

Not Just the Shakes: Non-motor Symptoms in Parkinson's

Christopher Tarolli, MD

Assistant Professor of Neurology
Division of Movement Disorders
University of Rochester Medical Center

Disclosures

Grant Funding:

- BioSensics, Michael J. Fox Foundation, NIH/NINDS, American Academy of Neurology Institute

Training Fellowships:

- Medtronic, NIH/NINDS

Who am I and why Parkinson's?

Outline

1. Non-motor symptom burden in Parkinson's
2. Pain in Parkinson's
3. Autonomic symptoms in Parkinson's
4. Barriers to identifying and managing non-motor symptoms
5. Take action!

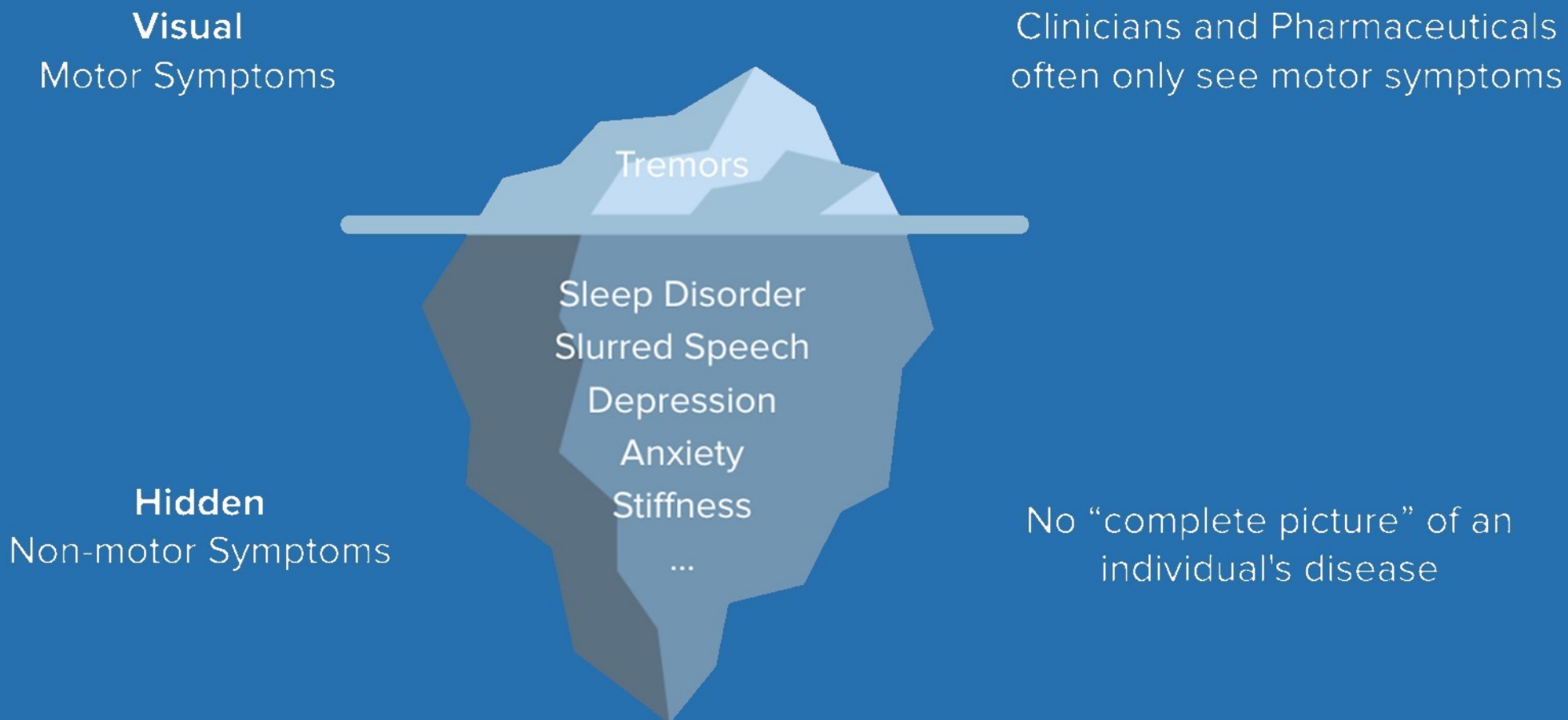
Outline

- 1. Non-motor symptom burden in Parkinson's**
2. Pain in Parkinson's
3. Autonomic symptoms in Parkinson's
4. Barriers to identifying and managing non-motor symptoms
5. Take action!

