Medication Management

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Medications

- Levodopa/Carbidopa (Sinemet)
- Levodopa/Benserazide (Prolopa)
- MAO Inhibitors
  - Rasagiline (Azilect)
  - Selegiline
- COM-T Inhibitors:
  - Comtan (Entacapone)
- Dopamine Agonists
  - Pramipexole (Mirapex)
  - Neupro patch (Rotigotine Patch)
- Anticholinergics
- Amantadine

Contraindicated with PD

- See cmdg.org for more complete list
- Example:
  - Any anti-dopaminergics
    - **Haldol** (Haloperidol)
    - **Stemetil** (Prochlorperazine)
    - **Maxeran** (Metochlopromide)
  - Etc.

Avoid Drugs that are Contraindicated in Parkinson's:

The term "contraindicated" essentially means that the drug in question should not be given to a patient. In the parkinsonian, the basic problem is the chemical nature of the disease itself. Many drugs alter the brain's dopamine system and may not be recognized as having the potential to markedly alter the symptoms of Parkinson's simply because the drugs are often used for the treatment of non-neurological conditions. Every patient with Parkinson's should have a list of these agents available for their physician's reference.

Drug Category	Trade Name	Generic Name
Antipsychotic (used for agitated confusion)	Haldol	Haloperidol
	Trilafon	Perphenazine
	Thorazine	Chlorpromazine
	Stelazine	Trifluoperazine
	Prolixin, Permitil	Flufenazine
	Navane	Thiothixene
	Mellaril (high dosage)	Thioridazine
Antidepressant	Triavil	Combination of Perphenazine & Amitriptyline
Antivomiting	Compazine	Prochlorperazine
	Reglan, Maxeran	Metoclopramide
	Torecan	Thiethylperazine
Miscellaneous	Serpasil	Reserpine
	Nitoman	Tetrabenazine
Possible / Potential Contraindicated Meds		
Blood Pressure Meds	Aldomet	Alpha-methyldopa
Anti-Seizure Medication	Dilantin	Phenytoin
Mood Stabilizer	Lithium	Lithium
Anti Anxiety	Buspar	Buspirone

Information in Table above taken from The Transmitter Vol. 7, No. 4, Oct 1990.

Medication Management

- Individualized treatments
- Timing
- Dosage
- Maximizing “On” time
- Side Effects
- Alternative treatments
  - DBS
  - Exercise
- Co-Morbidities
  - Contraindicated medications
- ***COMPLEX!!***

