CPG SERIES

CLINICAL PRACTICE GUIDELINE

amda The Society For Post-Acute And Long-Term Care Medicine™

DELIRIUM, DEPRESSION AND DEMENTIA (3Ds)

2023 UPDATED EDITION

in the Post-Acute and Long-Term Care Setting

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PREFACE

This clinical practice guideline (CPG) has been developed as a component of a project conducted by AMDA–The Society for Post-Acute and Long-Term Care Medicine, the national professional association of medical directors, attending physicians, nurse practitioners, physician assistants, and other practitioners working in the post-acute and long-term care (PALTC) continuum. This is one of a series of guidelines undertaken as part of AMDA's mission to improve the quality of care delivered to patients in these settings.

Original guidelines are developed by interprofessional workgroups that consist of practitioners and others involved in patient care in PALTC facilities. These workgroups utilize systematic reviews, journal articles, case studies, and other information obtained through a thorough literature search to develop a concise, usable guideline tailored to the PALTC setting.

The guideline development and revision process is directed by AMDA's Clinical Practice Steering Committee (CPSC). Each year the Steering Committee reviews all AMDA CPGs that are three years old and commissions a thorough literature review to determine whether the content of each guideline remains current. The CPSC selects the existing guidelines to be revised, and new guidelines to be created, based on (1) the Steering Committee's recommendations; (2) data collected; (3) an assessment of the difficulty of development and relevance to the AMDA membership; and (4) congruence with the AMDA Strategic Plan. AMDA's Board of Directors has final approval over this process.

Purpose

AMDA seeks to develop and revise guidelines that focus on specific concerns and common issues in PALTC. Although other agencies, organizations, and associations have developed guidelines for conditions that occur in older adults and chronically ill individuals, many of these guidelines limit or omit considerations unique to the PALTC population, such as team-based care. Furthermore, adhering to isolated CPGs that do not account for co-existing conditions may have undesirable effects and lead to poor clinical decision making.[1]

AMDA guidelines emphasize key care processes and are created to be used in conjunction with facility-specific policies and procedures that guide staff and practitioner practices and performance. They are meant to be used in a manner appropriate to the population and practice of a

particular facility. Guideline implementation may be affected by resources available in the facility, including staffing, and will require the involvement of all those in the facility who have a role in patient care.

AMDA appreciates that PALTC facilities play a significant role in the lives of older adults and their families and considers optimal medical care and health promotion to be priorities in this setting. AMDA guidelines are not intended to offer an exhaustive review of the condition of interest. They focus instead on the practical management of the condition in PALTC, stressing aspects of care that may differ significantly from or merit special emphasis when compared with community-based care for younger adults with the same condition.

Audience

This guideline is intended for members of the interprofessional team in PALTC. As stated by the World Health Organization, "Collaborative practice happens when multiple health workers from different professional backgrounds work together with patients, families, carers and communities to deliver the highest quality of care across settings."[2] Team members may include the medical director, attending physicians, director of nursing, advanced practice clinicians, nursing staff, consultant pharmacist, and other professionals such as therapists, social workers, dietitians, and nursing assistants who care for patients residing in PALTC facilities.

AMDA CPGs address many functions, interventions, and tasks related to recognizing, assessing, treating, and monitoring various medical conditions and situations. They focus on process (what should be done) rather than on personnel (who should perform specific tasks). For example, a variety of health care professionals working in PALTC, including nursing assistants, licensed nurses, dietitians, and social workers, may make and document observations (e.g., that a patient does not sleep at night, has become more withdrawn, or has a change in usual eating patterns). Only some of these professionals, however, may be qualified to determine the significance of those observations (e.g., the cause of sleeplessness or of a change in eating patterns). In contrast, practitioners may not be present to make observations but are trained to analyze the significance and causes of symptoms.

Thus, each facility should ensure that tasks are done correctly and by the appropriate interprofessional team members. It is important for observers to make and effectively document their observations; when interpretation of those observations is not within the scope of their training or practice, they should receive appropriate support from practitioners.

Assumptions

Practice guidelines for PALTC should be consistent with the fundamental goals of desirable practice in this setting. Operationally, this requirement means that the care team should systematically address (1) each patient's risk factors for multiple diseases and conditions; (2) the adverse consequences of these diseases and conditions on patients' functioning and quality of life; and (3) the benefits and burdens of prescribed interventions.

When patients residing in PALTC facilities are at or near the end of life, care goals will shift from curative care, functional improvement, or physical stability to end-of-life/comfort care. AMDA guidelines address this transition and provide recommendations for appropriate modification of the patient's care plan.

Patient-centered care means establishing individualized goals of care for each patient. Thus, when a workup or treatment is suggested, it is crucial to consider whether such a step is appropriate for that individual. A workup may not be indicated if the patient has a terminal or end-stage condition (i.e., with a life expectancy of less than six months), if it would not change the management course, if the burden of the workup is greater than the potential benefit, or if the patient or their legally authorized representative would decline treatment. It is important to carefully document in the patient's medical record the reasons for decisions not to treat or perform a workup or for choosing one treatment approach over another.

How to Use These Guidelines

Each guideline includes a narrative portion that covers the definition of the condition being addressed, as well as the following:

- **Recognition and Assessment** refers to identifying the presence of a condition, situation, or risk, and collecting the details needed for cause identification, interpretation, and subsequent management.
- **Diagnosis and Interpretation** refers to the process of defining causes and consequences of a symptom or problem and identifying the meaning and implications of the information gathered during the assessment.
- **Treatment and Management** addresses the selection and provision of appropriate interventions for the identified condition or situation.
- **Monitoring and Regulatory Compliance** addresses reviewing the course of a condition or situation as a basis for deciding to continue, change, or discontinue interventions and complying with federal and state nursing home regulations related to behavioral and psychological symptom management and related quality measures.

Each guideline includes many recommendations for practice and incorporates to the extent possible information and recommendations from evidence-based references and resources. The reader can refer to the references within this CPG to learn more about the evidence basis for recommendations.

Terminology

We recognize that people who reside in PALTC facilities are residents. Throughout these guidelines, however, we use the term *patient(s)* because we are addressing individuals within the context of treating a medical condition. When referring to pharmaceutical products, we avoid the use of brand names and refer to classes of drugs whenever possible.

A nursing facility/skilled nursing facility (NF/SNF) is a place of care for people who require 24- hour nursing and rehabilitation for acute and chronic medical conditions or impaired cognitive function and who have significant deficiencies in activities of daily living. The goal of care is to assist the individual in achieving their highest level of function and well-being. Both SNFs and NFs care for older adults with frailty and younger adults with physical disabilities (although pediatric and other specialized SNFs also exist). Many SNFs and NFs offer special care units (e.g., secure units, dialysis, ventilator units).

A subacute/post-acute care unit (sometimes called a "step-down" unit) is a facility in which care can be the bridge between an acute hospital stay and a return to a community home. It combines aspects of both the hospital and the SNF to reduce the cost of services while maintaining

quality of care. This type of care requires frequent patient reassessment and review of the clinical course and treatment plan for a limited time period, until the patient's condition has stabilized, or a predetermined treatment course is completed.

Note Regarding Hyperlinks

All hyperlinks in this document were validated prior to publication. However, hyperlinks change frequently, and AMDA cannot take responsibility for changes to external hyperlinks that occur after publication of this CPG. For best results, use the most current version of your preferred Internet browser to access all web pages referenced in this CPG. If clicking or tapping on a hyperlink does not direct correctly, try copying and pasting the link into your preferred browser or into an alternate browser.

References

1. Boyd CM, Darer J, Boult C, et al. Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: Implications for pay for performance. JAMA. 2005 Aug 10;294(6): 716–724.

2. World Health Organization. Framework for Action on Interprofessional Education & Collaborative Practice. Reference No. WHO/HRH/HPN/10.3. 2010. **https://www.who.int/publications/i/item/framework-for-action-on-interprofessional-education-collaborative-practice** Accessed 7/26/22.

GLOSSARY OF ABBREVIATIONS

3Ds	Delirium, depression, and dementia
ABCD	Antecedent, Behaviors, Consequences, Disaster (algorithm)
ACB	Anticholinergic Cognitive Burden
ADLs	Activities of daily living
AIDS	Acquired immunodeficiency syndrome
BIMS	Brief Interview for Mental Status (instrument)
BP	Blood pressure
BPH	Benign prostatic hyperplasia
BPSD	Behavioral and psychological symptoms of dementia
CAM	Confusion Assessment Method (instrument)
CES-D	Center for Epidemiological Studies–Depression (instrument)
CMAI	Cohen-Mansfield Agitation Inventory (instrument)
CMS	Centers for Medicare & Medicaid Services
CNS	Central nervous system
CPG	Clinical practice guideline
CSDD	Cornell Scale for Depression in Dementia (instrument)
CV	Cardiovascular
CVD	Cardiovascular disease
DSM-5.0	Diagnostic and Statistical Manual of Mental Disorders, 5th edition
ECT	Electroconvulsive therapy
ED	Emergency department
FAST	Functional Assessment Staging Tool for Dementia (instrument)
FDA	U.S. Food and Drug Administration
GDR	Gradual dose reduction
GDS	Geriatric Depression Scale (instrument)
GI	Gastrointestinal
HELP	Hospital Elder Life Program
HIV	Human immunodeficiency virus
IPT	Interprofessional team (also called interdisciplinary team [IDT])*
IV	Intravenous
LTC	Long-term care
MCI	Mild cognitive impairment
MDD	Major depressive disorder
MDS	Minimum Data Set
MMSE	Mini-Mental State Examination (instrument)
MOCA	Montreal Cognitive Assessment (instrument)
NF	Nursing facility
NSAID	Nonsteroidal anti-inflammatory drug
OBRA	Omnibus Budget Reconciliation Act of 1987
OTC	Over the counter
PALTC	Post-acute and long-term care
PHQ-9	Patient Health Questionnaire, module 9 (instrument)
PHQ-9-OV	Patient Health Questionnaire, module 9 – Observer Version (instrument)
PTSD	Post-traumatic stress disorder
PUD	Peptic ulcer disease
RAI	Resident Assessment Instrument
SIADH	Syndrome of inappropriate antidiuretic hormone
SLUMS	Saint Louis University Mental Status exam (instrument)
SNF	Skilled nursing facility
SNRI	Serotonin and norepinephrine reuptake inhibitor
SSRI	Selective serotonin reuptake inhibitor
TIA	Transient ischemic attack
TMS	Transcranial magnetic stimulation
UB-2	Ultra-Brief 2-item screen
UTI	Urinary tract infection
WBC	White blood cell

* This guideline uses IPT in preference to IDT

FOREWORD

Importance of the Care Delivery Process

The care delivery process has been developed over the better part of two decades and is recognized in the latest version of the Resident Assessment Instrument (RAI), version 3.0, in Chapter 4. It is important to understand this critical process and the steps involved in clinical decision making. As illustrated in Table 1 (p. xiv), it is imperative to obtain background information (recognition, assessment, problem definition) to accurately diagnose a problem, select an appropriate treatment, and monitor the treatment's effectiveness.

Reference

1. [CMS] Center for Medicare & Medicaid Services. Long-Term Care Facility Resident Assessment Instrument 3.0 User's Manual. Version 1.17.1. October 2019. https://downloads.cms.gov/files/mds-3.0-rai-manual-v1.17.1_october_2019.pdf Accessed 7/26/2022.

TABLE 1

Clinical Problem Solving and Decision Making Process Steps and Objectives

Process Step / Objectives *	Key Tasks **
Recognition / Assessment *Gather essential information about the individual*	– Identify and collect information that is needed to identify an individual's conditions that enables proper definition of their conditions, strengths, needs, risks, problems, and prognosis – Obtain a personal and medical history – Perform a physical assessment
Problem definition *Define the individual's problems, risks, and issues*	– Identify any current consequences and complications of the individual's situation, underlying condition and illnesses, etc. – Clearly state the individual's issues and physical, functional, and psychosocial strengths, problems, needs, deficits, and concerns – Define significant risk factors
Diagnosis / Cause-and-effect analysis *Identify physical, functional, and psychosocial causes of risks, problems, and other issues, and relate to one another and to their consequences*	– Identify causes of, and factors contributing to, the individual's current dysfunctions, disabilities, impairments, and risks – Identify pertinent evaluations and diagnostic tests – Identify how existing symptoms, signs, diagnoses, test results, dysfunctions, impairments, disabilities, and other findings relate to one another – Identify how addressing those causes is likely to affect consequences
Identifying goals and objectives of care *Clarify purpose of providing care and of specific interventions, and the criteria that will be used to determine whether the objectives are being met*	– Clarify prognosis – Define overall goals for the individual – Identify criteria for meeting goals
Selecting interventions / planning care *Identify and implement interventions and treatments to address the individual's physical, functional, and psychosocial needs, concerns, problems, and risks*	– Identify specific symptomatic and cause-specific interventions (physical, functional, and psychosocial) – Identify how current and proposed treatments and services are expected to address causes, consequences, and risk factors, and help attain overall goals for the individual – Define anticipated benefits and risks of various interventions – Clarify how specific treatments and services will be evaluated for their effectiveness and possible adverse consequences
Monitoring of progress *Review individual's progress towards goals and modify approaches as needed*	– Identify the individual's response to interventions and treatments – Identify factors that are affecting progress towards achieving goals – Define or refine the prognosis – Define or refine when to stop or modify interventions – Review effectiveness and adverse consequences related to treatments – Adjust interventions as needed – Identify when care objectives have been achieved sufficiently to allow for discharge, transfer, or change in level of care

* Refers to key steps in the care delivery process, related to clinical problem solving and decision making

** Refers to key tasks at each step in the care delivery process

Source: Center for Medicare & Medicaid Services. Long-Term Care Facility Resident Assessment Instrument 3.0 User's Manual. Version 1.17.1. October 2019. **https://downloads.cms.gov/files/mds-3.0-rai-manual-v1.17.1_october_2019.pdf**. Accessed 7/26/2022.

1. DEFINITIONS

1.1 Delirium

Delirium is an acute change in mental status (inattention and disorganized thinking) that develops over hours or days and has a fluctuating course.

1.2 Depression

Depression is a spectrum of mood disorders characterized by a sustained disturbance in emotional, cognitive, behavioral, or somatic regulation that is associated with a change from a previous level of functioning or clinically significant distress.

1.3 Dementia (Major Neurocognitive Disorder)

Dementia is a significant change in cognitive performance from a previous level of performance in one or more cognitive domains that interferes with functioning in daily life.

2. INTRODUCTION

Each of the "3Ds" — delirium, depression, and dementia — represents a distinct condition that is observed in a variety of clinical settings. While it is important to recognize the variability in presentation among these three conditions and the particular core characteristics of each, in everyday practice clinicians in the post-acute and long-term care (PALTC) setting frequently confront two or all three conditions both simultaneously and in conjunction with other existing conditions and diagnoses.

For example, a patient with dementia may grieve their loss of autonomy, health, and social contacts and become clinically depressed. The same patient may also demonstrate symptoms of delirium after contracting an acute illness. As illustrated in the case presentation at **Appendix A** (p. 86), these coexisting syndromes present PALTC practitioners with a unique diagnostic and management challenge.

The goal of this clinical practice guideline (CPG) is to help facility practitioners and staff to take a stepwise approach to recognizing, assessing, treating, and monitoring a patient who may have a clinical presentation consistent with one or more of the 3Ds.

QUESTION 1: What is the prevalence and impact of delirium, depression, and dementia in PALTC?

2.1 Delirium

Delirium is a common and serious problem in PALTC and is often associated with adverse outcomes such as increased length of hospital stay and increased morbidity and mortality.

- The prevalence and incidence of delirium in PALTC are 14% and 20% to 22%, respectively, with up to four out of five persons having delirium at the end of life.[1]
- Signs and symptoms of delirium can resemble those of many other conditions. Practitioners misdiagnose delirium up to 60% of the time.[2]
- Patients with delirium that begins during a hospitalization may continue with the syndrome for weeks to months.[3]

- Delirium is preventable in at least 30% to 40% of cases,[2] primarily by identifying and addressing its many risk factors.

Delirium includes acute disturbances in *attention* and *cognition* that are not better explained by a pre-existing, established, or evolving neurocognitive disorder. These disturbances typically develop suddenly and represent an acute change from baseline attention and awareness. Assessment of both attention and cognition is fundamental to the recognition of delirium, as this may improve patient safety and facilitate both prevention and broader identification of delirium.[4]

Delirium may lead to long-term functional decline, cognitive impairment, and increased health care costs. Delirium superimposed on dementia is associated with accelerated cognitive and functional decline, recurrent and longer hospitalizations, and death; it may also impede recovery from an acute illness.[5]

Because delirium results from the interaction of multiple predisposing and precipitating risk factors, a multicomponent nonpharmacologic approach to primary prevention is most effective. A validated delirium screening assessment should be performed at the onset of any change in mental status from baseline. The Confusion Assessment Method (CAM) is included in the Minimum Data Set (MDS) 3.0.

It is important to note that the U.S. Food and Drug Administration (FDA) has not approved any medications for the treatment of delirium. Nonpharmacologic interventions are the mainstay of delirium treatment, and early recognition and prevention are key. Evidence is insufficient that antipsychotics reduce the severity or shorten the duration of delirium. Preliminary evidence suggests that the use of second-generation antipsychotics may decrease the incidence of delirium in postoperative patients. There is no evidence, however, for or against the use of antipsychotics to prevent or treat delirium.[6] Additionally, patients and families should be counseled about the boxed warning in the labeling for antipsychotic agents concerning a possible association with increased risk of death when these agents are administered to patients with pre-existing dementia-related psychosis.

2.2 Depression

Major depressive disorder (MDD) or clinically significant depressive symptoms may be present in up to 35% of patients residing in PALTC facilities.[7] The reported prevalence of depression varies across studies because of methodological differences.[7] In one facility, about 12% of patients met the criteria for MDD, while 35% experienced significant depressive symptoms but did not meet the criteria for MDD. In a study of more than 4,200 LTC facilities, 34% of newly admitted patients had a diagnosis of depression and an additional 24% developed depression within the first year of residence in the facility.[8]

All health care workers in PALTC should maintain a high index of suspicion for the presence of depression or depressive symptoms in patients. Depression is often underrecognized and undertreated in PALTC facilities despite the availability of screening tools such as the Geriatric Depression Scale (GDS), Cornell Scale for Depression in Dementia (CSDD; **Appendix B**, p. 89), Center for Epidemiological Studies–Depression (CES-D) scale, and the Patient Health Questionnaire (PHQ)–9 (**Appendix D**, p. 92) section of the Resident Assessment Instrument (RAI) (see **Table 13**, p. 21). It has been reported that nursing and social work staff in PALTC facilities recognize less than 50% of cases of depression.[7]

Symptoms such as anhedonia and generalized sadness are common in PALTC patients with depression that may go unrecognized because patients with these symptoms may not exhib-

it disruptive behavior. However, older adults with depression may also present with atypical symptoms (e.g., agitation, apprehension, memory deficits, social withdrawal, somatic symptoms) instead of the classic depressive symptoms of sadness and hopelessness.

Reasons that depression is often unrecognized may include coexisting cognitive decline, practitioners' and patients' focus on medical illnesses, and the incorrect belief that increasing sadness is part of normal aging. In addition, symptoms of medical illness may be very similar to those of depression, making the accurate diagnosis of depression more difficult.[9]

Depression increases disability and all-cause mortality, which in turn increases the use of health care services.[10] Studies have described significant mortality risks in patients with severe depression.[11, 12, 13] In one prospective longitudinal study, MDD detected on admission to a PALTC facility was a risk factor for mortality.[14] Furthermore, depressive symptoms in older adults have been shown to be associated with a significant increase in the cost of general medical services.[12]

The relationship between medical multimorbidity and depression is complex. Medical conditions (e.g., cerebrovascular disease, dementia, Parkinson's disease, stroke) may predispose a patient to, or may trigger, depression. Medical or neurological conditions may also mask or imitate depression.[15] Many medical illnesses or conditions can cause symptoms such as apathy or lethargy that suggest depression, although the presence of such symptoms does not necessarily mean that a patient is clinically depressed. In many situations, however, depression may exacerbate coexisting medical illness. As a rule, when medical illness and depression coexist, both conditions should be treated.

Practitioners and members of the interprofessional team (IPT) in PALTC facilities should address depression because it adversely affects the patient's ability to achieve their highest practicable level of well-being. Treatment for depression is almost always effective, even in older adults with frailty. However, recurrent depression, psychotic depression, and mixed anxiety/depressive disorder may be refractory to treatment and may require extensive effort and significant consultative support.