Non-motor Symptoms in Parkinson's

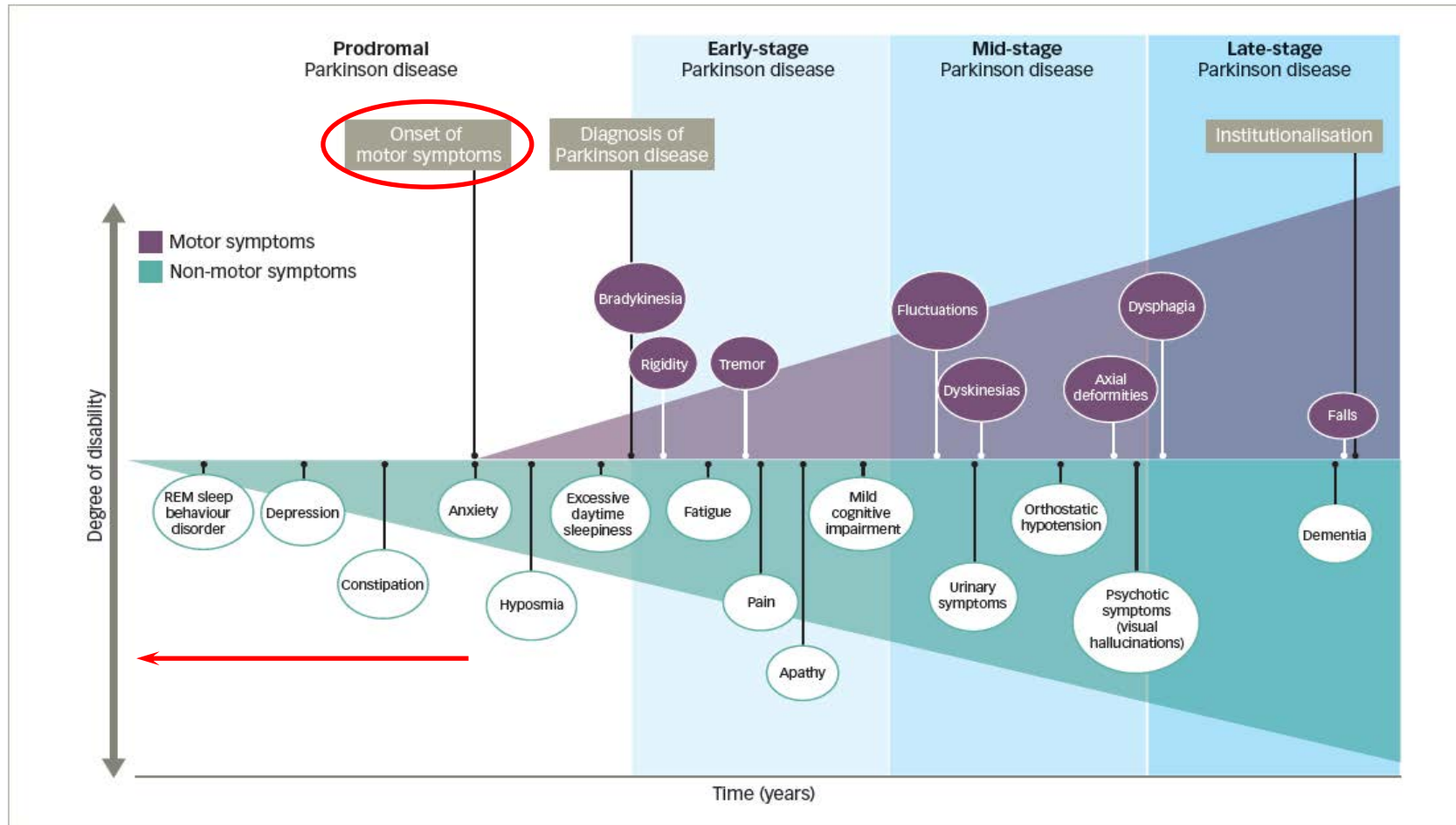
- Neuropsychiatric
- Gastrointestinal
- Sleep disturbance
- Respiratory
- Somatic
- Cognitive
- Cardiovascular
- Genitourinary
- Visual dysfunction