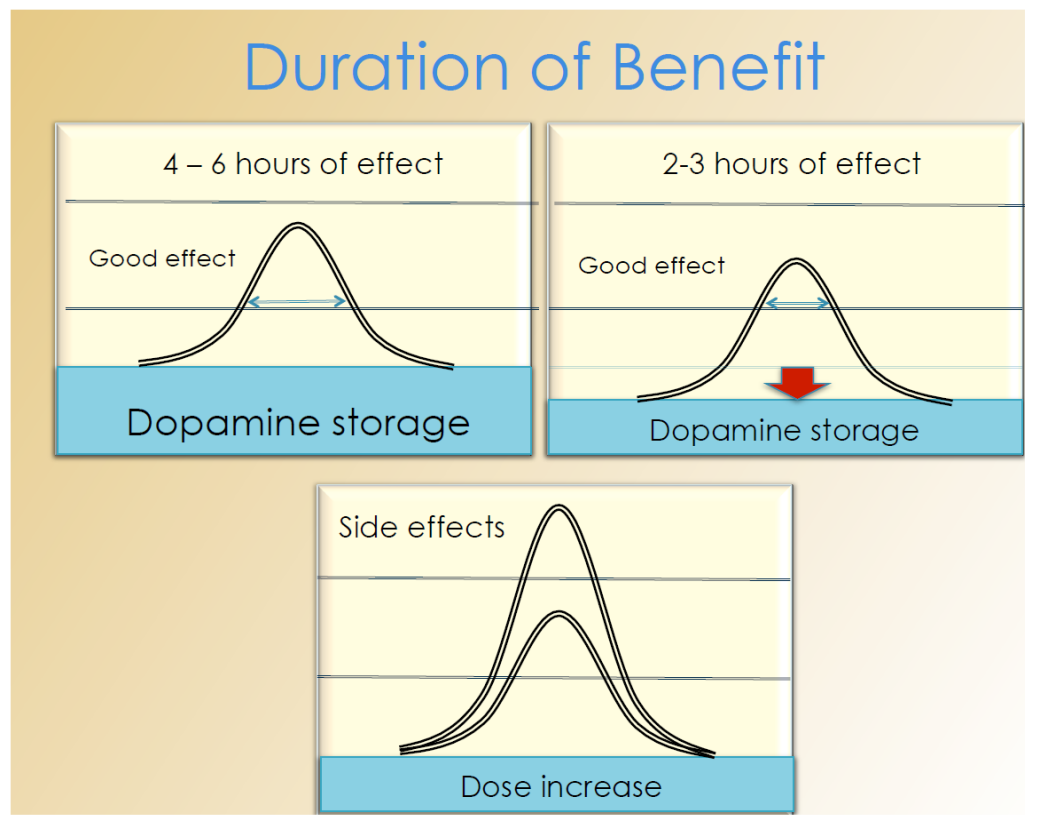
Medication Management

- Stress and Fatigue will make symptoms worse
- Hospital stays
  - Less sleep
  - Stressful situation
  - Illness puts stress on body
- PCH admissions
  - New environment
  - Loss of independence
  - Worry for future

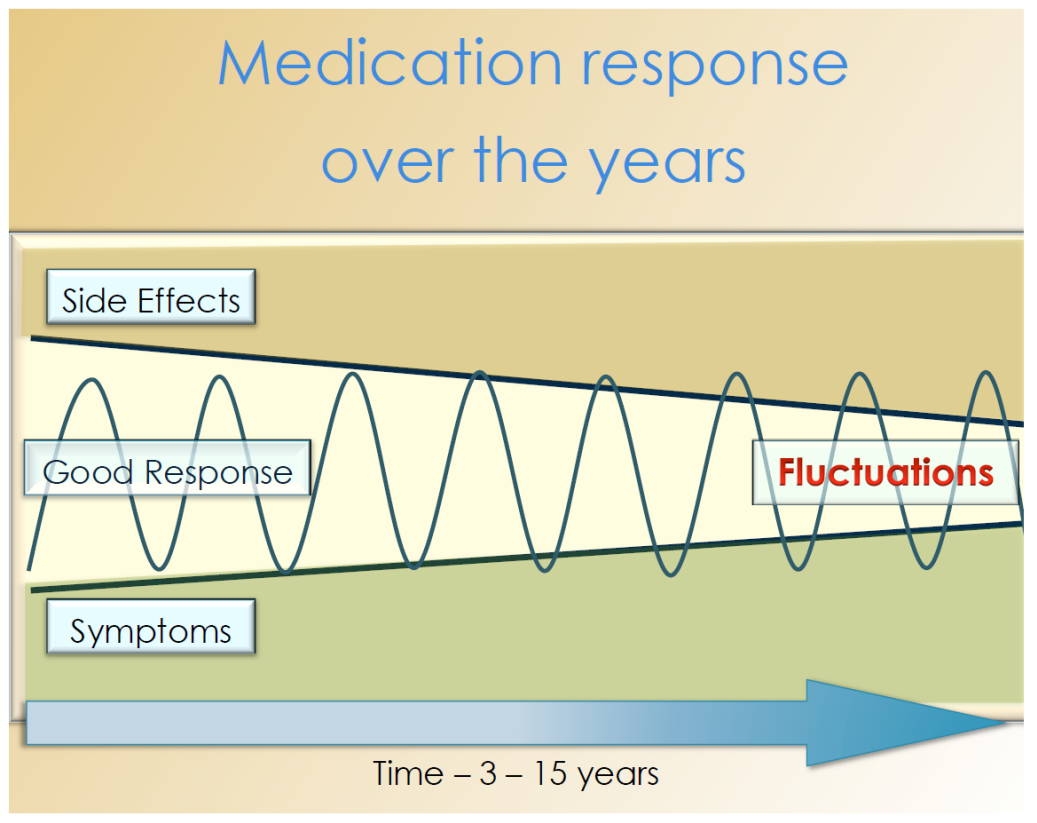
"ON-OFF" Phenomenon

- AKA: Motor fluctuations
- ON: medications are working well
  - Generally 30 min to 1 hour after taking Levodopa
  - Last about 4-6 hours

