Parkinson's disease (PD) can cause assisted living facility residents to lose function and independence. As a result, these individuals are at high risk of experiencing a fall, fall-related injury, or other problems (that necessitate hospitalization or force them to leave their home at the ALF). In fact, a diagnosis of PD or advancement of the disease is a key reason many elderly individuals enter assisted living in the first place.

To enable residents with Parkinson's disease to remain safely in the ALF for as long as possible and to maximize these individuals' functionality and dignity, facility staff need to understand Parkinson's signs and symptoms, the course of the disease, and how it is treated.

This issue of ALC features a condensed adaptation of the American Medical Directors Association's (AMDA) clinical practice guideline, *Parkinson's Disease in the Long-Term Care Setting*, for assisted living.

**Definition and Introduction**

Parkinson's disease is an age-related, chronic, slowly progressive neurodegenerative disease characterized clinically by the presence of at least two of three cardinal features:

- Resting tremor
- Bradykinesia (slowness of movement) with resulting rigidity
- Impaired postural reflexes

The term “parkinsonism” refers to a range of conditions that include Parkinson's disease, Parkinson-like syndromes (including drug-induced parkinsonism), and conditions that mimic Parkinson's disease.

While the exact incidence of PD in assisted living facilities is unknown, it is estimated that the disease affects one in 100 individuals over age 60. In fact, among people age 65 and older, PD is a more common cause of death than motor vehicle-related injury. PD contributes to an average of nearly 250,000 hospital discharges per year; and almost 10% of men and 5% of women over age 65 are admitted annually to a nursing facility with the disease.

PD is characterized biologically by a loss of dopaminergic neurons in a region of the brain known as the substantia nigra. Although it is the loss of these cells that triggers the symptoms of PD, the disease process likely begins years before symptoms appear. While the disease's cause is unknown, possible
Early detection of Parkinson’s Disease enables prompt intervention with both nonpharmacologic and pharmacologic treatments that can enhance the resident’s quality of life.
Residents with PD should be assessed on admission and at least monthly thereafter for weight changes, changes in food intake, appetite changes, and altered nutritional status.

Step 6. Assess the resident’s functional status. This should be done at baseline and as clinically indicated, for example, when significant changes occur in the resident’s ability to perform ADLs or when comorbid disease is present.

Step 7. Have the resident’s medication use assessed. This assessment can help identify drug-induced parkinsonisms and other medication-related problems. Falls, medication side effects, postural drainage, and gastroesophageal reflux disease. When indicated in the presence of such signs and symptoms, the speech-language pathologist should be asked to perform a dysphagia evaluation.

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A multifaceted approach to treating Parkinson’s Disease involves addressing the resident’s spiritual, social, emotional, and cultural needs, as well as his or her physical needs.

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Step 11. Implement appropriate nonpharmacologic interventions. Residents with PD may benefit from nonpharmacologic interventions that include physical/occupational therapy, speech therapy, dietary therapy, and recreational therapy. Incorporating such interventions into residents’ daily lives can enable these individuals to continue to socialize and participate in leisure interests and other activities. In many cases, nonpharmacologic interventions can reduce the need for drug therapy. Additionally, several studies have documented the potential value of exercise for treating PD.

Step 12. Implement appropriate pharmacologic interventions. Because of the narrow risk/benefit ratio of PD medications, pharmacotherapy for PD residents should be initiated only after nonpharmacologic therapy alone has failed and should be combined with nonpharmacologic treatments.

Levodopa combined with carbidopa has long been the gold standard for treating PD. However, long-term use of levodopa is associated with motor complications. Involuntary movements (dyskinesias) are among the most disabling of these complications. Patients treated with dopamine agonist monotherapy experience a lower incidence of dyskinesia as compared with residents who receive levodopa monotherapy.

Dopamine agonists are considered an appropriate first-line therapy for older residents who have normal physical and cognitive function. On the other hand, levodopa may be preferable for patients over age 70, especially those with dementia. These individuals are at higher risk for side effects from dopamine agonists, including confusion, hallucinations, hypotension, nausea and vomiting, and daytime sedation. Anticholinergic medications should be used with caution in patients with dementia and the very old because they may provoke acute confusional states or cause or contribute to cognitive dysfunction.

Step 13. Implement nutritional interventions as necessary. A daily multivitamin should be considered for all older adults, whether or not they suffer from PD. However, other vitamin therapies and dietary supplements (eg, vitamin C, vitamin E, beta carotene, selenium, coenzyme Q-10) have not been clinically validated. This information should be shared with residents and their families, and intake of a daily multivitamin should be encouraged.

At the same time, caregivers and family members should be alerted to watch for any chewing difficulties or dental caries in residents that may require a dental referral. A dietary consultation also may be useful.

Step 14. Work with the resident’s practitioner and other clinicians to manage complications and comorbidities associated with Parkinson’s disease and obtain specialty consultation if appropriate. The nature of the complication or comorbidity will determine the appropriate interventions and right specialists to call.

It is important to note that specialty consultations may not be appropriate for all ALF residents. It is important to consider the resident’s cognitive and functional status, severity of disease, expressed preferences, and life expectancy when determining whether to seek consultation.

Artificial feeding methods may be clinically appropriate for certain individuals with PD when swallowing problems become severe. When a resident is deemed to need artificial feeding interventions, the facility will need to decide whether it is in the individual’s best interest to be transferred to a nursing facility or other setting on a temporary or permanent basis. This decision should be discussed in detail with the resident and/or his or her family.