2.3 Dementia

Many residents of PALTC facilities have some degree of dementia. An analysis of data from the 2004 National Nursing Home Survey found that 45% of men and 52% of women aged 65 years or older in a nationally representative sample of long-stay residents had a diagnosis of dementia.[16] In a study of new admissions to a statewide sample of nursing homes in Maryland, the prevalence of dementia was estimated to be 48%.[17]

Dementia causes a range of behavioral, cognitive, functional, and mood changes that significantly affect patient-centered outcomes and quality of life.[18] Delirium superimposed on dementia tends to last longer than delirium not complicated by dementia. Delirium in conjunction with dementia is also associated with accelerated cognitive and functional decline, recurrent and longer hospitalizations, and death.[19] Controlling blood pressure and blood glucose levels, preventing episodes of delirium, and reducing the adverse impact of acute illnesses and medications can help to maintain brain function and prevent or reduce the severity and rate of progression of dementia.

Because dementia is irreversible, patient management focuses on optimizing function and minimizing complications and excess disability (i.e., greater functional impairment than would be expected due to the condition alone).Thus, management of dementia in PALTC involves the entire IPT, including social workers, physical therapists, and the nursing and medical teams. Obtaining a history from the patient's family and from all IPT members who are caring for the patient will aid in the early identification of troublesome behaviors and disease progression.

Of note, the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5.0) has broadened the category of "neurocognitive disorders" to include conditions affecting younger patients that are commonly encountered in PALTC facilities (e.g., HIV/AIDS, Huntington disease, stroke, traumatic brain injury).[20]

QUESTION 2: What are some common challenges in managing mood, behavior, and cognitive decline?

2.4 Challenges in Managing Mood, Behavior, and Cognitive Decline

The challenges of safe and effective management of mood, behavior, and cognitive symptoms in PALTC reinforce the importance of using a systematic approach to evaluate and manage these symptoms. The first challenge is recognizing that behavior has multiple coexisting causes.

Multiple origins/coexisting causes. All human behavior arises from the brain and can be influenced to some extent by all organ systems. Some behaviors result from inherent tendencies and personal experience and development. An acute change of condition or behavior typically has diverse, often coexisting causes (e.g., acute or chronic medical or psychiatric illnesses, adverse effects of medications, anxiety or fear triggered by a situation or illness, hunger, pain, sensory deficits). Understanding and addressing acute behavioral changes requires identifying underlying causes, determining their relative influence, and trying to address as many significant factors as possible.

Interpretive challenges. Although disease or organ dysfunction may cause or affect behavior, disruptive behavior is not in itself an illness or disease. Opinions may differ significantly regarding what constitutes disruptive or challenging behavior that needs to be treated or corrected. A key consideration in PALTC is whether a patient's behavior is comparable to behavior that occurs in society generally. What is considered normal or acceptable behavior may vary with the observer and is often a matter of degree. Individuals whose behavior some people would consider concerning may disagree with those concerns or see no need to change their behavior. They may deny that they are depressed, anxious, or angry. The most apparent cause for a specific behavior may not be the correct one. For example, aggression in a patient with dementia may be caused by discomfort, delirium, or depression instead of or in addition to dementia.

Challenging behavior. Some behavior is distressed, dysfunctional, disturbing, or disruptive, with or without impaired mood and cognition. Unlike most other symptoms, challenging or impaired behavior commonly affects other patients and facility staff alike. Thus, another important consideration is the extent to which a patient's behavior should be managed or suppressed and how much annoyance or disruption other individuals should be expected to tolerate.

Medical practitioners may feel pressure from facility staff to order medications to treat a patient's challenging behavior, and practitioners may not know what else to do to try to address the behavior. However, only some causes of challenging behavior are readily identifiable or treatable. Of those causes, only some can be managed with pharmacologic or nonpharmacologic interventions. For example, behavior not triggered by physiologic causes (e.g., behavior related to a personality disorder) may be especially difficult to control or influence.

In some cases, management of behavioral symptoms may be relatively straightforward (e.g., a nonpharmacologic intervention for transient aggression, an antidepressant for established MDD). In general, however, management of the 3Ds requires rigorous adherence to the processes identified in this CPG and the involvement of knowledgeable, skilled, and experienced medical and mental health practitioners.

2.4.1 Impact of Cognitive Biases

Cognitive biases have a major impact on the interpretation and management of behavioral symptoms. It is important to use a systematic approach – such as by following the steps in this CPG – to try to minimize the impact of cognitive biases (Table 2) on clinical decision making, including decision making related to behavior.[21, 22]

TABLE 2
Examples of Cognitive Biases that May Affect Diagnosis and Management of the 3Ds

Cognitive Bias	Examples
Anchoring bias (excessive reliance on pre-existing information; failure to reconsider previous conclusions or interventions when evidence suggests that current working assumptions might be wrong)	■ A patient admitted with a diagnosis of dementia is assumed to have dementia, despite equivocal screening findings and limited clinical evidence ■ Behavior in a patient with any kind of history of alcohol use disorder is assumed to be due to "hepatic encephalopathy" despite normal liver function tests and evidence of other unrelated causes
Premature closure (jumping to conclusions too quickly without considering all relevant evidence)	■ Combative or aggressive behavior in a patient with dementia is assumed to be due to BPSD without consideration of other possible causes (e.g., pain)
Bandwagon effect (being overly persuaded by the conclusions of others)	■ Assuming that psychiatric diagnoses made at or before a patient's admission must be correct and unwillingness to reconsider them ■ Referring all patients with behavioral symptoms for psychiatric consultation and unquestioningly accepting the consultant's conclusions and recommendations ■ Across-the-board agreement that antipsychotics are dangerous but other psychopharmacologic medications are safe

BPSD, behavioral and psychological symptoms of dementia

QUESTION 3: What preparation/systems/processes does a facility need to support effective management of the 3Ds?

2.5 Facility Preparation to Support Management of the 3Ds

PALTC facilities should have written policies and procedures in place to assess and manage the 3Ds that are consistent with desirable practices as outlined in this CPG and in related references and resources (Table 3). Related clinical reasoning and problem-solving processes are universal and enduring, despite advances in treatment and changes in facility staff and practitioners. Facilities should also develop and implement an ongoing staff education program focused on the 3Ds.

TABLE 3
Examples of Policies and Procedures Related to the Assessment and Management of Behavioral and Psychological Symptoms

- Documented processes for all disciplines for assessing, documenting and reporting behavioral and psychological symptoms (new onset, escalating, improved)
- Standardized tools and definitions to facilitate discussion and management
- Identification of IPT member roles in the assessment and management of behavioral and psychological symptoms
- How to identify and manage psychiatric emergencies
- Setting goals and assessing progress, including functional outcomes
- List of nonpharmacologic interventions available either in the facility or via outside sources
- Adequate staffing to implement nonpharmacologic interventions
- Appropriate references and resources (e.g., psychological consultants, behavior agreements) and notes on how IPT members may access or use these resources
- Interdisciplinary oversight review processes to assure compliance with preferred management practices
- Resources (e.g., guidelines, literature reviews) for identifying recommended practices and updating facility approaches

IPT, interprofessional team

2.5.1 References and Resources

Medical practitioners and staff should have and use reliable sources of information about the assessment and management of the 3Ds (e.g., symptom presentation, differentiating causes, management options). In addition to the information and references identified in this CPG, many reliable sources are readily available—often for free—by using an Internet search engine.

2.5.2 Defining the Roles of Members of the Interprofessional Team

Management of the 3Ds in PALTC involves coordination among the entire IPT. Team members may include primary care medical practitioners, nurses, psychiatrists, psychologists, activities professionals, dietitians, rehabilitation therapists, social workers, and consultant pharmacists.

Members of the IPT play important roles (e.g., as observers, information analysts, selectors of treatment) that should be identified and reinforced, consistent with each discipline's training, knowledge, and skills (Table 4). For example, certified nursing assistants observe and interact with patients and implem,ent interventions for behavioral and psychological symptoms (e.g., engaging patients in activities when they are getting anxious), while medical practitioners analyze information that is mostly collected by other disciplines and have an important role in selecting treatments but rarely provide direct interventions other than ordering treatments or consultations.

TABLE 4
Examples of Interprofessional Team Member Roles in Management of the 3Ds

Discipline / Position	Principal Roles
Certified nursing assistants	Observation, reporting, delivering treatment
Nurses	Observation, screening, assessment, reporting, documenting, analyzing information, delivering treatment
Rehabilitation therapists	Screening, assessment, reporting, documenting, delivering treatment
Pharmacists	Assessment of medication-induced symptoms, etc.
Other direct-care staff (e.g., dietary, environmental services staff)	Observation, reporting, documenting, analyzing information
Medical practitioners	Assessment, documenting, analyzing information, selecting treatment(s)

Medical practitioners may have limited availability to directly observe or examine patients and must rely on other sources, including IPT members, for the information they need to diagnose causes and understand related issues (e.g., factors that improve or exacerbate behavior, mood, or cognitive symptoms).

IPT members should provide medical and psychiatric practitioners with essential, accurate, organized, and detailed information that helps the practitioners to precisely define the problem, identify causes, clarify the impact on the patient, and individualize and adjust treatments. IPT members should accurately observe, describe, document, and report objective details (e.g., description, frequency, intensity, duration) and present a chronological story of the patient's symptoms.

For example, symptoms such as anxiety, anger, or aggression may reflect various underlying causes (e.g., delirium, medication-related adverse effects, personality disorder). Treatment will depend on many factors, including the causes and the consequences. Treatment selection should not be based on speculation and assumptions, but rather should depend on accurately determining causes.

2.5.3 Direct-Care Staff Competencies

To the extent possible, direct-care staff should complete basic competencies, consistent with their licensure/certification and scope of practice, in assessing, documenting, and reporting mood, cognition, and behavior using professionally accepted terminology. Instruction should be guid-

ed by a comprehensive curriculum that identifies desirable approaches (e.g., how to describe a patient's speech and appearance, how to organize a chronological story of a patient's behavior).

2.5.4 Medical Practitioner Roles

In most cases, the medical practitioner's involvement in a suspected case of the 3Ds will require significant detailed knowledge and skill (e.g., to interpret signs and symptoms, diagnose causes and contributing factors, choose appropriate interventions, determine the effectiveness of the current treatment regimen; **Table 5**). Competency in prescribing psychopharmacologic medications includes the ability to select medications based on knowledge of their indications, contraindications, side effects, and possible interactions with other medications, as well as to prescribe several categories of medications simultaneously.

TABLE 5
Medical Practitioners' Responsibilities in Management of the 3Ds

Medical practitioners have a responsibility to

- Attain and maintain competency in basic diagnosis and management of behavioral and psychological symptoms
- Recognize the extent and limits of their knowledge and experience and look things up or get help with more-complex situations
- Appropriately screen for and assess behavioral and psychological symptoms
- Diagnose and classify behavioral and psychological symptoms appropriately (e.g., cognitive disorder, delirium), including medical and medication-related causes
- Collaborate with the patient, family, and other IPT members to identify the impact of symptoms on the patient's function and quality of life
- Identify and select appropriate nonpharmacologic interventions and medications and strive to minimize the adverse consequences of medications
- Help monitor patient progress in attaining improvement or resolution of behavioral and psychological symptoms and adjust interventions accordingly
- Monitor for, identify, and manage medication-related adverse effects
- Understand how to identify whether psychiatric consultants are providing appropriate help

IPT, Interprofessional team

Implications: Every facility needs a foundation for assessment and management of the 3Ds. This foundation must be systematic, include necessary details, and be integrated into the facility's overall care-delivery process.

3. RECOGNITION AND ASSESSMENT

The objectives of the Recognition and Assessment phase are to

- Identify patients who have, or are at risk for, fluctuating levels of alertness or altered cognition (including delirium, depression, and dementia)
- Characterize these conditions and risks in sufficient detail to enable the development of effective plans for prevention, diagnosis, and treatment

Staff and practitioners should triage these situations by recognizing, performing, reviewing, and analyzing pertinent clinical data while obtaining relevant patient history to aid in appropriate assessment, treatment, and monitoring. In PALTC, recognition is a key first step that requires an effective IPT.

QUESTION 4: What pre-admission information is important to consider in the context of the 3Ds?

3.1 Pre-Admission Screening

Pre-admission screening is a systematic application of questions to identify individuals at risk for a specific disorder who may benefit from further investigation or direct preventive action (**Table 6**). In the context of this CPG, pre-admission screening might involve either a new patient or a patient returning to the PALTC facility after receiving care in another setting. Screening may be initiated by the facility admissions office (for a new patient) or by the nursing office (for a patient who is being readmitted). (See AMDA's CPG, ***Transitions of Care***,[a] for detailed guidance on ensuring care coordination when patients move between care settings.)

Pre-admission screening questions may address updates in the patient's condition (e.g., a change in a chronic condition or treatment plan). In some settings, information obtained at the

[a] Free download and ordering information for hard copy available at **https://paltc.org/product-store/transitions-care-cpg**

pre-admission screening may be used to determine the placement within the facility that best meets the patient's care needs (e.g., in a secure unit, dementia unit, skilled care/rehabilitation unit). All information obtained at the pre-admission screening should be transferred to the MDS coordinator or MDS nurse and medical records departments.

TABLE 6
Important Pre-Admission Information

Important pre-admission information may include the following:

- Current problem or diagnosis list
- Current medication list (from home or hospital) and any changes in the past 30 days
- Therapy (physical, occupational, speech) evaluations and progress notes
- Nutrition assessments, including height, weight (with dates), diet orders
- Nursing assessments, including a review of current functional and cognitive status

QUESTION 5: What key aspects of the patient's history should practitioners gather and review?

STEP 1 — Obtain a patient history

Review all available information about the patient's recent or past physical, functional, cognitive, and behavioral status. If the patient has recently been treated for an acute medical or psychiatric illness, review all available transfer information, including recent hospital discharge summaries and consultations with specialty practitioners. Obtain information from family or significant others about the patient's prior level of function. In obtaining this information, it is important both to encourage open information sharing and to ask directed questions about a recent functional or cognitive decline.

Try to establish a timeline of cognitive decline. For example, ask "How long has [patient's name] required assistance with finances?" or "When was the last time [patient's name] was able to walk independently?" Look for supporting documents or sources of information that provide context for the timeline and severity of cognitive decline (Table 7, p. 12).

TABLE 7

Establishing a Timeline of Cognitive Decline: Examples of Documents and Information Sources

- History from current or former formal or informal caregivers (e.g., family members, home-health aides, home therapy staff, primary care clinicians or nurses). Ask about
  - Baseline cognitive and functional status
  - Sensory impairments (e.g., hearing, vision)
  - Baseline personality disorders, likes/dislikes, prior occupation
- History from hospital staff (if recently discharged from acute care). Ask about
  - Observed behaviors, duration and timing of behaviors
  - Sensory deficits
  - Treatment modalities attempted and successful
  - Any successful nonpharmacologic interventions
- Medical records (inpatient or outpatient, e.g., history and physical, discharge summaries, social work documentation, consultative reports — particularly from primary care, neurology, psychiatry, or psychology
- Hospital medication administration record, to determine if any psychotropic medications were administered
- If available, results of any screening tests performed during hospitalization

While the patient's clinical situation may have changed, reviewing the above information provides some insight into their clinical situation at the time the tests were performed

QUESTION 6: What patient history is important to obtain in the context of the 3Ds?

STEP 2 — Review the patient's history specific to each of the 3Ds

In addition to the patient's overall history, it may be helpful to look specifically for history particular to delirium, depression, or dementia (Table 8). A key initial step is to identify and describe, to the extent possible, the patient's current behavioral, physical, and mental status. Identify pertinent details about how the patient looks, thinks, and acts. This baseline information provides useful context for interpreting subsequent behavior or altered mental status.

TABLE 8

Eliciting a Patient History Relevant to the 3Ds

Delirium

- If recently hospitalized, was the patient treated for possible delirium?
- Was a new medication added without a clear indication being stated in the discharge summary? For example:

Medication	Inappropriate Indication	Potentially Appropriate Indications
Mirtazapine	Weight loss	Depression
Quetiapine	Hallucinations	Bipolar disorder
Risperidone	Agitation	Schizophrenia
Trazodone	Insomnia	Depression

- Is there evidence that the patient had rapidly fluctuating levels of alertness while hospitalized?
- Was there a behavioral health or psychiatric consultation in the hospital for a patient without known psychiatric illness?

Depression

- Does the patient have a history of depression?
- Does the patient have a positive result on a valid screening test for depression (e.g., GDS, PHQ-9)?
- Review clinical summaries and other referral data, as well as patient and family history, to identify a history of depression, other psychiatric disorder(s), psychiatric treatment or hospitalizations, or suicide attempts
- Observe the patient for signs suggestive of depression, such as
  - Cognitive patterns related to items in Section C of the MDS
  - Mood and behavior patterns
  - Nutritional problems
  - Weight changes

Dementia

- Does the patient have a history of dementia? Look for previous diagnoses for which dementia could be a key contributing condition or symptom (e.g., “altered mental status,” “delirium,” “memory loss,” “mild cognitive impairment”).
- Check orders for medications that can alter cognitive function (e.g., anti-arrhythmic agents, antipsychotics, hypnotics, opioids, sedatives, any medications with significant anticholinergic properties). Consider consulting a standard medication scale such as the ACB scale.
- Review the patient’s use of herbal or over-the-counter medications.

ACB, Anticholinergic Cognitive Burden; GDS, Geriatric Depression Scale; MDS, Minimum Data Set; PHQ-9, Patient Health Questionnaire–9

QUESTION 7: How can practitioners distinguish an acute change of condition from baseline behavior?

STEP 3 — Recognize an acute change of condition as different from baseline behavior

In addition to delirium, depression, and dementia, patients may exhibit behaviors that raise concerns among PALTC staff and other residents (e.g., persistent restlessness, physical or verbal aggression, sexually inappropriate behavior). When these situations occur, and regardless of whether symptom onset is acute or gradual, staff should use a standard, systematic process to promptly and thoroughly assess them.

Identify any acute changes of condition or behaviors that suggest a change from the patient's baseline mental or cognitive status. Be aware that recent, abrupt changes in function, level of consciousness, alertness, or behavior changes in patients with dementia almost always result from acute or subacute conditions.

Prior AMDA CPGs have suggested using the ABC (Antecedents, Behaviors, Consequences) algorithm to help describe an acute change or new behavior. We propose adding a fourth domain: Disaster, which is a consequence worthy of special consideration, making the mnemonic ABCD (**Table 9**).

TABLE 9
The ABCD Algorithm

***A*ntecedents**
- When did the behavior or change in mental status begin and under what circumstances?
- Have environmental factors contributed to the behavior?
- Did a medical illness precede altered mental status?
- Did certain circumstances enable or disallow/compete with the behavior?

***B*ehaviors**
- What exactly happens when the behavior occurs?
- When, and how often, does it occur?
- Is it continuous or intermittent?
- How has it changed over time?
- How does the new behavior compare with the patient's usual behavior or mental status?
- Who is affected by it and how often?
- What makes it better or worse?

***C*onsequences**
- What are the consequences of the behavior or change in mental status?
- What is the extent of any danger to the patient and others?
- What is the degree of social disruption?
- Is the consequence of the behavior a motivating factor for the patient?

***D*isaster**
- What is the worst thing that could happen if the behavior continues (e.g., fatal elopement, altercations with other residents, use of assistive devices as weapons)?

ABCD, Antecedent, Behaviors, Consequences, Disaster

Unlike many other symptoms that arise or conditions that change, behavior changes often affect others in addition to the patient. There is often a sense of alarm and urgency to stop the behavior, particularly when it affects others. Nevertheless, new-onset behavioral symptoms and altered mental status can and should be assessed in a manner consistent with other changes in condition.

The term *agitation* is commonly used to describe diverse behavior such as aggression, disinhibition, irritability, resistance to care, restlessness, rummaging, screaming, and wandering. The common practice of reporting or documenting *agitation* without more precisely describing the behavior lacks clinical value. Rather than simply documenting that a patient is *aggressive* or *agitated*, use more appropriate and specific terms to describe the patient's behavior (Table 10, p. 16) – e.g., "Resident mistakenly identifies resident 31 as his wife, tries to force her into his room, and becomes assaultive when thwarted."