"ON-OFF" Phenomenon



"ON-OFF" Phenomenon



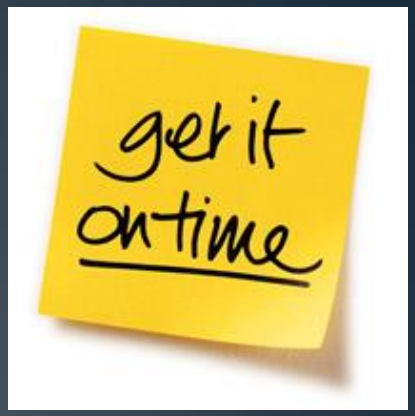
"ON-OFF" Phenomenon

- OFF: medications wear off and a return of symptoms occur including tremor, stiffness, **anxiety**, depression, etc.
  - Just before next dose of Levodopa
- Unexpected off periods may occur
  - Ineffective dose, altered timing, high protein lunch, gastric paresis, constipation, etc.

“ON-OFF” Phenomenon

Dyskinesias

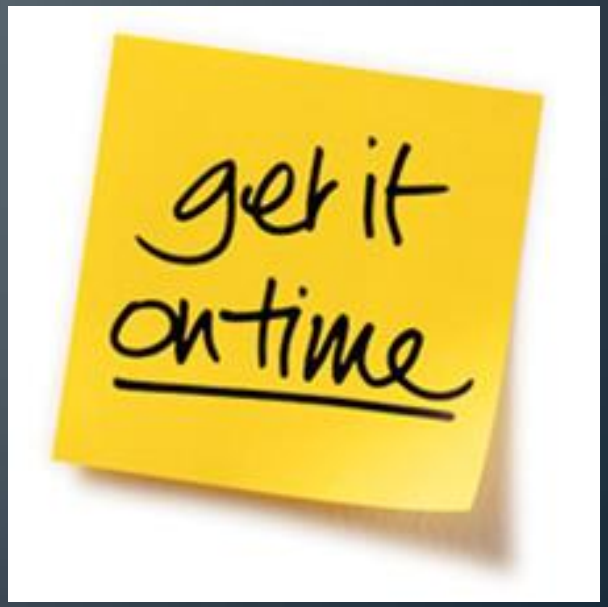
Timing Is Everything



- Administration of medications on time is crucial
- **ON TIME – EVERY TIME!**
- Keep to patient's schedule!
- Once a medication routine is disrupted, it may take hours, days or even weeks to recover to previous independence
  - Uneven release of dopamine means that a person may suddenly not be able to move, get out of bed, walk down the hall, feed themselves, etc.

Timing Is Everything

- When you keep to patient's schedule
  - Maximize "ON" time
    - Allows for better PT, feeding etc.
  - Lessen iatrogenic risks (ie. Fractures)
- Maximize their independence and minimize workload of staff



Neuroleptic Malignant Syndrome

- Never abruptly stop medications without consultation of MD or Movement disorder specialist
- NMS:
  - Muscular rigidity (seizure like)
  - Elevated body temp
  - Mental changes
  - Increased CK
- Neurologic emergency

Maximizing "ON" Time

- Done over years of minor changes
- Balance "On" time with side effects
- Too much:
  - Dyskinesias
  - Psychosis
  - Confusion
- Too little:
  - Poor mobility
  - Tremor
  - Stiffness
  - Sweating
  - Cramping

Maximizing "ON" Time

- Exercise!!
  - Slows the progression – Neuroprotective!!
  - Better outcomes than medications
  - Optimize independence
- Early rehab
- Daily activity
  - Walking, Stretching, Strengthening
- Maintain mobility the longest
- Use the "ON" time to the PWP benefit
  - Exercise, PT, Feeding, etc.