The Parkinson's Iceberg



Symptom Burden in Parkinson's

Figure 1: Summary of Parkinson's disease stage and motor and non-motor symptoms that predominate at each stage²⁴



REM = rapid eye movement. Adapted from Poewe et al., 2017

Takeaway: Non-motor symptoms are common, start before motor symptoms, and have a major impact on quality of life

Non-motor Symptoms in Parkinson's

- Neuropsychiatric
- Gastrointestinal
- Sleep disturbance
- Respiratory
- Somatic
- Cognitive
- Cardiovascular
- Genitourinary
- Visual dysfunction

Non-motor Symptoms in Parkinson's

- Neuropsychiatric
- Gastrointestinal
- Sleep disturbance
- Respiratory
- Somatic
- Cognitive
- Cardiovascular
- Genitourinary
- Visual dysfunction

Non-motor Symptoms in Parkinson's

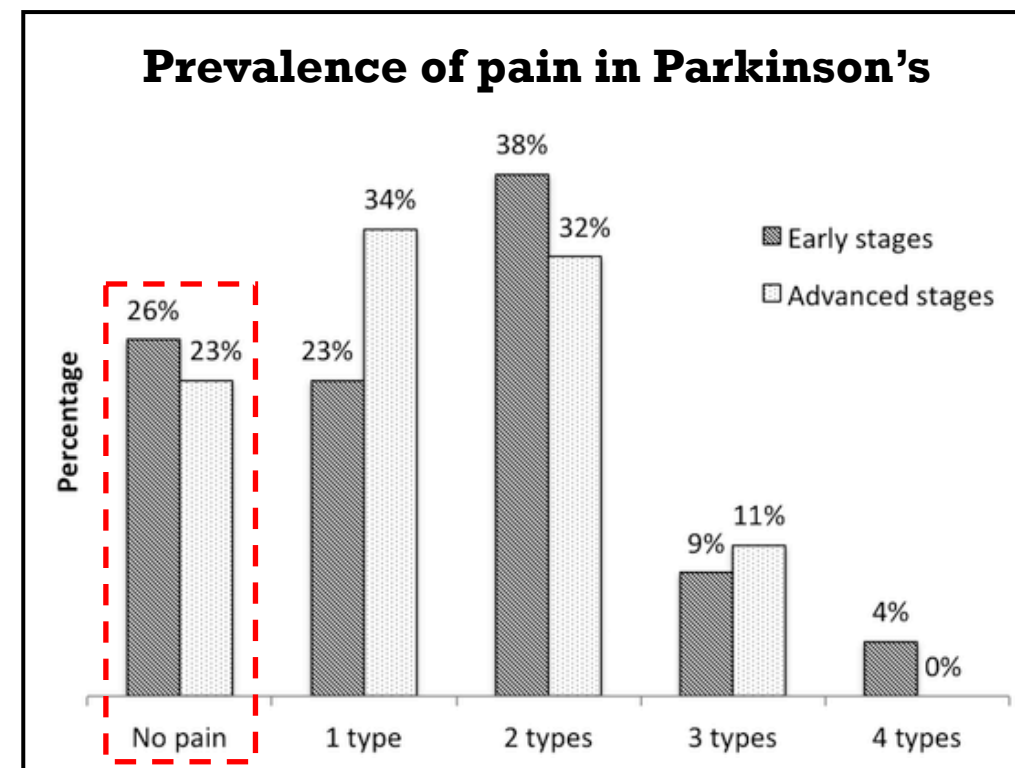
- Neuropsychiatric
- Gastrointestinal
- Sleep disturbance
- Respiratory
- Somatic
- Cognitive
- Cardiovascular
- Genitourinary
- Visual dysfunction

Outline

1. Non-motor symptom burden in Parkinson's
- 2. Pain in Parkinson's**
3. Autonomic symptoms in Parkinson's
4. Barriers to identifying and managing non-motor symptoms
5. Take action!