TABLE 10

Alternatives to "Agitation": Specific Terms for Describing Patient Behavior

Physical/Aggressive Biting Grabbing Hitting Hurting self or other Kicking Making physical sexual advances Pushing Scratching Spitting Tearing things, destroying property Throwing things	**Verbal/Aggressive** Cursing, verbal aggression Making verbal sexual advances Screaming
Physical/Nonaggressive Aimless wandering, pacing Eating/drinking inappropriate substances General restlessness Handling things inappropriately Hiding things Hoarding things Inappropriate dress, disrobing Intentional falling Performing repetitive mannerisms Shadowing Territorial behavior Trying to get to a different place	**Verbal/Nonaggressive** Complaining Continual unwarranted requests for attention or help Negativism Repetitive sentences or questions Strange noises (unusual laughter, crying)

Source: Cohen-Mansfield & Martin, 2010[23]

QUESTION 8: What risk factors commonly contribute to the 3Ds?

STEP 4 — Review common risk factors for the 3Ds

Many factors contribute to risk for the 3Ds; the conditions and factors shown in Table 11 are not an exhaustive list.

TABLE 11

Common Conditions and Risk Factors Associated with the 3Ds

Conditions (Categories)

- Delirium
- Dementia (Alzheimer's, frontotemporal, Lewy body, vascular)
- Epilepsy or other seizure disorder
- Hypothyroidism
- Infection (particularly pneumonia, skin-soft tissue infection, UTI)
- MDD
- Movement disorders (e.g., Parkinson's disease, Parkinson-plus syndrome)
- Normal-pressure hydrocephalus
- Primary psychiatric conditions (e.g., bipolar disorder, borderline personality disorder, PTSD, schizoaffective personality disorder, schizophrenia)
- Substance abuse (past or current)
- Traumatic brain injury
- Stroke, TIA
- Vitamin B12 deficiency

Risk Factors

- Age 75 years or older
- Cultural barriers (e.g., language; customs related to age or health)
- Devices (e.g., IV lines, Foley catheters, physical restraints)
- Family history of delirium, depression, dementia, or a primary psychiatric condition in a first-degree relative
- Fluid/electrolyte imbalance (e.g., nausea/vomiting, diarrhea, use of diuretics, dehydration)
- Gastrointestinal distress (e.g., constipation/fecal impaction, diarrhea, emesis)
- Grief, recent personal loss (e.g., new loss of autonomy, body part, family member, friend, functional status, spouse/significant other)
- Impaired sensory function (e.g., vision, hearing)
- Isolation, social restrictions (e.g., for infection-control purposes)
- Language barriers (e.g., aphasia)
- Mobility impairment (e.g., recent loss of cognitive, functional, or physical independence)
- Personal history of delirium, depression, mood disorder, psychosis, psychiatric hospitalization, attempted suicide
- Polypharmacy (particularly medications with CNS effects)
- Sleep deprivation
- Transitions of care (e.g., recent hospitalization, PALTC facility admission)
- Weight loss, anorexia

CNS, central nervous system; IV, intravenous; MDD, major depressive disorder; PTSD, post-traumatic stress disorder; TIA, transient ischemic attack; UTI, urinary tract infection

STEP 5 — Assess the patient's mental status

An assessment of mental status – along with identifying and describing behavioral symptoms on admission or with any acute change in condition – serves several purposes.

- Establishing a baseline for future comparison
- Identifying conditions that may be reversed or improved
- Identifying the relationship between the patient's medical condition(s) and their functional impairment to enable a more targeted management approach

A key initial step is to identify and describe, to the extent possible, the patient's current behavior and physical and mental status (**Table 12**).

- Review the patient's personal history (e.g., vocational history, personality, locus of control, traumatic life events, biases and prejudices, threshold for violence, historical coping mechanisms)
- Observe the patient in various situations (e.g., during activities or meals, while grooming)
- Identify and document pertinent details about how the patient looks, thinks, and acts

This process is strengthened when both licensed and unlicensed staff contribute information, emphasizing the need for practitioners in PALTC to operate in an IPT model of care.

With all initial and subsequent assessments (as indicated), assess vision and hearing. Loss of both vision and hearing is associated with dementia or cognitive decline.[24, 25, 26, 27] Ensure that

- Vision-correction glasses are available
- Ear canals are free of cerumen impaction
- Hearing aids are charged and functional

Because altered mental status can be considered a medical emergency, life-threatening diseases (e.g., hypoxia, myocardial infarction, respiratory failure, sepsis, stroke) should also be considered in the initial assessment. Assessment of the patient for acute abdomen, deep vein thrombosis, fecal impaction, focal neurological deficits, signs of infection, or urinary retention is strongly encouraged.

TABLE 12
Key Elements in Evaluating Mental Status

Domain	Characteristics
Affect	Appropriateness Quality (normal, flat, blunted, labile, happy, sad, apathetic)
Appearance and general behavior	Eye contact General responsiveness Grooming Psychomotor agitation, restlessness, retardation
Insight	Extent of personal awareness and understanding of current situation, including own current behavior
Judgment	Decision-making capacity Degree of understanding of benefits and risks of proposed interventions or actions Degree of understanding of safety, socially acceptable conduct
Mood	Level/intensity Duration Fluctuation/lability
Cognition	Orientation Short/long-term memory Concentration, attention
Speech/language	Clarity, coherence, fluency Quality, relevance Rate, rhythm Slurring Volume
Thought content	Presence of delusions, obsessions, compulsions, phobias, paranoia Homicidal/suicidal ideation
Thought process	Coherence Organization Relevance

Table 13 (p. 21) lists available instruments for measuring cognition, delirium, function, mental status, and mood disorders. Table 14 (p. 22) compares the domains assessed in three valid mental health status evaluation instruments.

- The **Brief Interview for Mental Status** (BIMS), a short performance-based cognitive screener, was expressly designed to facilitate cognitive screening as part of the MDS assessment. Its feasibility was demonstrated in a large sample of PALTC facilities. Most staff who were surveyed reported that the use of the BIMS improved assessments.[28]
- The **Cohen-Mansfield Agitation Inventory** (CMAI) is a 29-item scale (or 14-item short form) that systematically assesses agitation related to cognitive impairment over a 2-week period. It has been found to be a valid measure of agitation among older adults residing in a PALTC facility. The inventory includes both physical and verbal aggressive and nonaggressive behaviors.[29]
- The **Cornell Scale for Depression in Dementia** (CSDD; **Appendix B,** p. 89) has been well validated for older adults with dementia in the community and has been assessed in at least one study in older adults with frailty in PALTC settings.[30] This instrument entails both a semi-structured interview of a caregiver and direct observation and interviews with patients.
- The **Geriatric Depression Scale** (GDS) is the most-studied screening tool in cognitively intact PALTC patients, and shorter versions are well validated. In one study, a 10-item version of the GDS[31] was shown to have the best sensitivity and specificity among the shortened versions studied for diagnosing depression in older PALTC patients.[32]
- The **Patient Health Questionnaire–9** (PHQ-9; **Appendix C,** p. 91), which is included in the MDS, has been validated in outpatient elders and in hospitalized, rehabilitation (post-stroke), and home-health populations and appears to be a valid and promising screening tool for depression among PALTC patients.[33] One advantage of the PHQ-9 is its exclusive focus on the nine diagnostic criteria for depressive disorders. However, scales that focus predominantly on diagnostic criteria may be less specific for major depression and other mood disorders and may less accurately discriminate depression from anxiety or general psychological distress.[34]
- The **Patient Health Questionnaire–9 Observational Version** (PHQ-9-OV; **Appendix D,** p. 92) is a staff interview instrument that the Centers for Medicare & Medicaid Services (CMS) now recommends for use with individuals who cannot self-report. The PHQ-9-OV includes an irritability element that is not included in the PHQ-9.

In a study that identified and tested changes to the MDS 3.0, the PHQ-9, PHQ-9-OV, and GDS were compared in 418 residents from 70 PALTC facilities in eight states. The PHQ-9 had the best agreement with the gold standard (correlation coefficients: PHQ-9, 0.83; PHQ-9-OV, 0.79; for GDS, 0.71).[35]

TABLE 13

Available Instruments for Assessing Cognition, Delirium, Function, Mental Status, and Mood Disorders

Agitation

- Cohen-Mansfield Agitation Inventory (CMAI)

Cognition

- Blessed Orientation-Memory-Concentration Test
- Cognitive Performance Scale
- Clock Drawing Test
- Mini-Cog diagnostic test for dementia
- Mini-Mental State Examination (MMSE)*
- Montreal Cognitive Assessment Scale (MOCA)*
- Saint Louis University Mental Status exam (SLUMS)
- Verbal Fluency Test

Delirium

- Confusion Assessment Method (CAM)#
- Ultra-Brief 2-item screen (UB-2)[36, 37]

Function

- Activities of Daily Living (ADLs) portion of the MDS
- Barthel Index of ADLs
- Functional Activities Questionnaire
- Katz Index of Independence in Activities of Daily Living

Mental Status

- Brief Interview for Mental Status (BIMS)#
- Mini-Mental State Examination
- Montreal Cognitive Assessment Scale
- Saint Louis University Mental Status exam

Mood Disorders

- Center for Epidemiological Studies–Depression (CES-D) scale
- Cornell Scale for Depression in Dementia (CSDD; **Appendix B**, p. 89)
- Geriatric Depression Scale (GDS)
- Patient Health Questionnaire-9 (PHQ-9; **Appendix C**, p. 91)#
- Patient Health Questionnaire-9–Observer Version (PHQ-9-OV; **Appendix D**, p. 92)#

* A fee or additional training may be required to use these tools

Included in MDS

TABLE 14
Comparison of Three Valid Cognitive Screening Tools

Montreal Cognitive Assessment (MOCA) (Normal: 26 or higher)	Brief Interview for Mental Status (BIMS) (Normal: 13–15)	Saint Louis University Mental Status Exam (SLUMS) (Normal: 27–30)
■ Visuospatial/executive ■ Naming ■ Memory ■ Attention ■ Language ■ Abstraction ■ Delayed recall ■ Orientation	■ Registration of 3 words ■ Orientation to month, year, day ■ Delayed recall	■ Orientation to week, year, location ■ Attention ■ Animal fluency ■ 5 object recall ■ Visuospatial

QUESTION 9: What questions should the practitioner ask in assessing the patient's mental status?

Table 15 lists questions that will assist the practitioner in assessing the patient's mental status.

TABLE 15
Detailed Questions About Mood, Cognition, and Behavior

Characteristics
- Clarify the patient's thoughts, feelings, memory, or confusion

Temporality
- For how long has the behavior or change in mental status been occurring?
- When, and how often, does it occur? Is it continuous or intermittent?
- How has it changed over time?
- How does it compare with the patient's usual behavior or mental status?
- How often does an episode occur?
- Has the patient had the condition or issue before? If so, what brought it on or made it worse?

Intensity
- How bad is the condition or issue at its worst? How about at its best?

Duration
- How long does a flare-up (exacerbation) last?

TABLE continued

TABLE 15 continued

Detailed Questions About Mood, Cognition, and Behavior

Aggravating and Alleviating Factors

- Has the patient taken treatments (e.g., nonpharmacologic interventions or psychopharmacologic medications) for this condition or issue? If so, how and to what extent were they helpful?
- What makes the condition or issue better or worse (e.g., getting attention, activities, medications)?
- What might be causing the condition or issue?

Functional Impact

- How is the condition or issue affecting the patient's daily life? Is it affecting their ability to do things that matter to them (e.g., activities, mood, relationships, sleep)?
- How tolerable is the current condition or issue?

Note: Most questions may be addressed either to the patient or to staff/caregivers/family members if the patient is unable to self-report

To help to ensure a standard process, each facility should routinely use the MDS 3.0 to assess residents for the 3Ds. In certain circumstances, the use of additional assessment tools may be appropriate (see Table 13, p. 21). Table 16 (p. 24) lists the sections in the MDS 3.0 that are relevant to assessment of the 3Ds.

TABLE 16
MDS 3.0 Sections Relevant to Assessment of the 3Ds

Section B: Hearing, Speech, and Vision
- Item B0200: Ability to hear
- Item B0600: Speech clarity
- Item B1000: Ability to see in adequate light

Section C: Cognitive Patterns
- Mental Status
  - Item C0500: BIMS Summary Score
  - Item C0600: Staff Assessment of Mental Status
- Delirium
  - Item C1310: Signs and Symptoms of Delirium (from CAM)
- Mood
  - Item D0200: Resident Mood Interview (from PHQ-9)
  - Item D0500: Staff Assessment of Resident Mood (from PHQ-9-OV)
- Behavior
  - Item E0100: Potential Indicators of Psychosis

Other Important MDS Sections
- Section F: Preferences for Customary Routine and Activities
- Section G: Functional Status
- Section H: Bladder and Bowel
- Section I: Active Diagnoses
  - Neurological status (I4200–I5500)
  - Psychiatric/mood disorders (I5700–I6100)
- Section K: Swallowing/Nutritional Status
  - Weight loss or gain (K0300, K0310)

Note: Section numbers or cross-references may change in future versions of the MDS

BIMS, Brief Interview for Mental Status; CAM, Confusion Assessment Method; MDS, Minimum Data Set; PHQ-9, Patient Health Questionnaire-9; PHQ-9-OV, Patient Health Questionnaire-9-Observer Version

4. DIAGNOSIS AND INTERPRETATION

Patients residing in PALTC facilities frequently have multiple symptoms (e.g., anorexia, dysphagia, falls, incontinence, nausea, pain, weakness, weight loss). Multiple symptoms may have common causes and individual symptoms may have multiple causes. Symptoms that suggest the presence of one or more of the 3Ds must be evaluated in the context of all of the patient's conditions and treatments, not in isolation. Table 17 offers guidance on differentiating common clinical patterns associated with the 3Ds.

TABLE 17
Differentiating the 3Ds

	Delirium	Depression	Dementia
Onset	Acute (hours to days)	Acute or gradual (weeks to months)	Gradual (months to years)
Course	Fluctuating	Acute or chronic	Progressive
Duration	Days to weeks	Months to years	Months to years
Consciousness	Altered	Clear	Clear except in advanced stages
Attention	Impaired	Mildly impaired	Normal except in advanced stages
Mood	Variable	Low	Labile
Apathy	Present or absent	Present	Present or absent
Hallucinations	Present or absent	Usually absent	Variable
Psychomotor changes	Increased or decreased	Slowed in some cases	Normal
Reversibility	Usually	Usually	Rarely
Signs of other medical conditions	Present	Present	Usually absent

STEP 6 — Does the patient have signs or symptoms of delirium?

Delirium is a sudden change in mental status (inattention and disorganized thinking) that develops over hours or days and has a fluctuating course. The diagnosis of delirium may be a medical emergency. The DSM-5.0[20] defines delirium as follows:

1. A disturbance in attention (i.e., reduced ability to direct, focus, sustain, and shift attention) and awareness (reduced orientation to the environment).
2. The disturbance develops over a short period of time (usually hours to a few days), represents a change from baseline attention and awareness, and tends to fluctuate in severity during the course of a day.
3. An additional disturbance in cognition (e.g., memory deficit, disorientation, language, visuo-spatial ability, or perception).
4. The disturbances in Criteria 1 and 3 above are not better explained by another preexisting, established, or evolving neurocognitive disorder and do not occur in the context of a severely reduced level of arousal such as coma.
5. There is evidence from the history, physical examination, or laboratory findings that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal (i.e., due to a drug of abuse or to a medication), or exposure to a toxin, or is due to multiple etiologies.

The diagnosis of delirium is frequently missed in PALTC.[38] For this reason, the IPT should consider delirium as a possible diagnosis with any acute change of condition and should consider building delirium recognition into policies or procedures that address residents' change of condition.

Patients with delirium often have nonspecific symptoms; they may be hyperactive, hypoactive, or display fluctuating activity that is difficult to describe as either hyper- or hypoactive. **Table 18** lists possible presentations of delirium or altered mental status; **Table 19** (p. 28), possible causes of delirium; **Table 20** (p. 29), medications commonly associated with causing delirium.

TABLE 18

Possible Presentations of Delirium or Altered Mental Status

Behavioral or functional disturbances

- An abrupt, persistent, or significant change in usual performance of ADLs
- Disturbances occurring after a change in medication regimen (e.g., change in the dose of an existing medication; addition of a new medication [in any category] with CNS effects or side effects; recent abrupt discontinuation of a medication that should be tapered gradually)
- Progressive or abrupt onset of agitation, altered attention span, or restlessness that persists for a day or more, or a change in usual level of consciousness (e.g., from alert to drowsy, from drowsy to stupor) with or without other specific signs or symptoms such as fever or neurological signs (e.g., facial droop, focal weakness, slurred speech, unsteady gait)
- Rapid or persistent escalation of symptoms in a patient with new or pre-existing MDD or mental illness such as schizophrenia or the manic phase of bipolar disorder

Intellectual function

- Abrupt onset or progression of delusions, illusions, hallucinations, or paranoia
- Abrupt or rapid onset of confusion or persistent change from the usual level of understanding and comprehension, with or without physical or functional changes
- New onset of disorientation to person, place, or time, or worsening of existing disorientation
- Persistent change from the patient's usual level of thinking (whether normal or disordered)

ADLs, activities of daily living; CNS, central nervous system; MDD, major depressive disorder

TABLE 19
Possible Causes of Delirium

Delirium may be *hypo*active or *hyper*active. It is most commonly caused by an acute or subacute event.

Endocrine/metabolic conditions
- Acidosis
- Adrenal disorder
- Electrolyte disturbance (calcium, glucose, magnesium, sodium)
- Liver failure with hepatic encephalopathy
- Niacin/thiamine deficiency
- Renal failure
- Thyroid disorders
- Vitamin B12 deficiency

Infections
- CNS abscess
- Encephalitis
- HIV
- Meningitis
- Pneumonia
- Sepsis
- Syphilis
- UTI

Neurologic/CNS disorder
- Anoxic brain injury
- Brain tumor
- Intracerebral hemorrhage
- Multiple sclerosis
- Seizure
- Stroke, TIA
- Subarachnoid hemorrhage
- Subdural hematoma
- Vasculitis

Drugs/toxins
- Drug overdose or side effect (amphetamines, drugs with anticholinergic properties, cocaine, steroids)
- Drug withdrawal (alcohol, barbiturates, benzodiazepines, opioids, anticonvulsants, other sedative-hypnotics)
- Carbon monoxide
- Cyanide
- Industrial poisons
- Lead or mercury poisoning
- Pesticides

TABLE continued

TABLE 19 continued
Possible Causes of Delirium

Trauma
- Acute fractures
- Burns
- Head trauma (concussion, traumatic brain injury)

Other causes
- Acute hypoxia
- Acute urinary retention
- Constipation
- Hypotension, hypertensive emergency
- Hypothermia, hyperthermia
- Myocardial infarction

Note: See **Table 20** for medications commonly associated with causing delirium

CNS, central nervous system; HIV, human immunodeficiency virus; TIA, transient ischemic attack; UTI, urinary tract infection

TABLE 20
Medications Commonly Associated with Causing Delirium

- Centrally acting agents
  - Anticonvulsants (e.g., barbiturates)
  - Sedative-hypnotics (e.g. benzodiazepines)
- Analgesics
  - Opioids (e.g., oxycodone)
- Antihistamines (e.g., diphenhydramine, hydroxyzine)
- Anticholinergics (e.g., oxybutynin)
- Gastrointestinal agents
  - Antispasmodics (e.g., dicyclomine)
  - H2 blockers
- Antiemetics (e.g., meclizine, prochlorperazine, promethazine)
- Antibiotics
  - Fluoroquinolones
- Psychotropics
  - Tricyclic antidepressants (e.g., amitriptyline)
- Miscellaneous
  - Corticosteroids
  - Skeletal muscle relaxants (e.g., cyclobenzaprine)

Early recognition and treatment of delirium can improve outcomes. PALTC facilities should aim to train staff who are assessing patients frequently to use a standardized tool such as the CAM (Table 21). This standardized, evidence-based tool enables clinicians to identify and recognize delirium quickly and accurately. It is included in the MDS 3.0 and has a sensitivity of 94% to 100% and a specificity of 90% to 95%. As a quick screening tool, it can be incorporated into routine assessments. Training to administer and score the tool is necessary to obtain valid results. A positive score for delirium prompts further assessment.

