DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH

Parkinson Disease Psychosis in Long-Term Care

IN-SERVICE TOOL: RECOGNIZING AND MANAGING PARKINSON DISEASE PSYCHOSIS

LEARNING OBJECTIVES

After completing this activity, the participant should be better able to:

- Identify the signs and symptoms of Parkinson disease psychosis
- Develop communication strategies to ask residents and caregivers about psychosis in patient-friendly appropriate language
- Contrast individualized pharmacologic treatment plans for residents with Parkinson disease psychosis in the long-term care setting
- Interpret new Centers for Medicare & Medicaid Services requirements for the management of residents with Parkinson disease psychosis

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INTRODUCTION

As many as 60% of people with Parkinson disease (PD) will experience symptoms of psychosis, including hallucinations and delusions, as their disease progresses **(Figure 1)**.[1,2] These symptoms might cause residents to act aggressively or disruptively toward you or other residents. We now know that these symptoms might be part of the disease process, rather than being caused solely by medications for PD. This disorder is called PD psychosis (PDP). The symptoms of PDP can be treated, but only if the underlying cause is correctly identified and the resident is referred for appropriate management.

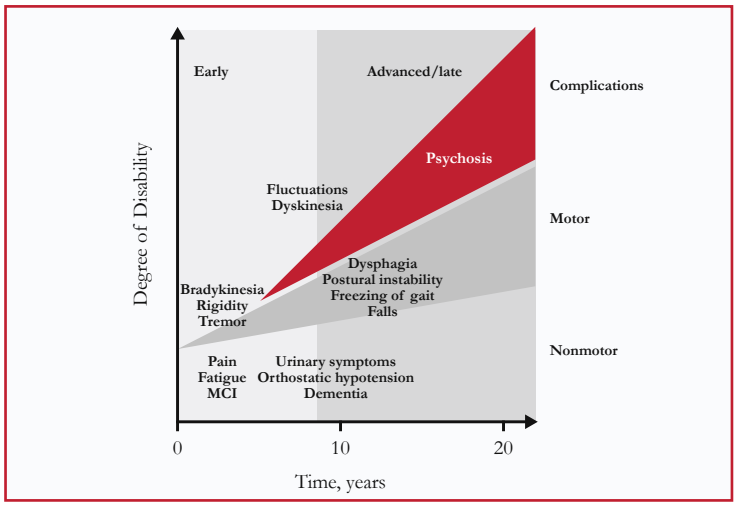

Figure 1. Progression of symptoms in Parkinson disease

Abbreviation: MCI, mild cognitive impairment.

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SIGNS AND SYMPTOMS OF PARKINSON DISEASE PSYCHOSIS

Parkinson disease psychosis can cause a wide array of psychotic symptoms, ranging from "minor" hallucinations and illusions to frightening and disruptive delusions. Residents can display either positive or negative emotions and actions as a result of these symptoms. Importantly, PDP symptoms often worsen over time,[3] reducing quality of life and making interactions with staff and other residents more difficult and sometimes dangerous. Early identification and management of PDP is therefore highly important because effective on-label treatment is now available. **Table 1** shows examples of the different types of symptoms that residents with PDP can experience.[4]

Table 1. Symptoms of Parkinson Disease Psychosis[4]

Illusions	Interpreting a stimulus, often visual, as something different from what it truly is (eg, a potted plant appears to be a cat)
Passage hallucinations	Sensing movement in the periphery
Presence hallucinations	Sensing someone's presence when nobody is there
Complex hallucinations	Seeing people, animals, or figures; most commonly visual but can involve other senses or multiple senses
Misidentification syndromes	Believing a person to have a different identity; often occurs with dementia
Delusions	Having false and fixed beliefs often involving paranoia, stealing, abandonment, or spousal infidelity

Psychotic symptoms affect many long-term care residents at some point and can be caused by various conditions or by a combination of factors. Because some causes of psychotic symptoms are life-threatening, it is important to evaluate residents with PD for the following conditions before evaluating if they might have PDP[5-7]:

- **Delirium:** An acute change in the resident's awareness or cognition, which can be caused by infection, certain medications, metabolic disturbance, or head trauma
- **Psychiatric illness:** Depression and schizophrenia-like psychosis can both cause psychotic symptoms and can have an onset later in life
- **Dementia:** Occasionally, dementias unrelated to PD can present with delusions and, more rarely, hallucinations

COMMUNICATING WITH RESIDENTS ABOUT PSYCHOTIC SYMPTOMS

As the primary day-to-day contact for residents with PD, your role in detecting changes in behavior and asking questions that can assist in further evaluation is very important. Even when a diagnosis of a psychiatric illness has been established, residents with PD can develop PDP, which can affect their mood or behavior. Identifying changes in behavior early in residents with PD is important because in most cases, symptoms become more frightening and disruptive over time if not treated.

Behaviors you might observe that are suggestive of an illusion, hallucination, or delusion include:

- Speaking or yelling when nobody is there
- Interacting with an inanimate object
- Reacting to an inanimate object with fear
- Appearing to touch something that is not there
- Mentioning seeing animals or people who are not there
- Acting frightened
- Acting defensive
- Aggressively refusing care
- Reporting fear of being poisoned
- Reporting that someone visited who did not
- Reporting theft, adultery, or other nefarious behavior when there is no evidence that it occurred
- Accusing people of being someone they are not

One of the most powerful communication tools you can use to gather information about a resident's mental state is to ask open-ended questions. An open-ended question is one that encourages a full answer. For example, asking "What are you afraid of?" is an open-ended question, whereas asking "Are you afraid of the dark?" is a closed-ended question, which can be answered with a "Yes" or "No". It is also useful to neither reinforce nor challenge a resident's false beliefs. Doing so can lead to increased confusion or agitation.

Symptoms should be reported to the resident's nurse and the primary care provider or specialty consultants. Caregivers should follow the facility policies and procedures for documentation of symptoms, and bring any new or worsening symptoms to the attention of the interdisciplinary team for appropriate intervention, notification, and

care planning. When reporting symptoms and behavior to other staff members, describe as many details as possible. This will help the prescribing clinician select the best treatment for the resident's needs. If you suspect that a resident is experiencing an illusion, hallucination, or delusion, be sure to describe that in your report. Information about recent changes to medication or health can also assist in the clinician's decision-making process.

MANAGING SYMPTOMS OF PARKINSON DISEASE PSYCHOSIS

Once the long-term care team has diagnosed psychotic symptoms in a resident with PD, the next step is treatment. Experts in PD and PDP have suggested a stepwise approach **(Figure 2)**.[5,8-10] Because many different factors can cause psychotic symptoms, it is important to first evaluate potential secondary causes, such as delirium, another psychiatric illness, or dementia.

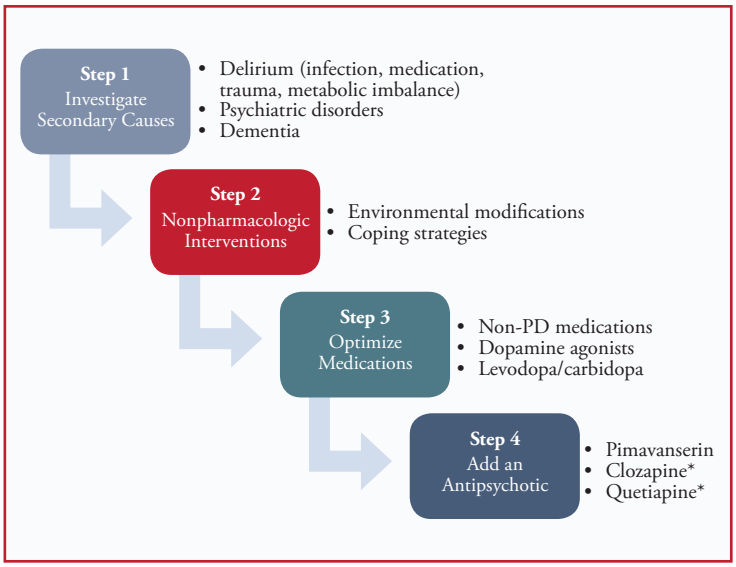


Figure 2. A stepwise approach for treatment of psychotic symptoms in residents with Parkinson disease[5,8-10]