Pain in Parkinson's

- Pain is common!
- Many causes
 - Orthopedic issues
 - Muscle stiffness
 - Abnormal posture
 - Dystonia
 - Nerve pain
- Pain can have an impact on nearly **EVERYTHING** else!



Managing Pain in Parkinson's

- Identify the cause of pain
- STAY ACTIVE!
 - Exercise
 - Physical therapy
- Optimize motor symptom management
- Consider pharmacologic therapy directed toward the cause

Takeaway: Pain is common, and activity can help to manage it

Outline

1. Non-motor symptom burden in Parkinson's
2. Pain in Parkinson's
- 3. Autonomic symptoms in Parkinson's**
4. Barriers to identifying and managing non-motor symptoms
5. Take action!

The Autonomic Nervous System

- **Definition:** the unconscious portion of the nervous system that controls our “bodily functions”
 - **Cardiovascular:** blood pressure and heart rate
 - **Gastrointestinal:** movement of food and liquid through our stomach and intestines
 - **Genitourinary:** sexual function and urination

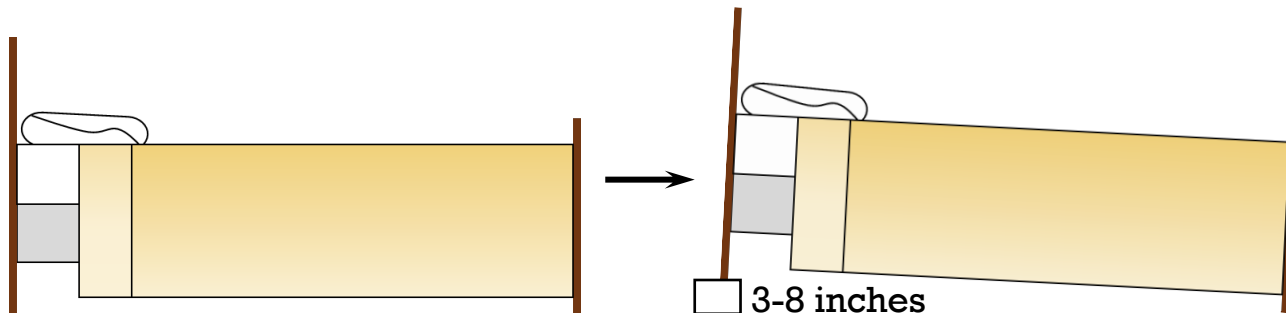
Autonomic Dysfunction: Orthostatic Hypotension

- Orthostatic hypotension: low blood pressure on sitting or standing causing reduced blood flow to the brain with changes in position
- Symptoms:
 - “Lightheadedness”
 - Fainting
 - Nausea
 - Fatigue
 - Clouded thinking
- Causes:
 - Parkinson's
 - Side effect of medications
 - Blood pressure medications
 - Parkinson's medications
 - Dopamine agonists
 - Carbidopa/levodopa

Managing Orthostatic Hypotension

- Non-pharmacologic

- Stand slowly
- Increase water AND salt intake
- Compression socks
- Elevate head of bed



- Pharmacologic

- Avoid medications that decrease blood pressure
- Artificially increase blood pressure
 - Fludrocortisone
 - Midodrine
 - Droxidopa
 - **Can increase blood pressure while lying down**