The terms *altered mental status, delirium,* and *encephalopathy* are often used interchangeably to describe an acute change in behavior. However, *encephalopathy* is an acute change due to a toxic or metabolic cause, whereas *delirium* is a psychiatric condition.[39] In common use, delirium (as diagnosed by the CAM) is a change in mental status regardless of the cause.

TABLE 21
Diagnosing Delirium with the Confusion Assessment Method

Delirium may be present if (1) ***both*** 1 ***and*** 2 and (2) ***either*** 3 ***or*** 4 are true.

1. Is there evidence of an acute change in mental status and a fluctuating course

and

2. Inattention (can test with months of year backwards, days backwards, digit spans)
- Easily distractible
- Has difficulty keeping track of conversation

and either

3. Disorganized thinking
- Rambling or irrelevant conversation
- Unclear or illogical flow of ideas
- Unpredictable switching from subject to subject

or

4. Altered level of consciousness
- Vigilant (startled easily by any sound or touch)
- Lethargic (repeatedly dozes off when being asked questions, but responds to voice or touch)

Source: Inouye et al[40]

STEP 7 — Does the patient have signs or symptoms of depression?

The DSM-5.0[20] defines depression as follows:

> Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (a) depressed mood or (b) loss of interest or pleasure. Note: Do not include symptoms that are clearly attributable to another medical condition.

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful). (Note: In children and adolescents, it can be an irritable mood.)
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation)
3. Weight gain or significant weight loss when not dieting (e.g., a change of more than 5% of body weight in a month), or increase or decrease in appetite nearly every day. (Note: In children, consider failure to make expected weight gain.)
4. Insomnia or hypersomnia nearly every day
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
6. Fatigue or loss of energy nearly every day
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide
10. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning
11. The episode is not attributable to the physiological effects of a substance or to another medical condition
12. The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders
13. There has never been a manic episode or a hypomanic episode
14. This exclusion does not apply if all of the manic-like or hypomanic-like episodes are substance-induced or are attributable to the physiological effects of another medical condition

Notes:

1. Criteria 1–3 represent a major depressive episode.
2. Responses to a significant loss (e.g., bereavement, financial ruin, losses from a natural disaster, a serious medical illness or disability) may include the feelings of intense sadness, rumination about the loss, insomnia, poor appetite, and weight loss noted in Criterion 1, which may resemble a depressive episode. Although such symptoms may be understandable or considered appropriate to the loss, the presence of a major depressive episode in addition to the normal response to a significant loss should also be carefully considered. This decision inevitably requires the exercise of clinical judgment based on the individual's history and the cultural norms for the expression of distress in the context of loss.

Because depression is common among patients in PALTC and treatment is almost always effective, facilities should consider adopting a policy that encourages formal screening of all patients for depression on admission and at any time a significant change occurs in a patient's functional or medical status. **Table 22** (p. 32) lists symptoms suggestive of depression; **Table 23** (p. 33), medications that can cause depression or induce or worsen depressive symptoms. (See **Table 13,** p. 21, for a list of available screening tools for mood disorders.)

TABLE 22
Symptoms Suggestive of Depression

Most important
- Depressed mood most of the day, almost every day (by either subjective report [feels sad or empty] or observation made by others [appears tearful])
- Diminished interest or pleasure in most activities, most of the time
- Thoughts of death or suicide

Important
- Difficulty making decisions
- Feelings of helplessness
- Feelings of worthlessness or hopelessness
- Inappropriate feelings of guilt
- Psychomotor agitation or retardation not attributable to other causes
- Social withdrawal, avoidance of social interactions or going out

Less important but common in older adults
- Appetite change
- Morning sluggishness and lack of energy that improves markedly later in the day
- Change in ability to think or concentrate
- Change in ADLs
- Change in libido
- Failure to thrive
- Family history of mood disorders
- Fatigue or loss of energy, worse than baseline
- Insomnia or hypersomnia nearly every day
- Increased complaints of pain
- Preoccupation with poor health or physical limitations
- Weight loss or gain

ADLs, activities of daily living

Source: Adapted from Alexopoulos et al, 2001[9]

TABLE 23

Medications that Can Cause Depression or Induce or Worsen Depressive Symptoms

- Anti-arrhythmics
- Anticonvulsants
- Barbiturates
- Benzodiazepines
- Bromocriptine
- Calcium-channel blockers
- Carbidopa-levodopa
- Certain beta-adrenergic blockers (e.g., propanolol)
- Clonidine
- Cytokines/interferon alfa
- Digoxin
- Fluoroquinolone antibiotics
- Opioids

STEP 8 — Does the patient have signs or symptoms of dementia?

The DSM-5.0[20] defines dementia, or major neurocognitive disorder, as follows:

1. Evidence of significant cognitive decline from a previous level of performance in one or more cognitive domains (complex attention, executive function, learning and memory, language, perceptual-motor, or social cognition) based on
   a. Concern of the individual, a knowledgeable informant, or the clinician that there has been a significant decline in cognitive function; and
   b. A substantial impairment in cognitive performance, preferably documented by standardized neuropsychological testing or, in its absence, another quantified clinical assessment.
2. The cognitive deficits interfere with independence in everyday activities (i.e., at a minimum, requiring assistance with complex instrumental ADLs such as paying bills or managing medications).
3. The cognitive deficits do not occur exclusively in the context of a delirium.
4. The cognitive deficits are not better explained by another mental illness (e.g., MDD, schizophrenia)

Findings related to the patient's physical, functional, and psychosocial status should be documented in the medical record. The nurse assessment coordinator and social worker will complete the appropriate sections of the MDS; however, the practitioner should also review these sections.

Whereas symptoms of delirium typically fluctuate, those of dementia are usually fairly stable. Patients with dementia may, however, display worse symptoms at different times of day (e.g., in the late afternoon, at night). Delirium (e.g., caused by an occult infection) may be superimposed on dementia and may thus appear to make dementia more severe.

Unlike patients with delirium, patients with dementia usually do not have altered levels of consciousness. The clinical course can help to differentiate between dementia and delirium; multiple cognitive impairments that persist for more than a few months suggest dementia rather than delirium.[20]

Patients with dementia tend to have fewer reported somatic symptoms (e.g., gastrointestinal distress, headaches, musculoskeletal pain) than those with depression. In addition, patients with dementia tend to perform poorly on tasks involving automatic processing (e.g., eating meals, writing their name). The CSDD may help to detect clinically significant depression in patients with significant cognitive impairment; the PHQ-9 may help to detect depression in patients with mild cognitive impairment.

Table 24 lists signs and symptoms that are suggestive of dementia and their consequences and provides examples of how caregivers may misinterpret these manifestations.

Causes of dementia are usually thought of as possibly reversible or irreversible, depending on the timeliness of the diagnosis and promptness of treatment (Table 25).

TABLE 24
Signs and Symptoms that May Suggest Dementia

Behavior	Consequences	Possible Caregiver Descriptions
Amnesia (loss of memory)	Repeats questions, misplaces objects	"Frustrated" "Paranoid"
Apraxia (loss of ability to coordinate learned movements)	Inability to use utensils, dress appropriately, or use toilet unassisted	"Won't eat" "Uncooperative" "Incontinent"
Aphasia (loss of ability to speak and/or understand)	Cannot follow directions, unable to engage in conversation	"Quiet" "Uncooperative" "Withdrawn"
Agnosia (loss of ability to recognize familiar objects)	Cannot recognize faces, familiar places, and/or objects	"Frightened, combative" "Wandering" "Stealing others' belongings"
Affective dysregulation (loss of appropriate emotion)	Loss of connection between emotion and expression, loss of empathy	"Depressed" "Frustrated" "Tearful" "Mood swings"

TABLE 25
Possible Causes of Dementia

Possibly reversible
- CNS conditions (e.g., chronic subdural hematoma, multiple sclerosis, normal-pressure hydrocephalus)
- Endocrine disorders (e.g., adrenal insufficiency, hypothyroidism)
- Infections (e.g., Creutzfeldt-Jakob disease, HIV, tuberculosis, untreated syphilis)
- Misuse of alcohol and other substances
- Nutritional deficiencies (e.g., thiamine, vitamin B12, Wilson disease)

Irreversible
- Alzheimer's disease
- Frontotemporal dementia
- Huntington disease
- Lewy body dementia
- Parkinson's disease dementia
- Parkinson-plus syndromes (e.g., corticobasilar degeneration, multiple system atrophy, progressive supranuclear palsy)
- Vascular dementia (including multi-infarct dementia; sentinel infarct dementia; vasculitis; diffuse white matter disease, e.g., Binswanger disease)

CNS, central nervous system; HIV, human immunodeficiency virus

STEP 9 — Does the patient have an acute change in behavior?

When evaluating behaviors that raise concerns among staff or other residents (e.g., persistent restlessness, physical or verbal aggression, sexually inappropriate actions), consider the following possible underlying causes:
- Unmet comfort needs (e.g., the patient is wet, soiled, in pain)
- Environmental issues (e.g., extremes in noise or temperature)
- Interpersonal interactions (e.g., disagreement with a roommate or staff member)
- Nonspecific behavioral and psychological symptoms of dementia (BPSD), sometimes called neuropsychiatric symptoms of dementia

Certain physical impairments may contribute to behavioral symptoms. For example, aphasia can result in the inability to understand or verbally express distress or pain; impairments of vision and hearing may lead to misinterpretation of events and cause suspicion, paranoia, and physical agitation. Agitation can also result from the frustration of having an impairment or the difficulty of making progress in recovering from illness or injury.

Recent, abrupt changes in function, level of consciousness, and behaviors in patients with dementia almost always result from acute or subacute conditions. Patients whose behavior changes

abruptly should be assessed for pain, environmental changes (e.g., facility transfer), a new medical condition, or the addition of one or more new medications. Patients with dementia who also display symptoms such as delusions and hallucinations may be at increased risk for institutionalization and death. The use of neuroleptic (antipsychotic) medications can compound this risk.

The facility should guide its staff and practitioners on relevant techniques, tools, and criteria for describing and assessing behavioral symptoms. Obtaining the most detailed description possible of a patient's symptoms promotes pertinent interpretation and interventions (see Table 8, p. 13).

QUESTION 10: What consideration should be given to confounding or comorbid conditions in the recognition and assessment of the 3Ds?

STEP 10 — Identify confounding conditions

It is important to recognize the presence of confounding conditions. Symptoms of a medical illness may be similar to those of depression or dementia.

- Apathy or lethargy may suggest depression but may also be nonspecific symptoms of a medical or neurological condition (Table 26).
- Patients with moderate to severe dementia may develop symptoms suggestive of depression (e.g., apathy, sleep impairment, social isolation) as part of the natural progression of dementia. Distinguishing between depression and dementia-related apathy can be very difficult; moreover, depression and dementia-related apathy may occur concomitantly. Patients are often unable to assist in distinguishing between the two conditions, particularly if both are present. This seems to be particularly true in patients with mild vascular dementia with apathy who also report depression.
- Other symptoms of depression (e.g., guilt, loss of hope, sadness) may result from other reversible or irreversible conditions. Consider whether sensory impairments (visual or auditory) or symptoms of a reversible medical condition (e.g., hypothyroidism, stroke) may be causing or contributing to the patient's depressive symptoms.
- Disengagement in the setting of terminal illness may be mistaken for depression. An individual's response to a stressor, such as imminent death, with a generalized loss of interest may be misinterpreted as depression. It is important to explore each patient's attitudes and clinical situation before determining that a nonspecific symptom such as apathy is pathological.

TABLE 26
Distinguishing the Symptoms of Apathy and Lethargy

Symptom	Possible Conditions
Apathy	Alzheimer's disease Anxiety Depression Fronto-temporal dementia Parkinson's disease Schizophrenia Stroke
Lethargy	Carbon monoxide poisoning Dehydration Fever Hyperthyroidism Hypothyroidism Hydrocephalus Kidney failure Infection/sepsis Sleep apnea

STEP 11 — Obtain objective and targeted data

To help guide the workup — and, if clinically appropriate, to assess and treat the patient in the facility — consider obtaining the laboratory values and imaging studies shown in Table 27, p. 38. Within PALTC facilities, the IPT frequently observes patients' functional and cognitive status. Practitioners must incorporate these IPT assessments into the overall approach to clinical management of the patient.

TABLE 27

Laboratory and Imaging Tests that May Guide Diagnosis and Interpretation

- Basic laboratory tests
  - Complete blood count with differential
  - Basic metabolic panel
  - Liver function tests
  - Thyroid stimulating hormone
  - Oxygen saturation
  - Fingerstick blood glucose
- If signs/symptoms suggest an infection, consider urinalysis, urine/blood cultures
- If concerned about drug levels, consider checking levels of anticonvulsant, psychotropic (e.g., lithium), or cardiac (e.g., digoxin) medications
- Consider the possibility of substance use disorder (illicit drugs or alcohol)
- Imaging studies as clinically appropriate (e.g., chest x-ray)

QUESTION 11: How do we determine the urgency of a situation and evaluate the need to transfer the patient?

STEP 12 — Determine the urgency of the situation, assess staff and facility resources, and communicate an immediate plan

When confronted with a patient with an acute change in behavior or mental status, it is important to determine the urgency of the situation. Some cases of altered mental status or behavior change require urgent evaluation and vigorous management, while others can be handled more routinely. Simply giving medications to try to "control" behaviors, or routinely requesting the immediate transfer of patients with a change in behavior or altered mental status to the emergency department or hospital, are often not helpful and are likely to be counterproductive.

Patients who are hospitalized for changes in behavior or mental status frequently face additional risks (e.g., change in environment, iatrogenic illness, polypharmacy, restraint use, transfer-related stress, unnecessary catheterization) in the hospital, and they may return to the facility with an inadequate diagnosis or a decline in physical function. Unexpected or unnecessary hospitalization may also result in the addition of medications of questionable benefit or the discontinuation of medications essential to the patient's care.

Because the causes of behavior changes and altered mental status are often readily identifiable, many situations can be analyzed and managed without hospital transfer. "Lateral transfers" to another facility with no more robust psychiatric resources than the current facility only shift and magnify the danger because the receiving facility has less experience with the patient. Such transfers, with less-than-transparent disclosure of the patient's behaviors, are common but represent a serious breach of ethics by endangering both the patient and people around them.

Before contacting a health care practitioner, facility staff should

- Identify the patient's behavior and function
- Describe the patient's behavior and function in detail
- Define whether and why they believe the patient's current behavior presents immediate risks to the patient or others

This will allow the practitioner (who is generally not present in the facility to observe or speak with the patient) to participate in identifying the urgency of the need for diagnostic workup, therapeutic interventions, or transfer to a higher level of care. Some changes in behavior and mental status are less severe or dangerous for a patient or others. For example, a single episode of physical aggression that is readily contained may be less urgent than frequently recurring or escalating aggression. **Table 28** offers examples of situations that may require urgent patient evaluation. (Also see AMDA's CPG, ***Acute Change of Condition***.[b])

TABLE 28
Examples of Situations in Which Urgent Patient Evaluation May Be Required

Medical symptoms

- Markedly abnormal vital signs
- New-onset respiratory distress, with increasing hypoxia and dyspnea
- Signs of a serious underlying condition possibly causing delirium (e.g., symptoms of stroke)

Psychiatric symptoms

- Escalating physically aggressive behavior or threats of violence
- Actions posing a significant danger to self or others
- Expression of suicidal ideation

All IPT members may be involved in determining the urgency of the situation and the best course of action. For example, calling the unit manager or director of nursing and asking about staff resources may help with deciding whether the patient can be safely monitored overnight or whether a 1:1 sitter can be assigned for a short time. Consider staff and facility resources when determining whether the patient can safely be treated "in place" or requires transfer to a higher level of care.

One-on-one management or very brief use of a chemical restraint in a behavioral emergency that creates danger to the patient or others may be indicated until the IPT can meet and craft a therapeutic plan of care. This approach is generally preferred over transfer to the emergency department or to a psychiatric hospital.

[b] Ordering information available at **https://paltc.org/product-store/acute-change-condition-cpg**

STEP 13 — Systematically document the findings of the diagnosis and evaluation process

Documentation records findings and the conclusions based on those findings. Methods of documentation may include checklists, flow sheets, narrative progress notes, and summaries of conclusions and interventions. The content and depth of documentation will vary by discipline.

While checklists and scales can help to monitor and communicate information about the patient's condition, it is important to use them judiciously, interpret them appropriately, and not rely on them excessively.

Summary documentation should tell the patient's story over time in an orderly, systematic fashion. Detailed narrative and summary notes that include comparisons over time (e.g., characteristics, duration, frequency, intensity, location, nature of the patient's symptoms; exacerbating and relieving factors; impact on function) can be very helpful to practitioners and the IPT.

5. TREATMENT AND MANAGEMENT

Before selecting any treatment strategy or pharmacologic agent, it is essential to first follow the previous steps in this CPG to ensure that you have correctly identified the problem. (See **Recognition and Assessment**, p. 10, and **Diagnosis and Interpretation**, p. 25, sections. Also see **Table 1** (p. xiv), *Clinical Problem-Solving and Decision-Making Process Steps and Objectives*.)

When considering a treatment and management plan for the 3Ds, it is important to

- Immediately address the cause(s) of any conditions that may constitute a medical emergency (e.g., delirium)
- Incorporate appropriate nonpharmacologic treatments
- Develop an optimal treatment strategy
- Identify the correct target symptoms
- Consider appropriate pharmacologic treatment
- Adhere to recommended prescribing practices in the management of pharmacologic treatment

Nonpharmacologic treatments must be incorporated into the care plans of patients diagnosed with one or more of the 3Ds. It is appropriate to consider using nonpharmacologic and pharmacologic treatments simultaneously. When a treatment strategy is chosen, it is important to also determine its endpoint.

Consider these questions when determining the best approach to the patient's problem:

- Is this a therapeutic trial of a treatment modality?
- What is the goal of treatment or what is the target symptom that is to be alleviated or improved?
- What are the criteria for determining whether treatment can or should be discontinued?
  - Has the goal of treatment been met?
  - Has the target symptom resolved?
  - Has the treatment not been effective and is continuing it considered futile?

STEP 14 — Address emergent cause(s) of delirium

Delirium may be a medical emergency. Treat the underlying cause(s) of the patient's delirium, which you have identified by following the steps outlined in this CPG. (See **Recognition and Assessment,** p. 10, and **Diagnosis and Interpretation**, p. 25, sections. Also see **Table 1**, p. xiv, *Clinical Problem-Solving and Decision-Making Process Steps and Objectives*.) Note that the FDA has not approved any medications to treat delirium.

QUESTION 12: What strategies can help mitigate risk factors for the 3Ds?

STEP 15 — Mitigate risk factors for the 3Ds

If the patient does not currently exhibit signs or symptoms of the 3Ds, it is important to mitigate their risk factors. For example, does the patient

- Become agitated or combative while personal care is being rendered?
- Have a history of repeated behaviors?
- Sometimes provoke or react aggressively to physical encounters/confrontations?
- Take medications that can affect mental status, cognition, or level of consciousness?
- Endanger themselves or others (e.g., exit seeking)?

It is important to anticipate and try to prevent the development and worsening of the 3Ds in all at-risk individuals. For example, having dementia is the most common risk factor for the development of delirium. Medications with anticholinergic properties or side effects are especially problematic because they oppose the beneficial effects of acetylcholine on brain function. Minimize the use of these agents in susceptible individuals unless they are essential and viable alternatives are unavailable.

QUESTION 13: What nonpharmacologic (psychosocial) interventions are available for the 3Ds?

STEP 16 — Incorporate nonpharmacologic interventions for the 3Ds

5.1 Nonpharmacologic Interventions for the 3Ds

Nonpharmacologic approaches can be highly successful when individualized to the nuances of the case at hand. Many evidence-based nonpharmacologic approaches are available that may prevent behavioral problems or, if implemented soon after symptoms develop, minimize their escalation. It is important for facility management to fully support the use of nonpharmacologic strategies, which may appear to be more labor-intensive than using medications alone to manage patients' behavior.

Facility staff should incorporate a daily routine, exercise, and meaningful activities into the schedules of all patients experiencing any of the 3Ds. Regular eating and sleeping routines benefit all PALTC patients. Consider environmental modifications such as appropriate lighting, temperature and sound control, and the presence of familiar items. Optimizing the environmental aspects of care can improve quality of life for all patients residing in PALTC facilities (Table 29).