Abbreviation: PD, Parkinson disease.
* Note: Clozapine and quetiapine are used off-label for Parkinson disease psychosis

After secondary causes have been ruled out, nonpharmacologic interventions should be attempted. You can teach these to the resident or suggest them when hallucinations are occurring. If a resident is aware that hallucinations are not real, educating him/her that psychotic symptoms are part of the normal course of PD can help alleviate distress. Nonpharmacologic approaches can be effective in reducing hallucination frequency and resulting agitation for some residents,[11] and might prevent unnecessary use of antipsychotics. Long-term care staff that directly interacts with residents has a crucial role in implementing these approaches and assessing their relative success or failure in diminishing symptoms of psychosis. **Table 2** provides examples of nonpharmacologic coping strategies.[11-13]

The next step involves a thorough analysis of current medications, eliminating those that are nonessential, and then optimizing the dose of those that are needed to control motor symptoms **(Figure 2)**.[5,8-10]

Table 2. Nonpharmacologic Approaches for Psychotic Symptoms[11-13]

Coping Strategy	Examples
Environmental modification	• Remove objects associated with illusions • Identify and remove visual triggers • Increase light levels • Play personalized music • Increase social interaction
Visual techniques	Instruct resident to: • Focus intentionally on the hallucinated object • Focus on a different object • Look away from the hallucination • Wear corrective lenses if applicable
Cognitive techniques	• Turn on lights, increase light level Instruct resident to: • Note to himself/herself that hallucinations are not real • Reassure himself/herself that hallucinations will resolve
Integrative techniques	Instruct resident to talk to staff and family about the nonreality of hallucinations and delusions*

* Should be attempted only if it is comforting and not likely to cause further distress to the resident

Many medications commonly taken by residents with PD can cause psychotic symptoms. These include anticholinergics, amantadine, catechol-*O*-methyltransferase inhibitors, monoamine oxidase B inhibitors, dopamine agonists, and levodopa/carbidopa.[5,8] Requests to adjust medications to treat motor symptoms of PD should be made last because reducing their dose might result in worsening motor symptoms. Your role in this process is crucial, particularly because residents should be followed closely after any medication adjustment for changes in motor and nonmotor symptoms. Collaboration with a consultant pharmacist or primary care provider is critical. Getting the right balance is an interdisciplinary team effort.

If nonpharmacologic approaches and optimization of medications for motor symptoms do not result in satisfactory improvement in psychotic symptoms, an antipsychotic medication should be considered **(Table 3)**.[10,14] Antipsychotics commonly used off-label—including clozapine, olanzapine, and quetiapine—can worsen motor symptoms in PD and have varying efficacy in treating psychotic symptoms.[15] Several antipsychotic agents—including haloperidol, risperidone, and ziprasidone—should never be used in residents with PD.[16] Pimavanserin is an antipsychotic that is US Food and Drug Administration approved to treat hallucinations and delusions associated with PDP.[17] In a clinical trial, motor symptom worsening was not seen.[18]

CENTERS FOR MEDICARE & MEDICAID SERVICES MEGA-RULE FOR ANTIPSYCHOTICS: CONSIDERATIONS FOR RESIDENTS WITH PARKINSON DISEASE PSYCHOSIS

The Centers for Medicare & Medicaid Services (CMS) has initiated a shift toward person-centered care in the past several years, with the goal of improving quality of care and quality of life for residents. In 2016, more than half the CMS nursing regulations were revised and published in the new "Mega-Rule."[19] Changes related to medication

Table 3. Antipsychotic Treatments for Parkinson Disease Psychosis[10]

Treatment for Psychosis		Efficacy	Safety*	Practice Implications
International Parkinson and Movement Disorder Society evidence-based medicine review designations (2018)	Pimavanserin	Efficacious	Acceptable risk without specialized monitoring	Clinically useful
	Clozapine†	Efficacious	Acceptable risk with specialized monitoring	Clinically useful
	Olanzapine†	Not efficacious	Unacceptable risk	Not useful
	Quetiapine†	Insufficient evidence	Acceptable risk without specialized monitoring	Possibly useful

Abbreviation: FDA, US Food and Drug Administration.