Maximizing "ON" Time

- DBS
  - Considered when medication fails to maintain a reasonable quality of life
  - Disabling dyskinesias
  - Motor fluctuations
- Gives some more balance of "ON" time throughout the day

Get It On Time

Get It On Time Campaign

- The Get It On Time campaign was adapted from the program started in the UK
- The idea is to make sure people with Parkinson's in hospitals and care facilities get their medications On Time, Every Time, as the implications of not getting their medications on time are substantial

Statistics

- Study done in the UK
  - People admitted to hospital on surgical ward
  - PD medications missed/late
    - 71%
      - *0.7 missed doses per patient per day*
  - Anti-dopaminergic drugs in 41%
  - Complications in 69%
    - Confusion, hallucinations and agitation in 52%
    - Motor deterioration in 7%
    - Falls in 10%
    - Infection, cardiac arrhythmias and renal impairment in 26%
- Study also done in Calgary
  - PD medications missed/late
    - 80%

Derry, Shah, Caie & Counsell.. Postgraduate Medical Journal 2010; 86: 334-337.
Guttman, Kish & Furukawa.. Canadian Medical Association Journal Feb 4, 2003 vol. 168 no. 3, 293-301

Statistics

- The PSC has stated that people with PD as compared with an aged matched control group were:
  - 1.4 times more likely to be admitted to hospital
  - LOS 1.2 times longer
  - Drug costs 3 times higher
- According to CIHI
  - The LOS for people with PD was 6-10 days longer then all other acute care patients
  - Readmission rates were higher
    - Within 1 week of discharge 4.4%
    - Within 1 month 11.7%
    - Compared: 3.8% and 9% respectively

Statistics

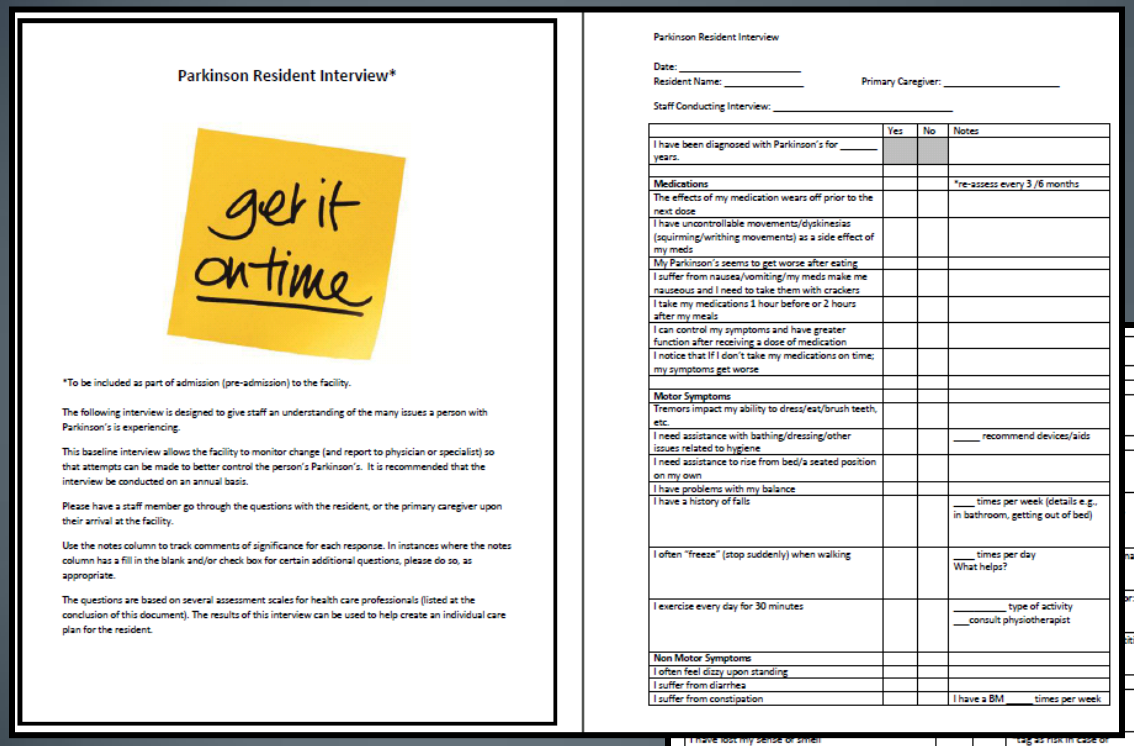
- Rehabilitation showed differences as well
- CIHI determined that people with PD who are getting in-patient rehab:
  - LOS was 6 days longer
  - Level of functioning was lower upon admission to rehab
  - Function level improved slower
  - Upon discharge their functional improvement did not improve as well as those who did not have PD
  - 33% were transferred PCH
  - 16% were readmitted back to an acute care hospital.