TABLE 29
Optimizing the Environmental Aspects of Care to Improve Patients' Quality of Life

- Personalize the environment to provide a more home-like atmosphere
- Minimize noise, especially at night
- Avoid unnecessary awakenings (e.g., for vital signs or medication administration)
- Provide a pleasant environment (minimize offensive odors, regulate ambient temperature)
- Provide adequate lighting
- Provide a variety of daily activities (physical, spiritual, cognitive)
- Provide comfortable seating and mobility devices
- Provide space for both privacy and socialization
- Provide a safe and secure environment for patients that encourages mobility and physical function

5.1.1 Delirium

Institute routine multi-component nonpharmacologic strategies for preventing delirium such as the Hospital Elder Life Program (HELP; Table 30, p. 44).[41] This program was originally designed to prevent delirium among hospitalized older adults by keeping them oriented to their surroundings; meeting their needs for nutrition, fluids, and sleep; and keeping them mobile within the limitations of their physical condition. HELP has been shown to prevent delirium and reduce the rate of falls[41] and has been adapted for PALTC use.[41]

TABLE 30
Nonpharmacologic Strategies for Preventing Delirium

Risk Factor	Intervention
Cognitive impairment	■ Reality orientation multiple times per day, e.g., • Board with names of care-team members and day's schedule • Communication to reorient to surroundings ■ Daily activities for cognitive stimulation and socialization, e.g., • Discussion of current events • Word games • Discussion of past using resident's own or other pictures • Reading • Music • Games with props
Sleep deprivation	■ Nonpharmacologic sleep enhancement strategies, e.g., • Back rub • Warm drink • Warm blanket • Relaxing music • Noise-reduction strategies • Uninterrupted scheduled sleep, including not scheduling medication administrations q6h
Immobilization	■ Daily "head-to-toe" physical activity at resident's maximum ability, e.g., • Active range of motion • Walking • Chair stands ■ Minimizing use of immobilizing equipment, e.g.: • Intravenous lines • Catheters • Splints
Vision impairment	■ Vision aids, e.g., • Glasses • Magnifying lenses ■ Adaptive equipment, e.g., • Large print • Large numbers on telephone/remote control

TABLE continued

TABLE 30 continued
Nonpharmacologic Strategies for Preventing Delirium

Risk Factor	Intervention
Hearing impairment	■ Amplifying devices ■ Adaptive equipment ■ Cerumen disimpaction
Dehydration/ undernutrition	■ Early recognition and volume repletion ■ Assistance and companionship during meals ■ Culturally appropriate, favorite foods and beverages when feasible

Source: Adapted from Boockvar et al, 2016[41]

As previously noted, numerous medications are commonly associated with causing delirium (see Table 20, p. 29). Evaluating the use of these medications in patients with delirium and discontinuing them unless they are essential may help to reduce the occurrence of delirium. Table 31 identifies additional strategies for preventing delirium.

TABLE 31
Additional Strategies for Preventing Delirium

- Avoid using indwelling urinary catheters. Minimize the use of other medical devices (e.g., intravenous catheters, continuous enteral feeding) that may restrict mobility or function
- Avoid using restraints
- Minimize the number and reduce the dose of medications with potential CNS side effects
- Pay careful attention to fluid and electrolyte balance in older patients who
  - Are taking diuretics
  - Have diarrhea, pneumonia, or urinary tract infections
  - Are otherwise at risk for dehydration
- Identify and manage treatable causes of anemia (see AMDA's CPG *Anemia in the Long-Term Care Setting*)[c]
- Optimize sensory function (e.g., provide corrective lenses for impaired vision, hearing aids)
- Optimize sleep (e.g., address reversible causes of sleep impairment; minimize nighttime noises, and unnecessary awakenings)
- Avoid prolonged isolation or restrictions (e.g., for infection-control purposes)
- Avoid unnecessary transfers, frequent medical appointments, or other changes in the patient's immediate physical environment and routine schedule
- If possible, avoid frequent changes in caregiver staff (strive for consistent staff assignment)

CNS, central nervous system; CPG, clinical practice guideline

[c] Ordering information available at **https://paltc.org/product-store/anemia-cpg**

5.1.2 Depression

Table 32 identifies psychotherapeutic and psychosocial interventions for depression.

TABLE 32
Psychotherapeutic and Psychosocial Interventions for Depression

Psychotherapeutic interventions	Cognitive behavioral therapy (individual preferred over group therapy) Interpersonal therapy Problem-solving therapy Social-skills groups
Psychosocial and other interventions	Activation (socialization, engagement in productive activity) Peer volunteer intervention with social worker supervision[43] Bereavement groups Exercise (aerobic and weight resistance training)[44] Family counseling Light therapy[45] Therapeutic recreation activity Participation in social events Animal-assisted therapy Bibliotherapy (creative arts therapy modality that involves storytelling or the reading of specific texts with the purpose of healing)[46] Life review[46]

Sources:
McCurren, Dowe, Rattle, et al, 1999[43]
Llewellyn-Jones & Snowdon, 2007[44]
Sumaya, Rienzi, Deegan, et al, 2001[45]
Holvast, Massoudi, Oude Voshaar, et al, 2017[46]

5.1.3 Dementia

Psychiatric symptoms (e.g., agitation, anxiety, depression, hallucinations, delusions) and disordered sleep patterns are common in dementia and often require intervention. Nonpharmacologic interventions should be tried first unless symptoms are causing marked distress or discomfort or pose immediate harm or danger to the patient or others.

Behavioral symptoms may include agitation due to hunger, fatigue, loneliness, pressure to perform, or pain or discomfort. Common examples in PALTC include agitation when personal care is being provided and during shift and staff changes. When such patterns are recognized, it is possible to develop and implement targeted interventions in response to specific behavioral symptoms. A 2012 meta-analysis found that nonpharmacologic interventions delivered by family caregivers may be as effective as pharmacotherapy in reducing the frequency and severity of behavioral and psychological symptoms of dementia.[47] Table 33 identifies options for the nonpharmacologic management of agitation in dementia.

Although a wide variety of over-the-counter (OTC) dietary supplements have been proposed as potentially helpful for memory loss and other cognitive symptoms, a systematic review of OTC interventions to prevent cognitive decline, mild cognitive impairment (MCI), and clinical Alzheimer-type dementia found insufficient evidence to recommend any OTC supplement for cognitive protection in adults with normal cognition or MCI.[48]

TABLE 33

Nonpharmacologic Management of Agitation in Dementia

Problem	Cause	Approach to Management
Patient does not sleep, wanders at night	■ Patient may need to urinate	■ Schedule toileting
	■ Patient is awakened at night by noise, bright lights outside a window, or by staff coming into their room	■ Provide indirect light ■ Provide window shade ■ Reduce nighttime noise ■ Avoid unnecessary nighttime awakenings ■ Review sleep routine; maintain sleep log ■ Educate staff about how to change care routines and approach to patients at night
	■ Patient may be napping or sedentary during the day	■ Modify patient's daytime routine to increase activity/exercise
Patient is combative when being bathed	■ Patient is anxious because • They misinterpret the event • They are cold or hot • They are concerned about modesty or privacy • They are overstimulated (i.e. noise, touch)	■ Reassure the patient ■ Be flexible about bathing methods and schedule (e.g., consider a towel bath) ■ Bathe the patient while they are wearing a terrycloth robe ■ Provide staff training in how to approach and calm an anxious patient ■ Consider designating a caregiver of a specific gender to bathe the patient
	■ Patient has joint pain caused by movement	■ Consider pretreating the patient with an analgesic ■ Consider using relaxation therapies (e.g., aromatherapy, calm music, low-intensity lighting)
Patient exhibits agitated behavior throughout the day	■ Patient is in pain or is depressed	■ Administer an analgesic ■ Screen the patient for depression
	■ Patient is experiencing environmental under- or overstimulation	■ Train staff in how to observe signs and symptoms in patients with dementia ■ Provide appropriate activities throughout the day
	■ Patient is reacting to an unsuitable or inappropriate action by a caregiver or family member	■ Educate the caregiver or family member about effective ways of communicating with the patient

TABLE continued

TABLE 33 continued

Nonpharmacologic Management of Agitation in Dementia

Problem	Cause	Approach to Management
Patient makes inappropriate sexual advances toward other residents or staff members	■ Behavior may represent an exaggeration of a previous personality trait or loss of social inhibitions ■ Patient has a basic drive for intimacy and love ■ Patient misidentifies another resident as their spouse	■ During social gatherings, steer the patient away from residents they have targeted ■ Assign care of the patient to a staff member who is not likely to be a target of advances ■ Educate staff about issues related to geriatric sexuality ■ Educate family members about the sexual needs of geriatric patients; encourage them to show physical affection (e.g., caressing, hugging) during visits ■ Respect patients' privacy needs

STEP 17 — Develop a treatment strategy for depression

In developing a treatment strategy for depression, it is important to determine the specific type of depression that is being treated (Table 34). For example, treatment of bipolar depression may be very different from treatment of unipolar MDD. As such, it is important to follow the process outlined in the **Diagnosis and Interpretation** (p. 25) section of this CPG to obtain a correct diagnosis and identify confounding or comorbid conditions.

TABLE 34
Treatment Strategies by Type of Depression

Type of Depression	Treatment Options
Unipolar, nonpsychotic depression; dysthymia, complicated grief	■ Psychotherapy alone ■ Medication alone (bupropion, mirtazapine, SNRI, SSRI, based on comorbid conditions/side-effect/risk-benefit profile) ■ Psychotherapy plus medication ■ Consider expert consultation or inpatient psychiatric treatment for • Severe or recalcitrant depression • Suicidality with a plan • Severe weight loss due to depression
Unipolar, psychotic depression	SSRI or SNRI plus atypical antipsychotic (documentation required to support antipsychotic use)
Melancholic depression	Typically does not respond to psychotherapy alone and requires pharmacotherapy or expert consultation for possible TMS/ECT treatment
Bipolar depression	■ Psychiatrist input is strongly encouraged as use of some antidepressants as monotherapy can precipitate mania ■ Treatment might include a mood stabilizer, antipsychotic, or both ■ Expert consultation for possible ECT treatment[44]

ECT, electroconvulsive therapy; SNRI, serotonin and norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor; TMS, transcranial magnetic stimulation

Source: Adapted from Llewellyn-Jones, Snowdon, 2007[44]

Table 35 (p. 50) lists factors to consider when assessing the use of pharmacologic therapy for depression. Classes of antidepressants with potential side effects, advantages, and additional considerations are shown in Table 36 (p. 51).

TABLE 35

Assessing Whether to Use Pharmacologic Treatment for Depression: Factors to Consider

When assessing whether to use pharmacologic treatment for depression, it is important to consider the following:

- Choice of treatment often depends on the side-effect profiles of individual agents and on the patient's susceptibilities. In certain clinical presentations, an adverse drug reaction may function as a treatment effect (e.g., sedation or appetite stimulation in a patient with insomnia or anorexia/weight loss who is taking mirtazapine)
- In the absence of contraindications, SSRIs are advised as first-line treatment for older adults

Dosing

- Doses at the low end of the dosing range are recommended for patients aged over 85 years and those with significant physical comorbidities
- Escalate the dose if necessary and safe
- If no adverse effects, titrate the dosage to the maximum recommended level and maintain it at that level for at least 4–5 weeks before considering a trial of a new drug

Duration of Therapy

- Maintain antidepressant treatment for at least six months to assess effectiveness
- Patients with recurrent or chronic depression require maintenance treatment
- Taper antidepressants over 1–2 weeks, depending on the half-life of the drug[49]

Specific Agents

- Venlafaxine may be preferred when melancholic features are present
- Duloxetine may be considered in the presence of comorbid chronic pain
- Mirtazapine may be helpful in cases of agitated depression (higher doses) or where sleep disturbances or weight loss are prominent features (lower doses)

SSRI, selective serotonin reuptake inhibitor

Source: Horowitz, Tayler, 2019[49]

TABLE 36

Classes of Antidepressants with Potential Side Effects, Advantages, and Additional Considerations

Class/Selected Agents	Adverse Effects	Advantages	Additional Considerations
SSRIs ($) ***Best safety profile*** ■ Citalopram ■ Escitalopram ■ Sertraline ***Higher risk of drug interactions*** ■ Fluoxetine ■ Paroxetine ■ Fluvoxamine	■ Nausea ■ Dry mouth ■ Insomnia ■ Somnolence ■ Agitation ■ Diarrhea ■ Excessive sweating ■ Sexual dysfunction ■ Increased risk of hyponatremia from SIADH ■ Orthostatic hypotension ■ Platelet dysfunction ■ Serotonin syndrome	■ Anticholinergic effects less common than with older antidepressants ■ Well tolerated by patients with cardiovascular disease	■ Maximum daily dose of citalopram 20 mg ■ Check sodium levels 1 month after starting an SSRI ■ Monitor for symptoms of hyponatremia and/or GI bleeding (especially for those with PUD or taking NSAIDs)
SNRIs ($–$$) ■ Venlafaxine ■ Duloxetine ■ Desvenlafaxine	■ Nausea ■ Dry mouth ■ Insomnia ■ Somnolence ■ Agitation ■ Diarrhea ■ Excessive sweating ■ exual dysfunction ■ Increased risk of hyponatremia from SIADH ■ Venlafaxine can raise BP, especially at doses above 150–225 mg/day ■ Orthostatic hypotension ■ Platelet dysfunction ■ Serotonin syndrome	■ Dual action on serotonin and norepinephrine[50] ■ Duloxetine also has FDA-approved indications for diabetic peripheral neuropathic pain, fibromyalgia, and chronic musculoskeletal pain[50] ■ Anticholinergic effects less common than with older antidepressants[50] ■ Well tolerated by patients with cardiovascular disease	■ Check sodium levels 1 month after starting an SNRI ■ Monitor for symptoms of hyponatremia (e.g., fatigue, malaise, delirium)
Dopamine and norepinephrine reuptake inhibitor ($) ■ Bupropion	■ Lowers seizure threshold ■ Agitation ■ Dry mouth ■ Insomnia ■ Headache ■ Nausea ■ Vomiting ■ Constipation	■ No effect on weight ■ May be activating ■ Minimal interaction with cytochrome pathways ■ Lowers seizure threshold	■ Exercise caution when using in patients with seizures ■ Insomnia

TABLE continued

TABLE 36 continued

Classes of Antidepressants with Potential Side Effects, Advantages, and Additional Considerations

Class/Selected Agents	Adverse Effects	Advantages	Additional Considerations
Tetracyclic antidepressant ($) ■ Mirtazapine	■ Sedating ■ May cause weight gain	■ Consider for patient with insomnia and poor appetite	■ More sedating at lower doses ■ Administer at hour of sleep ■ Available in dissolving solutab ■ Exercise caution when using in patients with diabetes
Serotonin modulator ($) ■ Trazodone	■ Sedation (at higher doses) ■ Priapism (rare) ■ Postural hypotension (at high doses)	■ Requires a high dose for therapeutic effect on depression	Cautions: ■ Cardiac arrhythmias and conduction problems ■ Serotonin syndrome (when used with SSRI/SNRI)
Tricyclic antidepressants ($) ■ Desipramine (secondary amine) ■ Nortriptyline (secondary amine) ■ Amitriptyline (tertiary amine)	■ Anticholinergic side effects • Dry mouth • Blurred vision • Constipation • Urinary retention • Inhibition of sweating • Cognitive dysfunction • Arrhythmia • Orthostatic hypotension • Delirium ■ May cause weight gain	■ Nortriptyline is often preferred because it is less likely to cause postural hypotension ■ May be helpful for neuropathic pain ■ May be helpful for migraine prophylaxis	Exercise caution in patients with a history of ■ BPH/urinary retention ■ Cardiac arrhythmias and conduction problems ■ Constipation ■ Dementia ■ Glaucoma ■ Orthostatic hypotension ■ Falls

TABLE continued

TABLE 36 continued

Classes of Antidepressants with Potential Side Effects, Advantages, and Additional Considerations

Class/Selected Agents	Adverse Effects	Advantages	Additional Considerations
Multimodal ■ Vortioxetine[51]	■ Nausea ■ Headache ■ Diarrhea ■ Dizziness ■ Other adverse effects that often arise during treatment with other antidepressants (e.g., blurred vision, hyperhidrosis, insomnia, sexual dysfunction, tremor) are less common with vortioxetine	■ Preclinical and clinical studies have shown that vortioxetine may help to manage symptoms of Alzheimer's disease ■ An ongoing trial is assessing the tolerability and efficacy of vortioxetine versus SSRIs in elderly with major depression	■ CYP2D6 is the primary isoenzyme involved in vortioxetine metabolism ■ Inducers (e.g., rifampin) and inhibitors (e.g., bupropion) affect vortioxetine exposure ■ Decreased kidney function (creatinine clearance <30 mL/min) did not significantly alter exposure to vortioxetine
Psychostimulants ($$) ■ Methylphenidate ■ Modafinil	■ Anxiety ■ Arrhythmia ■ Insomnia ■ Anorexia ■ Weight loss ■ Elevated BP ■ Tachycardia ■ Psychotic symptoms (e.g., hallucinations)	■ Quick response (hours or days) for those who respond ■ Can be used as adjuvant therapy for depression, especially with psychomotor retardation	■ In patients with CVD, can precipitate a CV event ■ Can cause priapism ■ Abuse potential

Note: Use of antidepressants carries a boxed warning concerning increased risk of suicidal thoughts and behaviors in pediatric and young adults/adolescents.

BP, blood pressure; BPH, benign prostatic hyperplasia; CV, cardiovascular; CVD, cardiovascular disease; FDA, U.S. Food and Drug Administration; GI, gastrointestinal; NSAID, nonsteroidal anti-inflammatory drug; PUD, peptic ulcer disease; SIADH, syndrome of inappropriate antidiuretic hormone; SNRI, selective norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor

Sources:
Alexopoulos et al, 2001[9]
FDA, Cymbalta labeling[50]
Danielak, 2021[51]

STEP 18 — Develop a treatment strategy for dementia

Current standards of dementia care, both in ambulatory and long-term care settings, are based primarily on symptomatic treatment. Treatment of behavioral disturbances, counseling, and environmental modification are the mainstays of management. Research on disease-specific and disease-modifying treatments is underway but is not addressed in this CPG.

The first step in dementia treatment is to endeavor to the extent possible to accurately diagnose the type of dementia that the patient has. Follow the steps outlined in this CPG for the recognition and assessment of dementia (see **Step 8**, p. 33). Although many patients with dementia show mixed pathology at autopsy, patients diagnosed with "senile dementia" may in fact have an aggressive neurodegenerative condition with a very different prognosis. For example, a patient with visual hallucinations may have dementia with Lewy bodies, which is characterized by neuroleptic sensitivity syndrome; inappropriate treatment of this condition with haloperidol may result in severe or life-threatening adverse effects.

Because of the challenging nature of dementia treatment, it is important to always take a patient-centered approach (**Table 37**) and to be familiar with the patient's stage of dementia (**Table 38**, p. 56). Treatment goals must be individualized based on the stage of dementia and the patient's (or representative's) preferences. In the early stages of dementia, be attentive to general medical and preventive care (e.g., dental, hearing, vision) as conscientiously as in the general older-adult population. In advanced dementia, pay particular attention to oral care, nutrition, toileting schedules, and skin care (particularly of the perineum).

Develop clear and relevant goals of treatment, such as[52]

- Improve mood
- Minimize undesirable medication side effects
- Reduce the frequency or severity of aggressive behaviors

Dementia treatment requires a collaborative approach by the IPT. **Advance care planning** should take place as early as possible, while the patient can participate and express their care wishes, and should be conducted at regular intervals, especially with significant changes in status. This avoids creating a difficult and stressful situation in which the patient's legally authorized representative must make these care decisions. In severe end-stage dementia, most patients will have difficulty swallowing; discontinuing unnecessary medications can help to avoid distress and discomfort and improve quality of life. The natural progression of dementia should be discussed as early as feasible with the patient and family or legally authorized representative, specifically with respect to the anticipated loss of interest in food, fluids, and safe swallowing function.