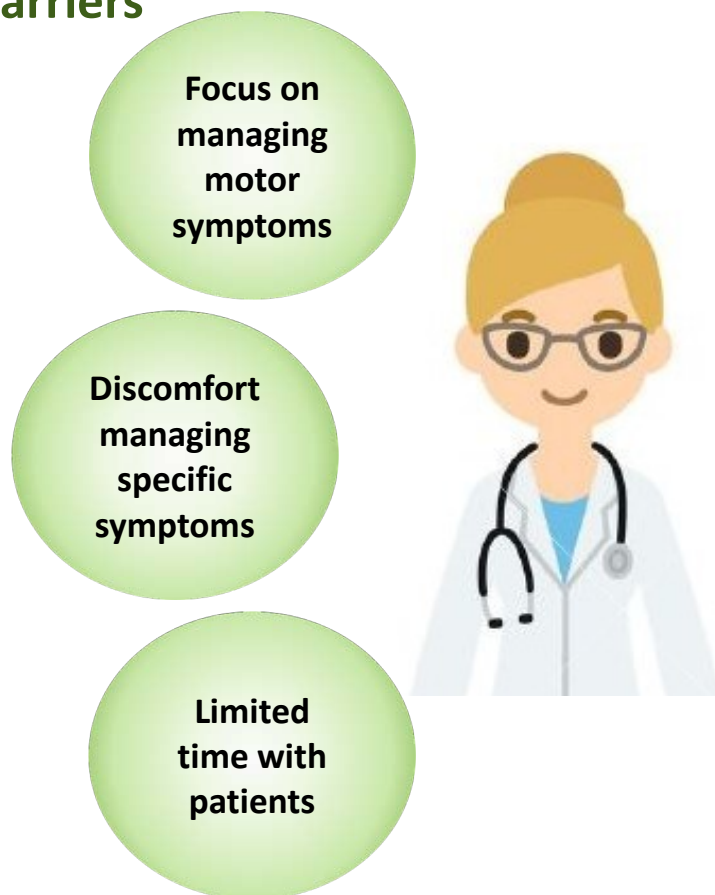
Takeaway: Some simple lifestyle interventions can help to manage bothersome drops in blood pressure

Outline

1. Non-motor symptom burden in Parkinson's
2. Pain in Parkinson's
3. Autonomic symptoms in Parkinson's
- 4. Barriers to identifying and managing non-motor symptoms**
5. Take action!