* All typical and atypical antipsychotics have a black box warning regarding use in elderly patients who have dementia-related psychosis.[14] This black box warning was based on an analysis of deaths in this population, in which causation was not linked to the antipsychotic.

† Used off-label for the treatment of Parkinson disease psychosis

management and psychotropic drugs, including those used in the treatment of PDP, went into effect in November 2017.[9] The definition of a psychotropic drug was updated to include any drug affecting brain activities associated with mental processes and behavior, including, but not limited to, the following categories:

- Antipsychotic
- Antidepressant*
- Anxiolytic
- Hypnotic

* Added in reaction to practices in which antidepressants were used for purposes other than their intended purpose (eg, sleep induction)

The overall goal of these regulations is to minimize inappropriate prescribing of antipsychotic drugs intended to control undesirable behavior, not to universally reduce prescribing. Even so, the Mega-Rule, when implemented without careful consideration of chronic illnesses such as PDP, can negatively affect outcomes for individual residents.

Gradual Dose Reduction

For residents who are already receiving psychotropic drugs, gradual dose reduction (GDR) and behavioral interventions are mandated, with the goal of discontinuation of the drug, unless clinically contraindicated.[9] A GDR attempt is required for psychotropic medications:

- Twice in the first year, during 2 separate quarters, with at least 1 month between attempts
  - Applies to both new admissions coming in on a psychotropic medication and to new psychotropic medication initiation
- Annually after the first year

Gradual dose reduction is not appropriate in cases of chronic illnesses such as PDP because dose reduction or discontinuation is likely to result in a return of psychotic symptoms. The Mega-Rule allows for exceptions to GDR when clinically contraindicated in patients with chronic conditions such as PDP who might require indefinite treatment.[9] Exceptions to GDR must be documented in accordance with the CMS regulation, as follows:

For any individual who is receiving a psychotropic medication to treat a disorder other than expressions or indications of distress related to dementia (for example, schizophrenia, bipolar mania, depression with psychotic features, or another medical condition, other than dementia, which may cause psychosis), the GDR may be considered clinically contraindicated for reasons that include, but that are not limited to:

- The continued use is in accordance with relevant current standards of practice and the physician has documented the clinical rationale for why any attempted dose reduction would be likely to impair the resident's function or exacerbate an underlying medical or psychiatric disorder; or
- The resident's target symptoms returned or worsened after the most recent attempt at a GDR within the facility and the physician has documented the clinical rationale for why any additional attempted dose reduction at that time would be likely to impair the resident's function or exacerbate an underlying medical or psychiatric disorder.

If GDR is being attempted for an antipsychotic (eg, to find the minimally effective dose for a patient with PDP), do not increase the dose of another antipsychotic to compensate.[9] For treatment-naïve residents, document any trials of nonpharmacologic approaches (such as the environmental and coping strategies discussed previously) and ensure that a diagnosis of PDP has been documented before ordering an antipsychotic drug.

As-Needed Provisions

As-needed psychotropic drugs should not be used unless they are needed to treat a diagnosed condition for a brief duration; orders are limited to 14 days.[9] Antipsychotic drug orders can be renewed only if the prescribing clinician evaluates the resident in person. Penalties associated with as-needed provisions will be imposed after May 2019.[20]

CONCLUSION

Your interaction and relationship with residents who have PD are critical to their wellbeing. By asking open-ended questions, you can discover that they are experiencing symptoms of psychosis, which can worsen over time if not treated. Reporting illusions, hallucinations, and delusions to other care team members involved in mental health assessment or prescribing is crucial for accurate and timely diagnosis and person-centered care plan development. A stepwise and comprehensive treatment strategy in accordance with the CMS Mega-Rule that incorporates evaluation of secondary causes, nonpharmacologic strategies, medication adjustment, and, finally, antipsychotic drug treatment, can maximize individual outcomes and quality of life.

COMPLIMENTARY CE CREDIT

If you are interested in learning more about PDP and receiving complimentary CE credit, please click the links below to access an associated 4-part series on PDP titled **Diagnosis and Management of Patients With Parkinson Disease Psychosis in Long-Term Care.**

For social workers, visit http://tinyurl.com/PDPMSW.
For nurses, visit http://tinyurl.com/PDPLTCCE.