Step 15. Consider referring the resident to community resources or for palliative care. Consider referring the resident or his or her family to PD support groups and to hospice care where appropriate. A consultation with social services, a review of community resources, and assessment of the resident’s spiritual needs may be useful as the PD progresses. A list of agencies and organizations that offer support for PD patients and family members is offered in Table 1.

Any significant decline in the resident’s clinical status should prompt his or her practitioner and facility staff to discuss the resident’s preferences with family members and to review the individual’s advance directives.

Preventing further decline in an individual’s level of functioning with Parkinson’s Disease may not always be a realistic therapeutic goal.

Monitoring
Because PD is a progressive disorder, residents with the disease must be reassessed regularly and when there is a significant change in a resident’s condition.

It is important to note that because of the progressive nature of PD, preventing further decline in an individual’s level of functioning may not always be a realistic therapeutic goal. Periodic reappraisal of
therapy goals is essential to ongoing care. Regular reassessments also should address whether it is safe and appropriate for the resident to stay in the ALF and, if not, what care, services, or interventions may enable the individual to stay in his or her home.

Step 16. Monitor the resident’s ability to communicate and carry out ADLs. As PD progresses, secondary manifestations—such as dementia, sleep disturbances, and pain—become more disabling. It is important that residents be watched for changes in physical function, perhaps suggesting a need for physical or occupational therapy, restorative nursing, assistive devices, and/or other interventions to maximize independence. It also is important to check the resident’s ability to communicate basic needs, wants, and ideas. Work with practitioners, physical therapists, and other consultants to determine the possible benefit of appropriate assistive devices.

Step 17. Monitor other elements. To keep residents with PD as functional, independent, and safe as possible, there are several other elements of life and care that clinicians, ALF staff, and family members should monitor. These include the resident’s:

- Cognitive, mental, and emotional status
- Nutritional status and ability to swallow
- Medications (for effectiveness, adverse effects, and complications)
- Appearance or progression of comorbidities and complications

Step 18. Monitor the need for a change in the resident’s level of care. As the resident with PD becomes increasingly ill and disabled, he or she may need to be transferred to a facility that can provide higher level of care, palliative care, or hospice care. It will be important for staff to discuss these options with the resident’s practitioner as well as with the resident and his or her family (or other designated decision maker). It will be important at this time to review the resident’s advance directives to ensure that his or her wishes regarding end-of-life care are known and respected.

If it is determined at this time that the resident needs to move to another setting, this should be done in a way that minimizes the individual’s stress and protects his or her dignity and well-being.

Summary
PD is a progressive degenerative brain disorder that commonly presents in late life. Many clinical manifestations of the disease can be treated with a combination of non-pharmacologic and drug therapies. ALFs must be prepared to identify and monitor residents who are at high risk of the disease, those who enter the facility with PD, and those who develop the illness during their residence. Facility staff and clinicians caring for residents with PD must do everything possible to keep PD residents safe and maximize their quality of life. They also must be prepared to deal with situations where it is unsafe or otherwise unfeasible for the resident with PD to remain in this setting.

Table 1. Organizations Offering Support for Residents with PD and their Families

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<tr>
<th>Organization</th>
<th>Address</th>
<th>Phone</th>
<th>Website</th>
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<tbody>
<tr>
<td>American Parkinson’s Disease Association, Inc.</td>
<td>1250 Hylan Blvd., Suite 4B, Staten Island, NY 10305</td>
<td>800/223-2732</td>
<td><a href="http://www.info@adaparkinson.org">www.info@adaparkinson.org</a></td>
</tr>
<tr>
<td>The Bachmann-Straus Dystonia and Parkinson Foundation</td>
<td>Mount Sinai Medical Center, 1 Gustave L. Levy Place, Box 1490, New York, NY 10029</td>
<td>212/241-5614</td>
<td><a href="http://www.dystonia-parkinsons.org">www.dystonia-parkinsons.org</a></td>
</tr>
<tr>
<td>European Parkinson Foundation Inc.</td>
<td>1504 NW Ninth Ave., Bob Hope Rd., Miami, FL 33136-1494</td>
<td>800/433-7022</td>
<td><a href="http://www.parkinson.org">www.parkinson.org</a></td>
</tr>
<tr>
<td>The Parkinson’s Disease Foundation</td>
<td>710 West 158th Street, New York, NY 10032</td>
<td>800/457-6676</td>
<td><a href="http://www.parkinsons-foundation.org">www.parkinsons-foundation.org</a></td>
</tr>
<tr>
<td>The Michael J. Fox Foundation for Parkinson’s Research</td>
<td>840 3rd St., Santa Rosa, CA 95404</td>
<td>707/544-1994</td>
<td><a href="http://www.michaeljfox.org">www.michaeljfox.org</a></td>
</tr>
<tr>
<td>The Parkinson Foundation of Canada</td>
<td>4211 Yonge Street, Suite 316, Toronto, Canada, M2P 2A9</td>
<td>416/227-9700</td>
<td><a href="http://www.parkinson.ca">www.parkinson.ca</a></td>
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<tr>
<td>We Move</td>
<td>204 West 84th St., 3rd Floor, New York, NY 10024</td>
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