Barriers to Symptom Management

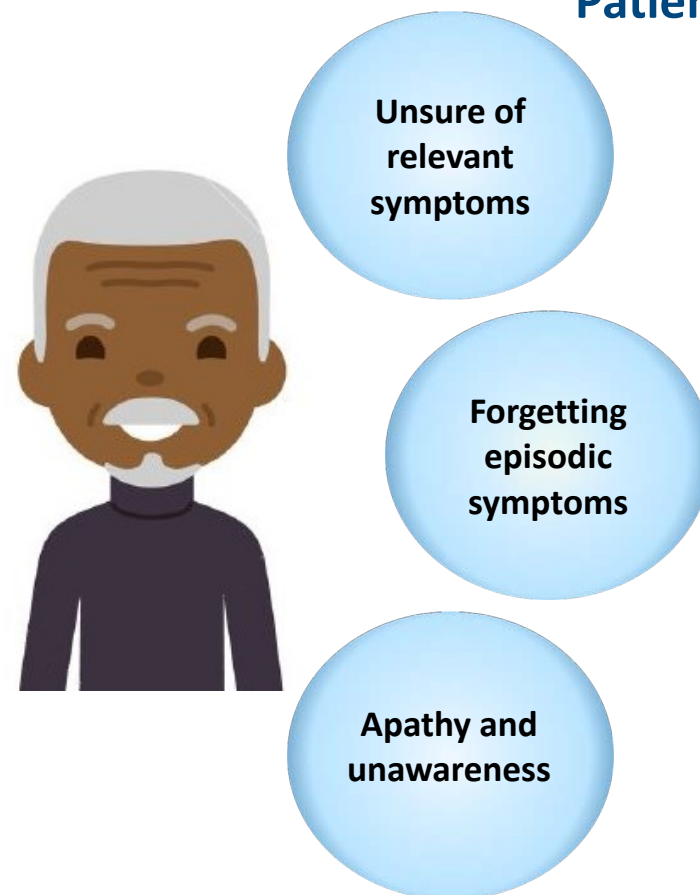
Physician Barriers



Systems Barriers

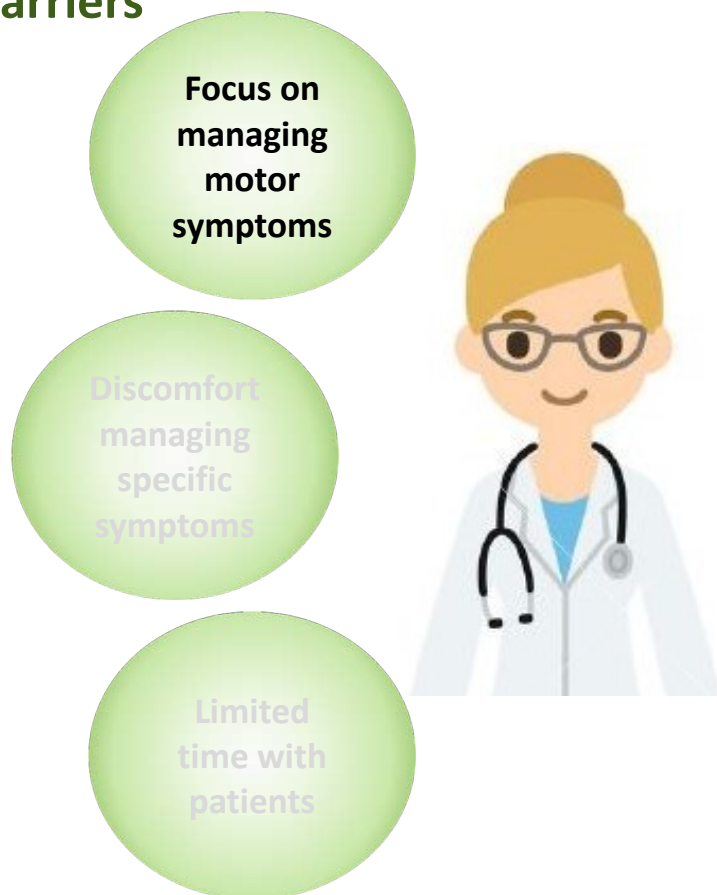


Patient Barriers



Barriers to Symptom Management

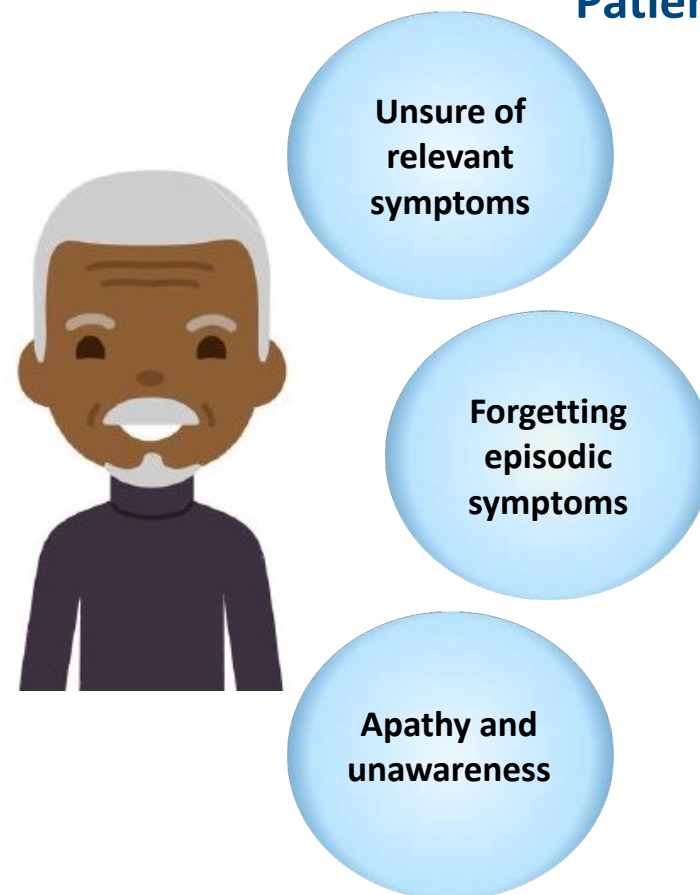
Physician Barriers



Systems Barriers



Patient Barriers



Takeaway: Be aware of common non-motor symptoms, and highlight YOUR priorities in the visit

Outline

1. Non-motor symptom burden in Parkinson's
2. Pain in Parkinson's
3. Autonomic symptoms in Parkinson's
4. Barriers to identifying and managing non-motor symptoms
5. **Take action!**

Takeaway Points and Action Steps

1. Non-motor symptoms are common, accumulate with progression, and have a major impact on quality of life
2. Pain is common in Parkinson's, and activity can help to manage it
3. Some simple lifestyle interventions can help to manage bothersome drops in blood pressure
4. Be aware of common non-motor symptoms, and highlight **YOUR** priorities in the visit