A skilled PALTC practitioner should be able to

- Help to formulate an accurate overall assessment of the patient's condition and prognosis
- Clarify factors that may contribute to increased morbidity
- Take an approach that will maximize the patient's function and quality of life
- Help to define the potential benefits and risks of pharmacologic and nonpharmacologic interventions that may be helpful in patients with advanced dementia

- Review medications and reduce or discontinue medications that may be adversely affecting cognition, behavior, or physical function, or may simply not be indicated due to changes in projected life expectancy
- Order appropriate testing, and recommend further evaluation when deemed necessary, such as in an atypical presentation or in early-onset dementia (i.e., under age 55 years)
- Clarify advance directives and end-of-life wishes. (See AMDA's ***Practitioner's Guide to Advance Care Planning Discussions***.[d])
- Discuss palliative and end-of-life medical treatment with the patient and family members
- Promote caregiver education about the progressive nature of dementia
- Evaluate the clinical situation to determine when and how a caregiver's involvement could optimize the patient's function and quality of life by improving patient-centered care, using their knowledge and understanding of the patient's history, baseline function, and preferences

TABLE 37
Elements of a Patient-Centered Approach to Dementia Management

- Educate staff, family, and caregivers about the natural progression of dementia
- Optimize function and quality of life, capitalize on remaining strengths
- Manage functional deficits
- Address socially unacceptable, unsafe, or disruptive behaviors
- Address pertinent psychosocial and family issues
- Address ethical and spiritual issues
- Manage dementia-related risks and complications
- Discuss end-of-life care and advance directives with the family or legally authorized representative
- Consider palliative care or hospice when appropriate

[d] Free download available at **https://paltc.org/sites/default/files/paper/1-PASSED_A17-Ethics%20ACP%20White%20Paper.docx**

TABLE 38

The Functional Assessment Staging (FAST) Scale for Dementia

1. No difficulty, subjectively or objectively
2. Complains of forgetting the location of objects. Subjective work difficulties.
3. Decreased job functioning evident to co-workers. Difficulty in traveling to new locations. Decreased organizational capacity.
4. Decreased ability to perform complex tasks (e.g., planning dinner for guests, handling personal finances, forgetting to pay bills)
5. Requires assistance in choosing proper clothing to wear for the day, season, or occasion (e.g., unless supervised, patient may wear the same clothing repeatedly)
6. Occasionally or more frequently over the past weeks
   a. Improperly putting on clothes without assistance or cueing
   b. Inability to bathe properly (e.g., not able to choose proper water temperature)
   c. Inability to handle mechanics of toileting (e.g., forgets to flush the toilet, does not wipe properly or properly dispose of toilet tissue)
   d. Urinary incontinence
   e. Fecal incontinence
7. a. Speech ability limited to less than about 6 different intelligible words in an average day or an intensive interview
   b. Speech ability limited to the use of a single intelligible word in an average day or an intensive interview
   c. Ambulatory ability is lost (i.e., cannot walk without personal assistance)
   d. Cannot sit up without assistance (i.e., will fall over without lateral rests on the chair)
   e. Loss of ability to smile
   f. Loss of ability to hold head up independently

5.2 Management of Behavioral and Psychological Symptoms of Dementia

Assess and appropriately treat BPSD (Table 39).

- Thoroughly document behavioral symptoms, including context, scope, and severity
- If initiating pharmacologic management, clearly document the target symptom
- Increase the dose slowly
- Do not expect an immediate response. Immediate effects may be largely due to sedation. Therapeutic efficacy may not be evident for two to four weeks

Be aware that, at a stable dose, drug levels may continue to rise for several days to a week, depending on the agent's pharmacokinetic properties. Consider reviewing the drug's half-life to determine when a steady-state level (i.e., five times the elimination half-life) is likely to be achieved.

TABLE 39

Management of Behavioral and Psychological Symptoms of Dementia

- Assess whether the patient can safely be monitored in the facility
- Evaluate for specific, treatable psychiatric conditions (e.g., pseudobulbar affect)
- Prior to instituting any treatments, rule out reversible causes (e.g., delirium, depression, unmet needs)
- Try nonpharmacologic management strategies
- Document the target symptom. Clearly document the treatment targets – i.e.
  - Symptoms to be treated
  - Monitoring strategy that will be used to determine treatment effectiveness
- Always justify the use of an antipsychotic agent
- The following may be ***appropriate*** target symptoms for antipsychotic treatment after other reversible causes have been ruled out:
  - Agitation causing severe distress to the patient
  - Aggressive behavior causing physical harm to self or others
  - Delusions distressing to the patient or other residents
  - Hallucinations causing distress to the patient
- The following are ***inappropriate*** target symptoms for antipsychotic treatment:
  - Fidgeting
  - Impaired memory
  - Insomnia
  - Inattention or indifference to surroundings
  - Mild anxiety
  - Nervousness
  - Poor self-care
  - Repeated vocalizations (e.g., "Help!")
  - Restlessness
  - Sadness or crying alone (i.e., unrelated to depression or another psychiatric disorder)
  - Uncooperativeness without aggressive behavior
  - Wandering
- Evidence supports modest symptom improvement with aripiprazole, haloperidol, olanzapine, quetiapine, and risperidone

Treatment of special populations

• Frontotemporal dementia	Some evidence for trazodone or SSRIs
• Parkinson's disease, Lewy body dementia	Quetiapine, clozapine, or pimavanserin most often used due to lower incidence of extrapyramidal symptoms (pimavanserin is FDA approved for use in Parkinson's disease psychosis; use of other agents is off label)
• Renal impairment	Reduced dose of galantamine, memantine, or risperidone. Titrate slowly.
• Hepatic impairment	Reduced dose of olanzapine

CMS, Centers for Medicare & Medicaid Services; FDA, U.S. Food and Drug Administration; LTC, long-term care; SSRIs, selective serotonin reuptake inhibitors

5.3 Pharmacotherapy for Dementia

Pharmacotherapy may be indicated as an adjunct to nonpharmacologic treatment if symptoms cause marked distress or discomfort or pose immediate harm or danger. Table 40 (p. 58) summarizes pharmacologic treatment options for dementia. Table 41 (p. 60) lists therapies with inconclusive evidence for use in treating dementia.

TABLE 40
Pharmacologic Treatment Options for Dementia

	Acetylcholinesterase Inhibitors			Memantine (Namenda IR, Namenda XR)*	Memantine HCl/donepezil HCl combo (Namzaric)*
	Donepezil (Aricept)	**Rivastigmine (Exelon oral or transdermal)***	**Galantamine (Razadyne, Razadyne ER)**		
FDA-approved indication	Mild to moderate Alzheimer's and Parkinsonian dementia	Mild to moderate Alzheimer's and Parkinsonian dementia	Mild to moderate Alzheimer's dementia	Alzheimer's disease (moderate to severe)	Moderate to severe dementia of the Alzheimer's type in patients stabilized on 10 mg of donepezil hydrochloride once daily
Dosing	■ Initiate at 5 mg daily, increase to 10 mg after 4–6 weeks ■ For moderate to severe dementia, may increase to 23 mg daily after at least 3 months *Note:* Donepezil is also available as an orally disintegrating tablet, 5 mg or 10 mg	■ **Oral:** Twice daily; start with 1.5 mg every 12 h and gradually titrate up to minimally effective dosage (up to 6 mg every 12 h) as tolerated ■ **Patch:** For naive patients, 4.6 mg/24 h once-daily patch for 4 wk; after 4 wk titrate up to recommended effective dose of 9.5 mg/24 h once-daily patch. Can be increased to maximum effective dose of 13.3mg/24 h once-daily patch. ■ **To convert dose:** If less than 6 mg total oral daily dose, use 4.6 mg/24 h once-daily patch for 4 wk; after 4 wk titrate up to 9.5 mg/24 h once-daily patch *Notes:* 1. Dose may be increased after 4 wk on 9.5 mg/24 hr patch 2. Rivastigmine also available in oral solution (2 mg/mL)	■ **Twice daily *(Razadyne):*** Start at 4 mg every 12 h, increase to 8 mg every 12 hr after 4 wk ■ **Once daily *(Razadyne ER):*** Start with one 8 mg capsule daily (preferably with food) and increase to 16 mg/day after 4 wk; may increase to 24 mg/day after another 4 wk *Note*: Galantamine also available as oral solution (4 mg/mL)	■ **IR:** Initial dose 5 mg daily, increasing by 5 mg daily to a target of 10 mg twice daily. Titrate no more frequently than once every 7 days. ■ **XR:** 7 mg once daily, increasing by 7 mg daily to a target of 28 mg daily. Titrate no more frequently than once every 7 days.	■ **Initial:** 7 mg/10 mg, taken once daily in the evening ■ **Max:** 28 mg/10 mg

TABLE continued

TABLE 40 continued
Pharmacologic Treatment Options for Dementia

	Acetylcholinesterase Inhibitors			Memantine (Namenda IR, Namenda XR)*	Memantine HCl/donepezil HCl combo (Namzaric)*
	Donepezil (Aricept)	**Rivastigmine (Exelon oral or transdermal)***	**Galantamine (Razadyne, Razadyne ER)**		
Adverse effects	■ Occurring at a frequency of at least 5% in patients receiving 10 mg/day and twice the placebo rate: ● Nausea ● Diarrhea ● Insomnia ● Vomiting ● Muscle cramps ● Fatigue ● Anorexia	■ Occurring at a frequency of at least 5% and twice the placebo rate: ● Nausea ● Vomiting ● Anorexia ● Dyspepsia ● Asthenia ■ With the patch, most patients participating in the controlled clinical trial had either no observed skin irritation or mild to moderate skin reactions	■ Occurring at a frequency of at least 5% and at least twice the placebo rate: ● Nausea ● Vomiting ● Diarrhea ● Anorexia	■ Diarrhea ■ Dizziness	■ Headache ■ Diarrhea ■ Dizziness
	Acetylcholinesterase inhibitors are well known to cause bradycardia in some patients				
Elimination half-life	70–80 h	■ **Oral:** 1.5 h ■ **Transdermal:** 3 h after patch removal	7–8 h	60–80 h	See individual agents
Metabolism	Liver	Kidney	Liver	Partially hepatic	Partially hepatic
Food interaction	No	Administer oral formulation with food	Administer with food	Administer without regard to meals	See individual agents
Protein binding	96%	40%	18%	45%	See individual agents

FDA, U.S. Food and Drug Administration

*Newer brand-name medications are usually more costly than older, generic agents. Consider discussing the cost of medications and the relative benefits vs risks with the patient's family members or legally authorized representative.

TABLE 41

Therapies with Inconclusive Evidence for Use in Treating Dementia

- ***Estrogen replacement:*** There is no conclusive evidence that initiating estrogen replacement is beneficial in the treatment of dementia
- ***Statins:*** A potential role for statin therapy in the prevention and treatment of Alzheimer's disease has been investigated; however, there is as yet no clearly established role for statins for these indications
- ***Dietary supplements:***
  - *Vitamin B:* An 18-month randomized trial of high-dose vitamin B-complex supplementation (folate, B6, B12) in 340 patients with mild to moderate Alzheimer's disease found no beneficial effect on measures of cognitive function[53]
  - *Omega-3 fatty acids:* Observational studies have suggested a possible association between dietary intake of fish and omega-3 fatty acids and a lower risk of dementia. However, clinical trials have not supported a therapeutic role for omega-3 fatty acid supplementation in the treatment of Alzheimer's disease.[54]
  - *Ginkgo biloba:* A systematic review concluded that ginkgo biloba is safe but the evidence that it offers benefit in the treatment of cognitive impairment and dementia is inconsistent and unconvincing[55]
- A 2018 systematic review found insufficient evidence to recommend any over-the-counter supplements to prevent or delay cognitive decline, mild cognitive impairment, or Alzheimer-type dementia[48]

Sources:
Butler et al., 2018[48]
Aisen et al., 2008[53]
Burckhardt et al., 2016[54]
Birks & Grimley Evans, 2009[55]

5.3.1 Antipsychotics Use and Precautions

All treatment decisions in individuals with behavioral and psychiatric issues should be based on adequate assessment, problem definition, and managing treatable underlying causes. (See Steps 1-11 in this CPG). Evaluate each situation's risks to the patient and to others, as well as its urgency (Step 12). Non-pharmacological interventions are discussed in the appropriate section above (section 5.1.3) and some are listed in Table 33.

It is important to note that atypical antipsychotics are sometimes prescribed to treat behavioral and psychiatric symptoms in patients with dementia. As a class, these medications are associated with diabetes mellitus, hyperlipidemia, metabolic syndrome, and weight gain. The FDA requires that second-generation antipsychotics carry a boxed warning due to an association with increased rates of death and cerebrovascular events.[57] Although the reasons for these outcomes are unclear, cardiovascular and cerebrovascular events, falls, and infections, may contribute to them. The CMS National Partnership to Improve Dementia Care in Nursing Homes (an initiative launched in 2012 to encourage nonpharmacologic approaches and reduce antipsychotic use for behavioral disturbance) considers antipsychotic use in this setting appropriate only for a select number of conditions.[58]

As always, unless clinically contraindicated, initiate nonpharmacological interventions and closely monitor the situation. There are situations where antipsychotic medications are indicated,

such as if the risks to the patient or to others remain high despite other measures. Examples of such situations that may require the prompt and aggressive use of medications are rapidly progressive psychotic symptoms or serious and persistent physical aggression. In these more serious situations, concurrent nonpharmacological interventions are sometimes helpful but rarely adequate as sole or primary interventions.

When pharmacologic intervention is initiated, second-generation antipsychotics are usually recommended over first-generation agents due to a lower incidence of extrapyramidal symptoms and tardive dyskinesia; however, evidence of their efficacy remains modest.[60] Follow the guidance in Table 42 when prescribing an antipsychotic for a patient with dementia. See **Appendix E** (p. 93) for prescribing information for antipsychotic agents.

Even when beneficial, all patients receiving any psychopharmacologic medications (including but not limited to antipsychotics) should be monitored closely for effectiveness and for adverse consequences.

Of note, a trial of a selective serotonin reuptake inhibitor such as citalopram, which has been shown to be effective in reducing agitation in patients with Alzheimer's disease, may be warranted.[59] Lastly, sustained-release depot formulations are available for multiple medications, including risperidone, haloperidol, olanzapine, and paliperidone. These are administered via intramuscular injection and have a duration of several weeks. Consult a pharmacist or geriatric psychiatrist for guidance on appropriate use.

Attempted tapering or discontinuation. Reduction or cessation of psychotic symptoms or severe aggression is sometimes—but not automatically—an indication to initiate dose reductions. Attempted tapering of antipsychotics depends on details such as the severity of an episode and a prior or recent history of recurrent significant psychotic symptoms. It may be reasonable and prudent to maintain antipsychotics while the situation stabilizes. In more serious situations, stable doses may need to be maintained at least for weeks or months. See section 6.1 for more information on gradual dose reduction.

TABLE 42

Guidance for the Use of Antipsychotic Agents in Patients with Dementia

- As appropriate, participate in informed-consent discussions with the patient or legally authorized representative about the risks and benefits of antipsychotic use in dementia
- Identify the target symptom(s)
- Prescribe the lowest possible dose for the shortest possible duration
- Monitor treatment effectiveness by evaluating the target symptom(s)
- If the medication is ineffective after a reasonable trial, consider
  - Titrating the dose upward
  - Switching to a different agent
- Once clinical stability has been achieved, consider GDR

GDR, gradual dose reduction

5.3.2 Acetylcholinesterase Inhibitors

Acetylcholinesterase inhibitors (e.g., donepezil, galantamine, rivastigmine) can be prescribed to treat symptomatic Alzheimer's disease. These treatments are better tolerated if they are slowly titrated to the target dose. Of note, these medications have been shown to be most effective when initiated early in the disease course.

The best outcome that can be expected with the use of these agents is a slowing of the process of cognitive decline. A systematic review and meta-analysis found that, compared with a placebo, these agents slightly reduced short-term cognitive decline and reported functional decline; however, the clinical importance of these differences was uncertain.[61] Consider discontinuation of acetylcholinesterase inhibitors as dementia progresses, as the risks and adverse effects probably outweigh any benefits of treatment. Clinicians should assist patients and their families in managing realistic expectations for these treatments.

Rivastigmine is noted to be effective in improving cognitive performance in patients with mild to moderate Parkinson's disease in doses similar to those used in Alzheimer's disease, and this benefit is believed to occur with the other acetylcholinesterase inhibitors.[62] The data are less clear for dementia with Lewy bodies.[63] (See AMDA's ***Parkinson's Disease & Psychosis in the PALTC Setting Pocket Guide***.[e])

5.3.3 Other Pharmacologic Agents for Dementia Treatment

Memantine (an NMDA receptor antagonist) is approved for use in moderate to advanced Alzheimer's disease. Aducanumab, an intravenous monoclonal antibody targeting amyloid for the treatment of Alzheimer's disease, was granted accelerated approval by the FDA in June 2021;[64] please refer to the **FDA website** (www.fda.gov) for current prescribing information.

5.3.4 Treatment of Depression Coexisting with Dementia

Nearly a third of patients will have an episode of major depression after the onset of dementia.[65] Consider an antidepressant trial if clinically indicated; be aware, however, that antidepressants have been shown to have mixed efficacy in moderate to severe dementia.[66]

[e] See **https://paltc.org/product-store/parkinsons-disease-psychosis-paltc-setting-pocket-guide** for availability information

QUESTION 14: What are some general prescribing principles for the 3Ds in PALTC?

STEP 19 — Adhere to recommended prescribing practices when prescribing medications to treat the 3Ds

Follow general principles for prescribing in PALTC (Table 43) when prescribing medications to treat the 3Ds. When a patient who is receiving psychopharmacologic medications is not doing well despite substantial or increasing doses, always consider whether the current regimen is indicated and beneficial or may need adjustment, replacement, or discontinuation.

TABLE 43
General Prescribing Principles for the 3Ds in PALTC

Follow the steps in the Recognition and Assessment (p. 10) and Diagnosis and Interpretation (p. 25) sections of this CPG to help determine the most appropriate treatment

- For each medication option, consider indications, contraindications, drug–drug interactions, and evidence-based recommendations
- Select medication options that are most likely to optimize benefits and minimize risks
- Whenever possible, start with a low dose and titrate upward as indicated until an acceptable balance is achieved between effectiveness and medication side effects
- More-severe or damaging symptoms may necessitate starting with an intermediate or higher dose
- Always consider psychopharmacologic medications in the context of the patient's entire medication regimen
- Medications are often more effective when combined with nonpharmacologic interventions
- As indicated, adjusting the timing of medication administration may make a difference (e.g., adjusting the timing of morning medication may help to improve sleep duration)
- Key parameters for monitoring the patient's response to treatment over time are similar to those for monitoring all other symptoms (e.g., comparative frequency, intensity, duration, related patient function)
- As always, consider GDR as clinically indicated

CPG, clinical practice guideline; GDR, gradual dose reduction

5.3.5 Treatment of Sleep Disturbance

Sleep disturbance (e.g., insomnia, altered sleep-wake cycle) is common among patients in PALTC. Nonpharmacologic treatment should be attempted before using medications such as sedative-hypnotics to address sleep disturbance. A 2020 Cochrane review did not support the efficacy of any pharmacologic intervention for sleep disturbance in dementia.[67] Nevertheless, some agents (e.g., melatonin, mirtazapine, trazodone) are used off label to treat sleep disturbance.

5.3.6 Continuing Psychopharmacologic Medications Begun Elsewhere

Many patients enter PALTC with existing orders for psychopharmacologic medications. PALTC medical practitioners rarely receive enough information about why these medications were started in another setting or by another practitioner, whether other approaches were tried, whether underlying causes were adequately addressed, what causes were identified, why certain doses were chosen, what adverse effects may have resulted, or what to anticipate about the patient's subsequent course.

When a patient's psychopharmacologic medication regimen has been started or adjusted during a hospital stay or in another health care setting, consider whether the treatment is appropriate or should be limited or changed. This is especially important when the current treatment may be ineffective, unnecessary, or causing complications.

5.3.7 Psychopharmacologic Medication Prescribing Influenced by Demand or Expectation

Every PALTC facility should encourage and expect open dialogue both with patients and families and between staff and practitioners. However, psychopharmacologic medications should not be prescribed or dispensed based primarily or solely on staff or family demand, but rather on appropriate indications determined by following the steps in this CPG, even if in an abbreviated fashion. Staff and families can contribute valuable details about a patient's symptom history and underlying causes.