REFERENCES

1. Forsaa EB, Larsen JP, Wentzel-Larsen T, et al. A 12-year population-based study of psychosis in Parkinson disease. *Arch Neurol.* 2010;67(8):996-1001.
2. Kalia LV, Lang AE. Parkinson's disease. *Lancet.* 2015;386(9996):896-912.
3. Goetz CG, Fan W, Leurgans S, Bernard B, Stebbins GT. The malignant course of "benign hallucinations" in Parkinson disease. *Arch Neurol.* 2006;63(5):713-716.
4. Goldman JG, Vaughan CL, Goetz CG. An update expert opinion on management and research strategies in Parkinson's disease psychosis. *Expert Opin Pharmacother.* 2011;12(13):2009-2024.
5. Goldman JG, Holden S. Treatment of psychosis and dementia in Parkinson's disease. *Curr Treat Options Neurol.* 2014;16(3):281.
6. Brendel RW, Stern TA. Psychotic symptoms in the elderly. *Prim Care Companion J Clin Psychiatry.* 2005;7(5):238-241.
7. Brown TM, Boyle MF. Delirium. *BMJ.* 2002;325(7365):644-647.
8. Martinez-Ramirez D, Okun MS, Jaffee MS. Parkinson's disease psychosis: therapy tips and the importance of communication between neurologists and psychiatrists. *Neurodegener Dis Manag.* 2016;6(4):319-330.
9. Centers for Medicare & Medicaid Services. *State Operations Manual Appendix PP - Guidance to Surveyors for Long Term Care Facilities.* Baltimore, MD: Centers for Medicare & Medicaid Services; 2017.
10. Seppi K, Chaudhuri KR, Coelho M, et al. Update on treatments for nonmotor symptoms of Parkinson's disease—an evidence-based medicine review [published online ahead of print January 17, 2019]. *Mov Disord.* doi:10.1002/mds.27602.
11. Diederich NJ, Pieri V, Goetz CG. Coping strategies for visual hallucinations in Parkinson's disease. *Mov Disord.* 2003;18(7):831-832.
12. Ballard C, Brown R, Fossey J, et al. Brief psychosocial therapy for the treatment of agitation in Alzheimer disease (the CALM-AD trial). *Am J Geriatr Psychiatry.* 2009;17(9):726-733.
13. Matsui H, Udaka F, Tamura A, et al. Impaired visual acuity as a risk factor for visual hallucinations in Parkinson's disease. *J Geriatr Psychiatry Neurol.* 2006;19(1):36-40.
14. US Department of Health & Human Services. *Atypical Antipsychotic Medications: Use in Adults.* Baltimore, MD: Centers for Medicare & Medicaid Services; October 2015.
15. Seppi K, Weintraub D, Coelho M, et al. The Movement Disorder Society evidence-based medicine review update: treatments for the non-motor symptoms of Parkinson's disease. *Mov Disord.* 2011;26(suppl 3):S42-S80.
16. Gilbert R. *Medications to Be Avoided or Used With Caution in Parkinson's Disease.* San Antonio, TX: American Parkinson Disease Association; 2018.
17. Nuplazid [package insert]. San Diego, CA: ACADIA Pharmaceuticals Inc; 2018.
18. Cummings J, Isaacson S, Mills R, et al. Pimavanserin for patients with Parkinson's disease psychosis: a randomised, placebo-controlled phase 3 trial. *Lancet.* 2014;383(9916):533-540.
19. US Department of Health & Human Services. Medicare and Medicaid Programs; reform of requirements for long-term care facilities. *Federal Register.* 2016;81(192):68688-68871.
20. US Department of Health & Human Services. *Temporary Enforcement Delays for Certain Phase 2 F-Tags and Changes to Nursing Home Compare.* Baltimore, MD: Centers for Medicare & Medicaid Services; 2017.