Get It On Time Campaign

- "The Get it on Time" program cost effective and straightforward approach to avoiding unnecessary overextended stays.
- We can accomplish this by:
  - Giving the staff working with them a better understanding of PD and why the timing their drugs is so crucial
  - Visual reminders
  - Open dialogue with patient and staff to create care plan that works for both
  - Primarily to have people with PD get their medications On Time, Every Time to optimize their recovery and quality of life.

Visual Reminders

Parkinson Resident Interviews



Parkinson Resident Interview*

get it on time

*To be included as part of admission (pre-admission) to the facility.

The following interview is designed to give staff an understanding of the many issues a person with Parkinson's is experiencing.

This baseline interview allows the facility to monitor change (and report to physician or specialist) so that attempts can be made to better control the person's Parkinson's. It is recommended that the interview be conducted on an annual basis.

Please have a staff member go through the questions with the resident, or the primary caregiver upon their arrival at the facility.

Use the notes column to track comments of significance for each response. In instances where the notes column has a fill in the blank and/or check box for certain additional questions, please do so, as appropriate.

The questions are based on several assessment scales for health care professionals (listed at the conclusion of this document). The results of this interview can be used to help create an individual care plan for the resident.

Parkinson Resident Interview

Date: _____
Resident Name: _____ Primary Caregiver: _____

Staff Conducting Interview: _____

	Yes	No	Notes
I have been diagnosed with Parkinson's for _____ years.			
Medications			*re-assess every 3 /6 months
The effects of my medication wears off prior to the next dose			
I have uncontrollable movements/dyskinesias (squirming/writhing movements) as a side effect of my meds			
My Parkinson's seems to get worse after eating			
I suffer from nausea/vomiting/my meds make me nauseous and I need to take them with crackers			
I take my medications 1 hour before or 2 hours after my meals			
I can control my symptoms and have greater function after receiving a dose of medication			
I notice that if I don't take my medications on time; my symptoms get worse			
Motor Symptoms			
Tremors impact my ability to dress/eat/brush teeth, etc.			
I need assistance with bathing/dressing/other issues related to hygiene			_____ recommend devices/aids
I need assistance to rise from bed/a seated position on my own			
I have problems with my balance			
I have a history of falls			____ times per week (details e.g., in bathroom, getting out of bed)
I often "freeze" (stop suddenly) when walking			____ times per day What helps?
I exercise every day for 30 minutes			_____ type of activity ___consult physiotherapist
Non Motor Symptoms			
I often feel dizzy upon standing			
I suffer from diarrhea			
I suffer from constipation			I have a BM _____ times per week
I have lost my sense of smell			*tag as risk in case of smoke/fire/fumes
Cognitive			Mental Status Assessment done/on file?
I often feel sad			___ consult re: medication for depression?
I feel anxious at times			
I have a problem with gambling (or other obsessive behaviour)			
I get annoyed or angry at times			
I have difficulty concentrating			
I keep forgetting words and events			
I see images of animals/small children playing around me or other things that may not really be there			_____ per day _____ during night _____bothersome or benign
I have difficulty following a conversation/staying engaged in a conversation			
I would like a consultation regarding administering my own medication			

List medications, dosages, and **the time of day when you normally take each dose.**

Medication	Dose	Time(s)

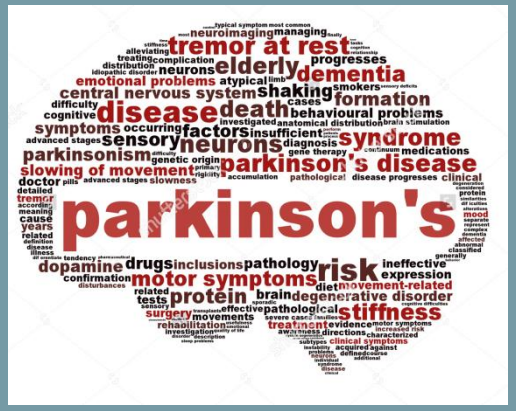
*Parkinson Resident Interview, Developed by Parkinson Society Central Northern Ontario Region, 2011

This interview has been developed as an amalgamation of existing Parkinson assessment techniques and long term care resident measurements, including UPDRS, PDQ39, 'Parkinson Problem Profile' created by Dr. Doug Hobson and RAI-MDS.