5.3.8 PRN vs Standing Medication Doses

Orders for PRN medications must be clear and specific about the situation, diagnosis, and target symptoms or behavior that they are intended to treat. It is recommended that PRN psychopharmacologic medications be discontinued or, if a medication is needed, changed to a standing order. It is also essential to evaluate the specific impact of a PRN medication over time. Before switching PRN psychopharmacologic medications to a standing dose, consider whether the current PRN medications are indicated for the condition for which they are being used and whether they have been effective. If not, reconsider the entire situation. (See **Table 1**, p. xiv, *Clinical Problem-Solving* and *Decision-Making Process Steps and Objectives.*)

For example, if a PRN medication is ineffective or is only slightly effective for a limited time (e.g., lorazepam PRN for anxiety), it may be the wrong approach. However, a patient who has repeated episodes of physical aggression, has been thoroughly evaluated, and continues to respond to a PRN antipsychotic with significant improvement and no significant side effects may benefit from a low standing dose of an antipsychotic medication. PRN psychopharmacologic medications must be prescribed in accordance with CMS regulations (**Table 44**, p. 65).

TABLE 44

CMS Regulations Regarding PRN Use of Psychotropic Medications

The federal definition of psychotropic agents includes anti-anxiety, antidepressant, antipsychotic, and hypnotic agents. State surveyors' definition of these agents may include anticholinergic medications, anticonvulsants, antihistamines, central nervous system agents, mood stabilizers, muscle relaxants, NMDA receptor modulators, and over-the-counter natural or herbal products. Please check state regulations.

PRN Psychotropics (Excluding Antipsychotics)

- 14-day limit on all PRN orders. Order may be extended beyond 14 days if the attending physician or prescribing practitioner*
  1. Believes it is appropriate to extend the order ***and***
  2. Documents clinical rationale for the extension ***and***
  3. Provides a specific duration of use

* The above items may be documented upon initiation of the PRN psychotropic order, thus allowing use of the PRN agent beyond the 14-day limit

PRN Antipsychotics

- 14-day limit on all PRN orders. Order may not be extended beyond this limit. A new order for the PRN antipsychotic agent may be written provided that the attending physician or prescribing practitioner*
  1. ***Directly*** examines and assesses the resident; evaluation by facility staff is not permitted; ***and***
  2. Documents the clinical rationale for the new order, including
     a. What is the benefit of the medication to the resident? ***and***
     b. Have the resident's expressions or indications of distress improved as a result of the PRN medication?

* The above items must be completed every 14 days for residents receiving PRN antipsychotic agents. There are no exceptions for residents in hospice care.

CMS, Centers for Medicare & Medicaid Services

Source: CMS[68]

STEP 20 — Manage behavioral symptoms appropriately

5.3.9 Undertreatment and Overtreatment of Behavioral Symptoms

Both undertreatment and overtreatment of behavioral and psychological symptoms can have adverse consequences (Table 45). Ultimately, treatment is a balancing act that requires careful assessment of the patient and the clinical knowledge to find the path that provides the right amount of the right interventions and limits marginal, problematic, or ineffective treatment.

TABLE 45

Comparative Impact of Undertreatment and Overtreatment of Behavioral Symptoms

Risks of Undertreatment	Optimal Treatment	Risks of Overtreatment
Mood/Behavior		
■ Apathy ■ Antagonistic relationships with clinical staff ■ Depression ■ Hopelessness, despair ■ Suicidal thoughts	■ Optimal, effective medication regimen ■ Focused nonpharmacologic interventions ■ Balance between treatment and side effects	■ Impaired mood, behavior ■ Verbal, physical aggression ■ Falls ■ Psychosis, delirium
Function		
■ Impaired function	■ Maximal functional capacity	■ Impaired functional status due to medication side effects, interactions
Other Patient Outcomes		
■ Accelerated decline ■ Increased hospitalization ■ Early death	■ Improved patient satisfaction, quality of life ■ Patient has sense of control, hope, a plan for dealing with exacerbations of behavioral or psychological symptoms	■ Medication side effects (e.g., adverse impact on renal or hepatic function, changes in mental status, sedation)
Facility Impact		
■ Multiple ED transfers ■ OBRA survey deficiencies	■ Optimal medication use ■ Fewer complications requiring time-consuming interventions ■ Better outcomes overall	■ Excessive time spent on medication pass/ polypharmacy ■ OBRA survey deficiencies for treatment-related complications (e.g., aggression, falls, weight loss)

ED, emergency department; OBRA, Omnibus Budget Reconciliation Act of 1987

QUESTION 15: How can psychiatric consultants help in the management of behavioral and psychological symptoms?

5.4 Appropriate Use of Psychiatric Consultants in the Management of Behavior Symptoms

An effective PALTC crisis management plan should include adequate access to urgent psychiatric consultation. Table 46 describes appropriate expectations for psychiatric consultants in the management of behavioral and psychological symptoms.

TABLE 46
Expectations for Psychiatric Consultants in the Management of Behavioral and Psychological Symptoms

Aspect of Care	Desirable Consultative Support
Recognition / Assessment / Problem Definition	■ Works with staff and practitioners to formulate a clear picture of the situation, including description of behavior and frequency, intensity, and duration of symptoms ■ Helps facility identify causes in detail so that staff and practitioners do not just react to symptoms and demand medications
Diagnosis / Cause Identification	■ Helps facility staff and practitioners seek, understand, update, and confirm or challenge existing psychiatric diagnoses ■ Utilizes guidelines for competent differential diagnosis, which requires context, including details of current symptoms and more-remote history
Patient Management / Treatment	■ Collaborates with staff and practitioners to identify history of prior interventions ■ Helps facilities target underlying causes and not just behavior ■ Does not just function as "psychiatric medication manager" ■ Can provide a detailed, clinically pertinent rationale (not just a diagnosis) for any recommendations to initiate, add, or change medications ■ Knows how to manage multiple medications based on effective clinical reasoning ■ Helps staff and practitioners recognize medication indications, interactions, and major adverse consequences[69]
Monitoring	■ Helps staff and practitioners monitor patient responses to interventions and adjust them effectively ■ Knows how to manage a complex treatment regimen, including exactly what to increase, decrease, add, and stop

Sources: Levenson, 2020[69]; 2021[70]

6. MONITORING AND REGULATORY COMPLIANCE

QUESTION 16: How can practitioners optimize patient monitoring to ensure that treatment is appropriate and effective?

STEP 21 — Monitor the patient's response to treatment and adjust management as appropriate

Staff and practitioners should routinely review individualized plans of care and discuss in detail whether the assessment and treatment plans continue to be relevant, safe, and effective. The same methods and criteria used in the initial assessment (see **Recognition and Assessment** section, p. 10) should be used to monitor the patient's progress. Document approaches, timetables, and goals of treatment in the interdisciplinary care plan and progress notes often enough and in enough detail to enable decision making about whether symptoms are improving and interventions are effective or whether diagnoses need to be reconsidered and interventions revised.

- Review the effectiveness and continued appropriateness of all medications.
- Prevent, identify, and address any complications of the patient's condition or of current interventions.
- Monitor for adverse effects of medications, particularly antipsychotics (**Table 47**, p. 69).
- Initiate or modify interventions based on the stepwise approach outlined in the **Treatment and Management** section (p. 41).

TABLE 47

Side-Effect Profile of Antipsychotic Medications Most Commonly Used in PALTC*

Agent Generic Name *(Brand Name)*	QTc prolongation	Anticholinergic effects	CNS depression	Dyslipidemia	Hyperglycemia	Orthostatic hypotension (falls)	Weight gain	Extrapyramidal symptoms	Increased prolactin
Aripiprazole *(Abilify®)*	±	±	±	±	±	±	±	+	+
Clozapine *(Clozaril®)*	++	+++	+++	+++	+++	+++	+++	±	±
Haloperidol *(Haldol®)*	+	+	+++	+	+	+	++	+++	+++
Olanzapine *(Zyprexa®)*	+	++	++	+++	+++	+	+++	+	±
Quetiapine *(Seroquel®)*	+	+	+++	++	++	++	++	±	±
Risperidone *(Risperdal®)*	+	+	+	+	+	++	+	+++	+++
Ziprasidone *(Geodon®)*	+++	±	±	±	±	±	±	+	±

± minimal risk; + small risk; ++ moderate risk; +++ high risk

CNS, central nervous system

* Consult a pharmacist or psychiatrist for guidance on the use of newer antipsychotic agents (e.g., asenapine, brexpiprazole, iloperidone, lurasidone, paliperidone, pimavanserin)

Sources:
Glick et al, 2006[71]
Haddad, 2007[72]

6.1 Gradual Dose Reduction

Within the first year (a) in which a patient is admitted on a psychotropic medication, or (b) after the prescribing practitioner has initiated a psychotropic medication, the facility must attempt a gradual dose reduction (GDR) in two separate quarters (at least one month apart), unless doing so is clinically contraindicated. After the first year, a GDR must be attempted annually unless clinically contraindicated. GDR may also be indicated when

- The patient's clinical condition has improved or stabilized
- The underlying causes of the original target symptoms have resolved
- Nonpharmacologic approaches have been effective in reducing the patient's symptoms

If the patient's condition has not responded to treatment or has declined despite treatment, evaluate both the medication and the dose to determine whether the medication should be discontinued or the dosing altered.

6.2 Monitoring Delirium

Re-evaluate all patients for delirium with CAM as often as indicated. Also evaluate patients as indicated for the following potential complications associated with delirium:

- Aspiration pneumonitis or pneumonia
- Cognitive decline
- Constipation, fecal impaction
- Dehydration
- Falls
- Functional decline
- Malnutrition/weight loss
- Physical debility
- Pressure ulcers
- Urinary retention

Educate staff to recognize the above issues as possible complications of delirium.

6.3 Monitoring Depression

Use the same screening instruments previously used to identify depression to monitor for relief of depression symptoms. In a first episode of depression, continue the medication for 6 to 12 months beyond the achievement of full remission. Older adults may have higher relapse rates than younger populations.[73] Older adults who have had multiple episodes of MDD, those with frequent relapses or recurrences, and those with dysthymic disorder may need long-term treatment.[74] The phases of MDD are defined in Table 48 (p. 71).

TABLE 48
Phases of Major Depressive Disorder

Term	Clinical Definition
Response	Improvement from the initial onset of depression
Remission	Experience of being free from depression symptoms
Recovery	Absence of symptoms for at least 4 months following the onset of remission
Relapse	A full return of depressive symptoms once remission has occurred but before recovery has taken hold
Recurrence	A new, distinct depressive episode after recovery has been attained

6.4 Monitoring Dementia

If the treatment goal is functional improvement or slowing of decline with acetylcholinesterase inhibitors or memantine, standard practice for patients residing in PALTC facilities should include screening annually or at any time a change in cognitive function is suspected, using the same instruments previously used to identify dementia.

How best to balance the relative benefits and burdens of ongoing treatment should be discussed with the family or the patient's legally authorized representative on an ongoing basis. Revisit the treatment indication and consider discontinuation if

- Functional decline progresses
- The patient experiences medication side effects
- Medication is determined to be ineffective
- The patient has progressed to end-stage dementia and should be transitioned to palliative care

If psychotropic drugs have been prescribed, monitor the patient for adverse effects and symptom persistence. Continue to monitor for the emergence of new behaviors and for changes in patient, caregiver, or environmental factors (Table 49).

TABLE 49

Patient, Caregiver, and Environmental Factors to Monitor in Patients with Dementia

Patient factors

- Medical illness
- Pain
- Unmet needs (e.g., fatigue, fear, hunger, lack of sleep)

Caregiver factors

- Ability to communicate with the patient (verbally or using nonverbal cues) and staff
- Caregiving style
- Stress
- Unrealistic expectations

Environmental factors

- Overstimulation (e.g., noise, lights on overnight)
- Understimulation (e.g., lack of appropriate activities for the patient's degree of cognitive impairment)
- Limited exposure

Source: Kales et al, 2019[75]

QUESTION 17: How do we make decisions about changing, adding, reducing, or stopping psychopharmacologic medications?

6.5 Monitoring of Behavioral and Psychological Symptoms

The IPT (including medical practitioners) should periodically discuss in some detail the status of all patients with behavioral and psychological symptoms (e.g., at IPT, care-plan, or service-plan meetings). Details about a patient (see Table 12, p. 19; Table 15, p. 22) enable better-informed decision making that can help to optimize treatment.

Consider changes in psychopharmacologic treatment when

- Treatment goals are not being achieved
- The patient's prognosis or goals of care change
- A significant change (i.e., improvement or worsening) occurs in an underlying cause of behavioral or psychological symptoms or their treatment

Even longstanding medications may become less effective over time, and adverse effects and problematic interactions with other medications may arise or worsen. Table 50 (p. 73) provides examples of situations in which to consider modifying a patient's treatment regimen for behavioral or psychological symptoms.

TABLE 50

Examples of Situations in Which to Consider Modifying the Treatment Regimen for Behavioral and Psychological Symptoms

Possible Dose Increases	Possible Dose Reductions/Discontinuation
■ Current medication and dosing are providing partial relief without significant side effects ■ Dosing guidelines provide "room to move" ■ A dose increase may be desirable to help to determine whether the medication is optimally effective	■ The underlying cause of the patient's symptoms has been addressed ■ Symptoms are not responding as anticipated to the current regimen, suggesting that this regimen may be ineffective or not indicated ■ The patient is experiencing significant medication-related side effects or drug interactions ■ Significant signs are noted of misuse of, or excessive dependency on, prescribed medications ■ The patient has skipped doses without adverse impact ■ The patient's symptoms are currently controlled and a medication reduction trial has not yet occurred and will not create excessive risk of adverse outcomes ■ The risks and burdens of continued treatment outweigh the anticipated benefits

Implications: Monitoring and adjusting treatments follow the same steps and principles as initially prescribing them. Objective details are needed to identify the effectiveness and adverse effects of treatment and to identify to what extent management of the 3Ds has attained the desired goals. Treatment adjustments should be based on knowledge of the details (e.g., onset and duration of medication effect, recommendations for adjusting doses and frequency of dosing). Guessing is ineffective and imprudent. Consultative support should be obtained as needed and used judiciously.

QUESTION 18: What quality performance measures can be used to assess facility effectiveness in managing the 3Ds?

STEP 22 — Monitor the facility's performance in managing the 3Ds

Assessment of facility performance should be grounded in an understanding of the facility's patient mix by age, sex, and prevalence of mental illness. Review management of the 3Ds through the facility's quality improvement processes and the use of quality assurance performance improvement projects. Table 51 suggests indicators that a facility may wish to use to monitor its performance.

TABLE 51
Suggested Indicators for Monitoring Facility Performance in Managing the 3Ds

General
- Facility has adopted policies and procedures that promote a systematic, interdisciplinary, individualized approach to caring for patients with delirium, depression, and dementia
- Facility staff and affiliated professionals receive appropriate education that reflects current standards and practice in the care of patients with delirium, depression, and dementia
- Patients are regularly assessed for delirium, depression, and dementia

	Process Indicators	Outcome Indicators
Delirium	Percentage of patients ■ Assessed for predisposing and precipitating risk factors for delirium ■ Assessed for potential causes of delirium ■ For whom nonpharmacologic strategies for delirium prevention were implemented ■ Treated with antipsychotics for delirium only	Incidence and prevalence (i.e., present on admission to the facility) of delirium
Depression	■ Implementation of facility protocols consistent with current standards of practice for the recognition, assessment and treatment of depression ■ Percentage of patients • Assessed for risk factors or screened for depression • With depression who receive interventions consistent with current standards of practice	Percentage of patients ■ With a noticeable improvement in target symptoms after treatment of depression ■ Treated to remission (i.e., absence of both sad mood and reduced interest for at least 3 weeks and no more than 3 remaining symptoms of the major depressive episode)
Dementia/ BPSD	Percentage of patients • Screened for dementia • With dementia who are receiving an antipsychotic ■ Percentage reduction and/or stopping of antipsychotics as part of GDR	Percentage of adverse-outcome events in dementia care ■ Falls with injuries ■ Hospitalizations ■ Aspiration pneumonia

BPSD, behavioral and psychological symptoms of dementia; GDR, gradual dose reduction

QUESTION 19: How should a facility oversee and review its approaches to managing behavioral and psychological symptoms, including the use of psychopharmacologic medications?

6.6 Quality Oversight of Behavioral and Psychological Symptom Management

As with all aspects of care, behavioral and psychological symptom management can benefit from facility-wide oversight. As previously noted, it is important that facility management fully support the use of nonpharmacologic strategies, which may appear to be more labor-intensive than using medications alone to manage patients' behavior.

Because the treatment of these symptoms relates to so many other patient-care issues (e.g., falls, mood, weight loss, unplanned hospital transfers), it may be most effectively addressed as part of a facility's overall clinical quality improvement activities. Some facilities, however, choose to address it by setting up a dedicated oversight group. This internal oversight process may also help facilities to comply with state and federal laws and regulations related to the use of psychopharmacologic medications, including the proper application of prescription drug monitoring procedures for the management of controlled substances (i.e., administration, storage, disposal, and detection and prevention of diversion).

The IPT should periodically review behavioral and psychological symptom management practices and processes (not only outcome-related quality measures), using criteria such as those listed in Table 52.

TABLE 52
Examples of Criteria for Reviewing Behavioral and Psycological Symptom Management

- Consistency and accuracy of assessments of cognition, mood, and behavior
- Quality and content of documentation by nurses and medical practitioners related to behavioral and psychological symptoms
- Adequacy of documented clinical rationale for decisions about a patient's current management plan and treatment regimen for behavioral and psychological symptoms (e.g., the basis for deciding to prescribe, continue, increase, or add psychopharmacologic medications)
- How well goals for managing behavioral and psychological symptoms are identified and met
- How well patients receiving psychopharmacologic medications are monitored for effectiveness (including facility behavioral monitoring) and adverse effects
- Use of specific psychopharmacologic medications or combinations despite identified risks or published warnings, interactions, or complications
- Review of patients who are declining or not improving as anticipated while on psychopharmacologic medications
- In-depth review of patients who are receiving
  - High doses of psychopharmacologic medications
  - Psychopharmacologic medications without a clearly documented clinical rationale
  - More than 2 psychopharmacologic medications simultaneously
  - Frequent or multiple PRN psychopharmacologic medications

QUESTION 20: How should facilities and practitioners take into account nursing home regulations and surveys in managing behavioral and psychological symptoms?

6.7 Regulatory and Survey Considerations in Behavioral and Psychological Symptom Management

PALTC staff and practitioners are concerned about federal and state nursing home regulations related to behavioral and psychological symptom management and related quality measures. Regulatory expectations for the management of these symptoms are identified in the Centers for Medicare & Medicaid Services' *State Operations Manual*—primarily §483.40 (Behavioral Health Services)[76] and §483.35 (Nursing Services).[76]

Federal regulations and surveyor guidance do not mandate how to manage behavioral and psychological symptoms, but do include many expectations and general guidelines (Table 53, p. 77). State surveyors have limited ability to fairly and consistently appraise the management of these symptoms (e.g., whether appropriate and timely treatment has been prescribed and given, whether a facility could have prevented aggression or fighting). Primarily, they attempt to assess whether the care of patients with behavioral and psychological symptoms is consistent with the regulations and related guidance.

TABLE 53
Regulatory Considerations in Behavioral and Psychological Symptom Management

- Have medical practitioners tried to identify and manage medical issues that may be causing a behavior problem?
- How did medical practitioners decide on the patient's current treatment plan, including the plan for addressing behaviors and the treatment regimen?
- Are families included as part of the care team when possible and made aware of the behavior that the patient is exhibiting and the program for managing it?
- How do medical practitioners decide that the patient needs psychopharmacologic medications?
- Have staff and practitioners
  - Identified potential risks of psychopharmacologic medications?
  - Tried to minimize the complications of these agents?
  - Communicated and documented the risks and benefits of these agents, as well as alternatives, to the patient, family, or legally authorized representative?
  - Identified and managed complications when they occur?
- How have goals for improvement of behaviors been identified?
- How do staff and practitioners monitor for medication effectiveness and adverse effects?
- What do staff and practitioners do when adverse effects of treatments for behavioral and psychological symptoms are identified?
- Have staff and practitioners identified and incorporated the patient's history and preferences into the plan of care?
- How do practitioners decide to adjust interventions over time?
- Has the IPT developed and implemented an individualized behavior management plan, documented the effectiveness of the plan, and revised it as indicated?
- Are adequate staff available to implement nonpharmacologic interventions?
- Are staff trained in how to approach residents and manage behavior effectively?
- Were nonpharmacologic interventions tried? If so, how was their effectiveness determined?

IPT, interprofessional team

To anticipate and address survey concerns, medical practitioners and facility staff should recognize that regulatory compliance must start with performing and documenting clinically appropriate care. This can be achieved by following the steps in this CPG and in cited references (e.g., assessing and describing behavioral and psychological symptoms, identifying causes, prescribing and administering appropriate treatments, monitoring results). Simply ordering medications or nonpharmacologic interventions is not necessarily evidence of either meeting regulatory requirements or "doing the right thing" in regard to patient management.