KNOWLEDGE CHECK

1. Mr N, a resident with a 10-year history of PD, repeatedly asks about the cat sitting on his windowsill, but there is only a potted plant there. Which psychotic symptom is Mr N likely experiencing?
   a. Hallucination
   b. Illusion
   c. Delusion
   d. Misidentification

2. True or false? Psychosis in PD is always caused by medications for motor symptoms.
   a. True
   b. False

3. Mrs D has been acting aggressively and talking to herself for a few days. She has a 15-year history of PD. What is the next best step to manage her symptoms?
   a. Reduce her levodopa dose
   b. Assess her for acute delirium
   c. Request an as-needed antipsychotic
   d. Modify her environment

4. What could you say to Mrs D to get the most information about what she is experiencing?

   _____

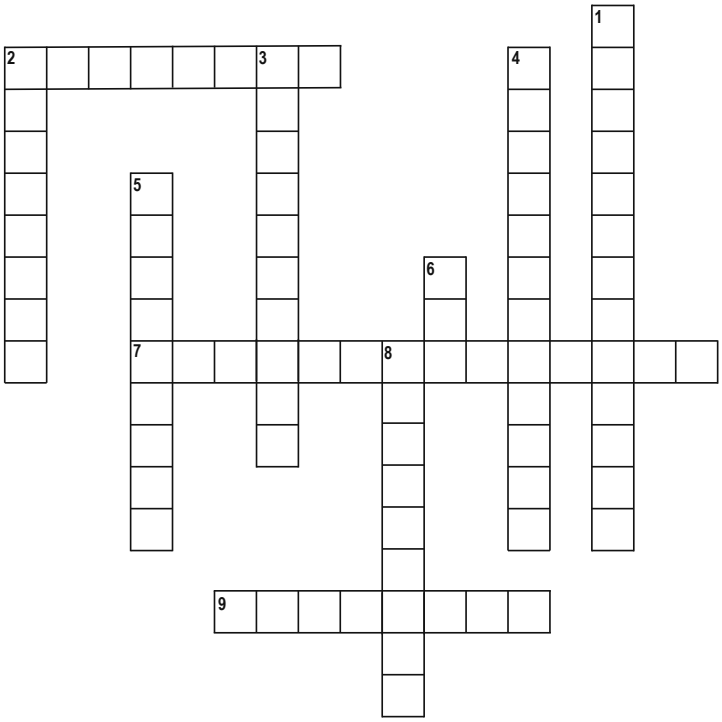
   _____

5. True or false? All antipsychotic drugs are equally effective in treating symptoms of PDP.
   a. True
   b. False

6. Ms H, a 73-year-old resident with an 8-year history of PD, has become increasingly fearful, agitated, and combative at bedtime. What can you say to her to best gather information about her mental state?
   a. "There is nothing to be afraid of."
   b. "Are you afraid of the dark?"
   c. "Is someone upsetting you?"
   d. "What are you afraid of?"

7. True or false? GDR for antipsychotic medications is contraindicated in residents with chronic conditions who might require indefinite treatment.
   a. True
   b. False

8. True or false? Symptoms of PDP are likely to become more severe over time if not treated appropriately.
   a. True
   b. False



Across

2. When a resident has a false and fixed belief involving paranoia, stealing, infidelity, etc, he/she is experiencing a/an _____.
7. Class of drug recently added by the CMS under the heading of "psychotropic".
9. When a resident interprets a visual stimulus (an object) as something it isn't, he/she is experiencing a/an _____.

Down

1. When a resident sees, hears, or feels something that is not there, he/she is experiencing a/an _____.
2. _____ can cause symptoms of psychosis and result from infection, medications, metabolic disturbance, or head trauma.
3. The Movement Disorder Society designated this drug's safety as an "unacceptable risk".
4. This antipsychotic is approved by the US Food and Drug Administration to treat hallucinations and delusions associated with PDP.
5. This antipsychotic requires specialized monitoring.
6. Three-letter abbreviation for the CMS-required process to reduce unnecessary antipsychotic dosing unless clinicaly contraindicated.
8. A disorder characterized by illusions, hallucinations, and delusions that can occur in residents with Parkinson disease.

KNOWLEDGE CHECK ANSWERS

1. b
2. b
3. b
4. See page 2
5. b
6. d
7. a
8. a

SOLUTION TO CROSSWORD

Across

2. delusion
7. antidepressant
9. illusion

Down

1. hallucination
2. delirium
3. olanzapine
4. pimavanserin
5. clozapine
6. GDR
8. psychosis