guideline 35, 2006
2. Parkinson’s UK Clinical Steering Committee, National Parkinson’s audit 2012.
Dates for the forthcoming Masterclasses are below. Do encourage colleagues to attend!

Classic Masterclass is 2 - 6th June and audit follow up 26th November 2015 (both modules must be completed).

Specialist Registrar Masterclass 16/17th September 2015.

Both meetings in 2015 are being held centrally in Sheffield.

Additionally a Complex Care MasterClass roadshow is being held in Glasgow, 12th March, 2015 - see page 15 for the programme. This is one of a series of short MasterClasses being held in multiple locations throughout the UK to update clinicians.

All bookings can be made via the academy website where there are programmes and application forms.

http://www.parkinsonsacademy.co.uk

Academy enquiries, Duncan Gillett - Neurology Project Manager - duncangillett@neurologyacademy.org
telephone 0845 3381725
### The Parkinson’s Academy

#### Complex Care MasterClass Roadshow

**Draft Programme - Date: 12th March 2015**

**Mercure - Glasgow City Centre**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>09:30</td>
<td>Registration &amp; refreshments</td>
</tr>
<tr>
<td>10:00</td>
<td><strong>Welcome</strong></td>
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<tr>
<td></td>
<td><em>Dr Connor Maguire, MasterClass Faculty</em></td>
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<tr>
<td>10:15</td>
<td><strong>Most recent developments in advanced Parkinson’s therapies and the MDT team</strong></td>
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<tr>
<td></td>
<td><em>Lucy Mooney, Lead Movement Disorder Nurse Specialist / Senior Research Nurse, Bristol</em></td>
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<tr>
<td>11:30</td>
<td>Refreshments</td>
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<tr>
<td>11:45</td>
<td><strong>Practical aspects of the management of depression, psychosis and dementia - Interactive session / Part 1</strong></td>
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<td><em>Dr Iracema Leroi, clinical senior lecturer in the Institute of Brain, Behaviour and Mental Health (University of Manchester) and honorary consultant in older adult psychiatry.</em></td>
</tr>
<tr>
<td>12:45</td>
<td>Lunch and networking</td>
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<tr>
<td>13:30</td>
<td><strong>Practical aspects of the management of depression, psychosis and dementia - Interactive session / Part 2</strong></td>
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<tr>
<td></td>
<td><em>Dr Iracema Leroi, Manchester</em></td>
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<tr>
<td>14:30</td>
<td>Refreshments</td>
</tr>
<tr>
<td>14:45</td>
<td><strong>Managing late stage disease - drugs/invasive/options/surgery</strong></td>
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<tr>
<td></td>
<td><em>Dr Richard Davenport, Edinburgh</em></td>
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<tr>
<td>16:15</td>
<td><strong>The DBS Service in Glasgow</strong></td>
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<td></td>
<td><em>Mr Laurence Dunn, Consultant Neurosurgeon, Glasgow</em></td>
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<tr>
<td>16:30</td>
<td><strong>Parkinson’s Update</strong></td>
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<tr>
<td></td>
<td><em>Katherine Crawford, Scotland Manager, Parkinson’s UK</em></td>
</tr>
<tr>
<td>17:00</td>
<td>Closing remarks and depart</td>
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</tbody>
</table>

*Medtronic have provided funding to support this meeting. Medtronic have no input into the content/programme or organisation of this educational meeting.*