'Get it on Time' is a national program of Parkinson Society Canada based on design and text created by Parkinson UK.

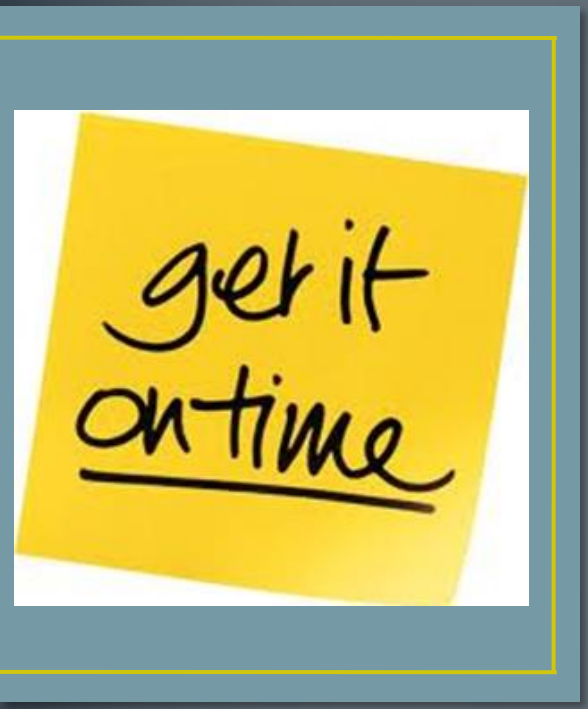
Hospital Management Kit

Summary

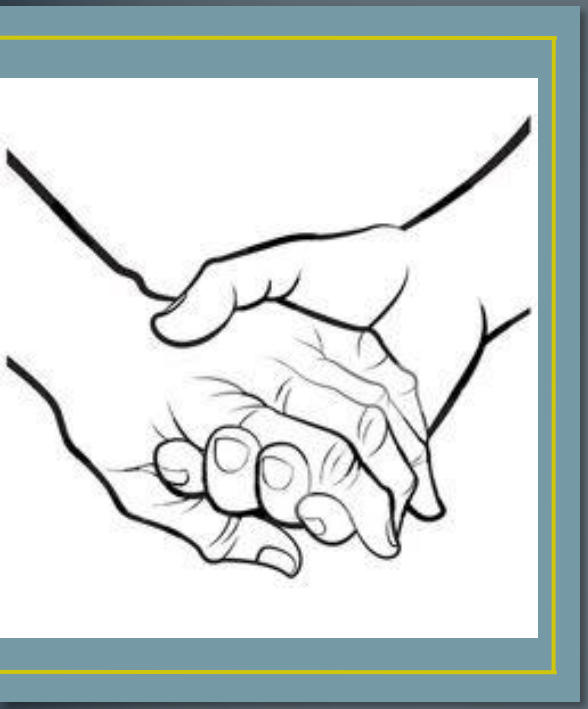


- In Summary
  - PD is more than just a movement disorder
    - Motor, cognitive and emotional changes
    - Non-Motor symptoms
  - PD is progressive
    - Needs change over time
  - PD causes loss
    - Loss of self-image, independence, control
  - PD treatment is complex
    - Very individual, side effects, progressive

- Timing is crucial
  - Timing of Medications
    - ON TIME – EVERY TIME
  - Give Adequate Time
  - Give one task at a time
  - Maximize “ON” Time
  - Use “ON” time to its fullest
    - Exercise, PT, etc. when “ON”



- Get It On Time Campaign
  - Spread the word
- Prevent unnecessary extended hospital stays
- Lessen LOS
- Lessen complications
- Improve quality of life



- Open dialogue
  - Create a care plan that works for both patient/client & staff member
  - To get medications On Time – Every Time!
- Caregivers and Family
  - The important voice for PWP
  - Dealing with it for decades

Thank You!

Questions??