It is imprudent to prescribe unnecessary or inappropriate medications, including psychopharmacologic medications, based primarily or solely on either family or staff demand or regulatory and survey considerations. Regulatory guidance states that practitioners are not expected to order medically inappropriate interventions on request or demand.

> The resident has the right to request treatment; however, facility staff are not required to provide medical treatment or services if the requested treatment or services are medically unnecessary or inappropriate.[76]

Table 54 lists the information and documentation pertaining to behavorial and psychological symptom management that facilities and practitioners should be able to present to surveyors to try to demonstrate compliance with expected care.

TABLE 54
Behavioral and Psychological Symptom Management: Documenting Processes for Surveyors

Facility staff and practitioners should be able to present sufficient detailed information and documentation to demonstrate the following to surveyors:

- How they are managing a patient's behavioral and psychological symptoms
- How they have decided on a patient's current treatment plan, including the analgesic regimen
- How they decide that a patient needs opioid analgesics
- How goals for relief of behavioral and psychological symptoms are identified
- How they monitor for medication effectiveness and adverse effects
- What they do when adverse effects of treatments are identified
- How they decide to adjust treatments over time

Implications: All facilities should review their behavioral management processes and results, based on identified quality criteria (not just outcomes), and make adjustments accordingly. All facilities have a responsibility to have rules for prescribing and to oversee behavioral symptom management and prescribing practices.

QUESTION 21: What constitutes an effective staff education program for the 3Ds?

STEP 23 — Develop and implement an ongoing staff education program focused on the 3Ds

Ongoing education of the entire IPT promotes the recognition, assessment, and treatment of the 3Ds. These complex conditions are better managed when health care practitioners work together effectively as a team. Equipped with observations and assessment data from multiple health-professional perspectives, the IPT can better communicate with family members and other caregivers involved in the patient's care and assist the patient, family, and/or legally authorized representative in making informed choices about treatment and other care issues.

Guidance for training staff on the 3Ds varies based on profession, certification, education level, state regulations, and facility policies. While there are no national standards for health professionals' education and training in dementia care, the National Council of Certified Dementia Practitioners recommends at least eight hours of dementia-care training per year for staff caring for patients with dementia.

- All professional staff members should receive training on assessment tools for delirium, depression, and dementia (e.g., BIMS, CAM, CSDD, PHQ-9, SLUMS).
- Education sessions should be interactive and should employ a variety of teaching/learning strategies so that participants have the opportunity to practice and engage with new skills. Appropriate strategies include
  - Interactive group work
  - Classroom-based theory
  - Practice-based or experiential learning
- Provide training scenarios and case examples that are relevant to PALTC.
- Provide opportunities for learners to reflect upon and discuss both "good" and "poor" practice.
- Post reminders (e.g., posters, pins) regarding the need to remain vigilant about the possibility of delirium in all PALTC patients.
- Many organizations, including the following, offer teaching aids and additional training resources:
  - Alzheimer's Association **https://www.alz.org/**
  - AMDA – The Society for Post-Acute and Long-Term Care Medicine **https://paltc.org/**
  - American Geriatrics Society **https://www.americangeriatrics.org/**
  - Gerontological Advanced Practice Nurses Association **https://www.gapna.org/**
  - Gerontological Society of America **https://www.geron.org/**

RESOURCES

AMDA Advance Care Planning Resources **https://paltc.org/topic/advance-care-planning**

CMS Focused Dementia Care Survey Tools **https://www.hhs.gov/guidance/document/focused-dementia-care-survey-tools**

CMS Cognitive Assessment & Care Plan Services **https://www.cms.gov/cognitive**

The 4Ms: A Framework of an Age-Friendly Health System – Mentation, Medication, Mobility, and What Matters (Institute for Healthcare Improvement, John Hartford Foundation) **http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx**

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APPENDIX A
Delirium, Depression, Dementia? — A Case Presentation

This case presentation illustrates how the coexistence of the 3Ds can present unique diagnostic and management challenges for PALTC practitioners and highlights some key challenges and questions that need to be considered during the workup and assessment of delirium, depression, and dementia. As you read it, think about how you might have approached this situation.

Part 1 – Background and Initial Assessment

- Mary Smith is an 86-year-old woman who was recently hospitalized for generalized weakness and recurrent falls. In the hospital, she was diagnosed with and treated for a urinary tract infection (UTI). She was subsequently discharged to a PALTC facility for skilled care. Her diagnoses upon admission to the facility include atrial fibrillation, diastolic heart failure, hypertension, diabetes, and "mild cognitive impairment." Her initial score on the MDS Brief Interview for Mental Status scale is 10.

- Her daughter contacts the practitioner with concerns about "mom's memory," describes her mother as needing help with activities in which she was previously independent, and reports that her mother experienced an increase in falls over several months prior to her hospitalization.

- On assessment, Mrs. Smith's score on the Saint Louis University Mental Status scale is 16/30; she scores 4/4 on clock drawing and recalls 2 of 5 items. Physical examination is otherwise unremarkable. After reviewing the results of this evaluation with Mrs. Smith and her daughter, the practitioner prescribes a trial of donepezil for a diagnosis of probable dementia.

- Two weeks later, staff notify the practitioner that Mrs. Smith "is not herself." The physical therapist informs the practitioner that he has twice found Mrs. Smith in her nightclothes and "soaked" in urine. Of note, Mrs. Smith was previously continent of both bowel and bladder. Mrs. Smith tells staff that people were shooting guns outside her window last night and they all died. She refuses to return to her room and stays in the day room. Although she has a new symptom of urinary incontinence, she offers no complaint of dysuria, frequency, or urgency.

- On physical exam, Mrs. Smith is in the day room, dressed and well groomed and working on a word puzzle. Vital signs are stable. "I'm the crazy lady on the second floor . . . I know there are not people in my room, but this happened to me before when my husband died. I've never lived alone," she says.

- Her complete blood count is normal, with a white blood cell (WBC) count of $6.2x10^3$/mcL and a Vitamin B12 level of over 2000 mcg/mL. Chem 8 shows a blood-urea-nitrogen level of 19 mg/dL and a creatinine level of 1.2 mg/dL. On urinalysis, nitrites are negative, leukocyte esterase is negative, there is 1 WBC per high power field, "few" bacteria, and "many" epithelial cells. Two days later, the culture results show greater than 100,000 colony-forming units per milliliter (CFU/mL) of *E. coli* and greater than 10,000 CFU/mL of two other organisms, probable collection contamination.

APPENDIX continued

Discussion

Differentiating the 3Ds can be challenging. Mrs. Smith had presented to the hospital with generalized functional decline and recurrent falls. Although she was diagnosed and treated for a UTI, history obtained during her PALTC stay seemed to suggest a subacute decline lasting several months prior to her hospitalization.

Part 2 – Is Depression Present?

- As the practitioner gets to know Mrs. Smith better, additional history is obtained that prompts concern that her underlying chronic condition may be depression rather than dementia. Important questions to ask at this time may include
  - Does Mrs. Smith have dementia or unrecognized depression or both?
  - What is the timeline of Mrs. Smith's functional decline? Does it correspond to any major socioeconomic stressors in her life (e.g., the death of a family member)?
  - Was Mrs. Smith's hospital course complicated by delirium? Was there a prolonged hospital course that may have accelerated her functional decline?
  - Was there a recent medication change?
  - Could a new medical condition explain Mrs. Smith's delirium?
  - Are staff trained to provide nonpharmaceutical interventions for delirium (e.g., sleep hygiene, gentle re-orientation)?
  - Are staff trained to appropriately interact with older adults who may have dementia with behavioral symptoms?
  - If the diagnosis of dementia is correct, how will Mrs. Smith's clinical progression be monitored?
  - If Mrs. Smith's condition is suspected to be predominantly due to depression, what are the treatment goals and how will her treatment be objectively monitored for efficacy in achieving those goals?
  - How long should Mrs. Smith be treated before an improvement in symptoms would be expected?

- On further assessment, Mrs. Smith states that she felt "crazy" after her spouse died and that she had never lived alone. She further states that following the death of her husband of 66 years, she moved in with her daughter and son-in-law. Unfortunately, she is unable to return to that living situation as her daughter has worsening chronic health conditions. She says, "They found this place for me."

- When administered the Geriatric Depression Scale–Short Form, Mrs. Smith acknowledges that she is bored, is not full of energy, does not think it is wonderful to be alive now, is not happy most of the time, is not in good spirits most of the time, and feels most people are better off than herself. A score higher than 5 is suggestive of depression; Mrs. Smith's score is 6. She acknowledges occasionally feeling depressed; however, she declines to start an antidepressant at this time, although she expresses willingness to discuss this again in the near future.

Discussion

Consider the additional information obtained by focusing specifically on assessment of depression. Would this information have changed your overall treatment approach to Mrs. Smith? Is there additional information that

APPENDIX continued

you would have liked to obtain? Keep in mind that thinking about specific conditions facilitates narrowing down questions to aid in differentiating the possible condition(s).

Part 3 – Is Delirium Present?

- When, at two weeks after her initial assessment, Mrs. Smith had a change in condition, was "not herself," incontinent of urine, and hallucinating, consider the following:
  - Was her hospital course complicated by delirium?
  - Was there a recent medication change?
  - Might a new medical condition explain Mrs. Smith's delirium?

- Recall that she had a 10-day hospitalization that included treatment for a UTI and she had recently been started on a trial of donepezil.

- At the time her change in condition is recognized, she is administered the Confusion Assessment Method (CAM; see **Table 21**, p. 30); she shows evidence of an acute change in mental status and a fluctuating course per staff reports (criterion 1), but she successfully completes serial 3's (criterion 2), demonstrates organized thinking (criterion 3), and is alert. However, she is easily startled by sounds and remains insistent that she not return to her room, fearing harm (criterion 4).

- Although Mrs. Smith does not currently demonstrate delirium either by the CAM criteria or during the clinical interview, her CAM score indicates that she remains at high risk, with positive scores for criteria 1 and 4. The practitioner considers multi-component nonpharmacologic interventions for delirium and management of her sleep/wake cycle, and considers the recent addition of donepezil as a potential cause of abnormal dreams. After discussion with the patient and her daughter, the practitioner agrees to stop the donepezil.

Discussion

Reflecting on Mrs. Smith's acute change of condition, it is possible to see how she may have been experiencing delirium that may or may not have been due to a reversible cause. When approaching this "new" problem, it is important to consider the entire patient picture – i.e., everything you have learned about Mrs. Smith's condition – to promptly obtain a correct diagnosis and avoid harm.

APPENDIX B
Cornell Scale For Depression in Dementia

Name _____ Age _____ Sex _____ Date _____

Wing _____ Room _____ Physician _____ Assessor _____

Ratings should be based on symptoms and signs occurring during the week before interview. No score should be given if symptoms result from physical disability or illness.

SCORING SYSTEM
a = Unable to evaluate 0 = Absent 1 = Mild to intermittent 2 = Severe

A. MOOD-RELATED SIGNS				
1. Anxiety: anxious expression, rumination, worrying	a	0	1	2
2. Sadness: sad expression, sad voice, tearfulness	a	0	1	2
3. Lack of reaction to present events	a	0	1	2
4. Irritability: annoyed, short tempered	a	0	1	2
B. BEHAVIORAL DISTURBANCE				
5. Agitation: restlessness, hand wringing, hair pulling	a	0	1	2
6. Retardation: slow movements, slow speech, slow reactions	a	0	1	2
7. Multiple physical complaints (score 0 if gastrointestinal symptoms only)	a	0	1	2
8. Loss of interest: less involved in usual activities (score only if change occurred acutely, i.e., in less than one month)	a	0	1	2
C. PHYSICAL SIGNS				
9. Appetite loss: eating less than usual	a	0	1	2
10. Weight loss: (score 2 if greater than 5 pounds in one month)	a	0	1	2
11. Lack of energy: fatigues easily, unable to sustain activities	a	0	1	2
D. CYCLIC FUNCTIONS				
12. Diurnal variation of mood: symptoms worse in the morning	a	0	1	2
13. Difficulty falling asleep: later than usual for this individual	a	0	1	2
14. Multiple awakening during sleep	a	0	1	2
15. Early morning awakening: earlier than usual for this individual	a	0	1	2

APPENDIX continued

APPENDIX B continued

E. IDEATIONAL DISTURBANCE				
16. Suicidal: feels life is not worth living	a	0	1	2
17. Poor self-esteem: self-blame, self-depreciation, feelings of failure	a	0	1	2
18. Pessimism: anticipation of the worst	a	0	1	2
19. Mood congruent delusions: delusions of poverty, illness, or loss	a	0	1	2

SCORE _____
Score greater than 12 = Probable depression

Notes/Current Medications:

_____
_____
_____
_____
_____

Instructions for use:

1. The same CNA (certified nursing assistant) should conduct the interview each time to assure consistency in response.
2. The assessment should be based on the patient's normal weekly routine.
3. If uncertain of answers, questioning other caregivers may further define the answer.
4. Answer all questions by placing a check in the column under the appropriately numbered answer. (a = unable to evaluate, 0 = absent, 1 = mild to intermittent, 2 = severe)
5. Add the total score for all numbers checked for each question.
6. Place the total score in the "Score" box and record any subjective observation notes in the "Notes/Current Medications" section.
7. Scores totaling twelve (12) points or more indicate probable depression.

Reprinted from Alexopoulos GS, Abrams RC, Young RC, Shamoian CA. Cornell Scale for Depression in Dementia. *Biological Psychiatry* 23: 271-284, ©1998, with permission from the first author

APPENDIX C
Patient Health Questionnaire–9*

Resident: _____ Identifier: _____ Date: _____

Section D			
D0100. Should Resident Mood Interview be Conducted? —> Attempt to conduct interview with all residents			
Enter code	0. No (resident is rarely/never understood) —> Skip to and complete D0500-D0600, Staff Assessment of Resident Mood (PHQ-9-OV) 1. Yes —> Continue to D0200, Resident Mood Interview (PHQ-9©)		
D0200. Resident Mood Interview (PHQ-9)			
Say to resident: "Over the last 2 weeks, have you been bothered by any of the following problems?"			
If symptom is present, enter 1 (Yes) in column 1, Symptom Presence If Yes in column 1, then ask the resident: "About how often have you been bothered by this?" Read and show the resident a card with the symptom frequency choices. Indicate response in column 2, Symptom Frequency			
1. Symptom Presence **0. No** (Enter 0 in column 2) **1. Yes** (Enter 0–3 in column 2) **9. No response** (Leave column 2 blank)	**2. Symptom Frequency** **0. Never or 1 day** **1. 2–6 days** (several days) **2. 7–11 days** (half or more of the days) **3. 12–14 days** (nearly every day)	**1. Symptom Presence**	**2. Symptom Frequency**
		↓ **Enter scores** ↓	
A. Little interest or pleasure in doing things			
B. Feeling down, depressed, or hopeless			
C. Trouble falling or staying asleep, or sleeping too much			
D. Feeling tired or having little energy			
E. Poor appetite or overeating			
F. Feeling bad about yourself – or that you are a failure or have let yourself or your family down			
G. Trouble concentrating on things, such as reading the newspaper or watching television			
H. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual			
I. States that life isn't worth living, wishes for death, or attempts to harm self			
J. Being short-tempered, easily annoyed			
D0300. Total Severity Score			
Enter score	Add scores for all frequency responses in Column 2 – Symptom Frequency **Total score must be between 0 and 27** Enter 99 if unable to complete interview (i.e., Symptom Frequency is blank for 3 or more items).		
D0350. Safety Notification – Complete only if D0200 item I = 1 indicating possibility of resident self harm			
Enter code	Was responsible staff or provider informed that there is potential for resident self harm? 0. No 1. Yes		

*For an alternate version of the PHQ-9 that includes guidance on interpreting scores, go to https://med.stanford.edu/fastlab/research/imapp/msrs/_jcr_content/main/accordion/accordion_content3/download_256324296/file.res/PHQ9%20id%20date%2008.03.pdf

APPENDIX D
Patient Health Questionnaire–9 — Observer Version

Resident: _____ Identifier: _____ Date: _____

Section D			
D0500. Staff Assessment of Resident Mood (PHQ-9-OV) **Do not conduct if Resident Mood Interview (D0200—D0300) was completed**			
Over the last 2 weeks, did the resident have any of the following problems or behaviors?			
If symptom is present, enter 1 (yes) in column 1, Symptom Presence. Then move to column 2, Symptom Frequency, and indicate symptom frequency			
1. Symptom Presence **0. No** (Enter 0 in column 2) **1. Yes** (Enter 0–3 in column 2)	**2. Symptom Frequency** **0. Never or 1 day** **1. 2–6 days** (several days) **2. 7–11 days** (half or more of the days) **3. 12–14 days** (nearly every day)	**1. Symptom Presence**	**2. Symptom Frequency**
		↓ **Enter scores** ↓	
A. Little interest or pleasure in doing things			
B. Feeling down, depressed, or hopeless			
C. Trouble falling or staying asleep, or sleeping too much			
D. Feeling tired or having little energy			
E. Poor appetite or overeating			
F. Feeling bad about yourself – or that you are a failure or have let yourself or your family down			
G. Trouble concentrating on things, such as reading the newspaper or watching television			
H. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual			
I. States that life isn't worth living, wishes for death, or attempts to harm self			
J. Being short-tempered, easily annoyed			
D0600. Total Severity Score			
Enter score	Add scores for all frequency responses in Column 2 – Symptom Frequency **Total score must be between 0 and 30**		
D0650. Safety Notification – Complete only if D0500 item I = 1 indicating possibility of resident self harm			
Enter code	Was responsible staff or provider informed that there is potential for resident self harm? 0. No 1. Yes		

APPENDIX E
Antipsychotic Agents Commonly Used in PALTC

Agent (Brand Name)	Indications and Dosage	Adverse Drug Reactions	Cost
Haloperidol (Haldol®)	**Psychosis** ***Oral*** 0.5 to 2 mg 2x–3x/day (max 20 mg/day) **Agitation associated with dementia (off label)** ***Oral*** ■ 0.25–2 mg/day ■ Slowly increase dose every 4–7 days based on tolerability (max 6 mg/day in 1 or 2 divided doses) ■ First-line use not recommended in non-emergent situations[1] ■ If no response in 4 weeks, begin taper to discontinuation **Agitation associated with delirium (off label)** ***Oral /IM*** ■ 0.5–2 mg once (for mild agitation) ■ 5–10 mg once (for severe agitation) ■ Repeat doses based on clinical response **IV (severe agitation only)** ■ 2 mg once, followed by repeat doses every 15–20 minutes while agitation persists ■ Once delirium is controlled, may repeat a dose every 4–6 h	**Potential ADRs** ■ Altered cardiac conduction (QTc prolongation) ■ Anticholinergic effects ■ Blood dyscrasias ■ CNS depression ■ Extrapyramidal symptoms ■ Hyperprolactinemia ■ Neuroleptic malignant syndrome ■ Orthostatic hypotension (falls)	Oral $ Vial $$

APPENDIX continued

APPENDIX E continued

Agent (Brand Name)	Indications and Dosage	Adverse Drug Reactions	Cost
Olanzapine (Zyprexa®)	**Depression (in combination with fluoxetine)** ***Oral*** ■ 5 mg in the evening ■ Titrate as tolerated (max 20 mg/day) **Agitation associated with dementia (off label)** ***Oral*** ■ 2.5–5 mg/day ■ Increase dose as tolerated (max 10 mg/day) ***IM*** ■ 2.5–5 mg as 1 dose ■ Can repeat 1.25 or 2.5 mg dose up to 2 additional doses, with at least 2 h between doses (max 12.5 mg per episode) ■ If no response in 4 weeks, begin taper to discontinuation **Agitation associated with delirium (off label)** ***Oral*** ■ 5 mg/day for up to 5 days ■ >60 y, 2.5 mg/day for up to 5 days	**Highest risk for weight gain compared with other antipsychotics** **Other potential ADRs** ■ Altered cardiac conduction (QTc prolongation) ■ Anticholinergic effects ■ Blood dyscrasias ■ CNS depression ■ DRESS ■ Extrapyramidal symptoms ■ Hyperglycemia ■ Hyperprolactinemia ■ Neuroleptic malignant syndrome ■ Orthostatic hypotension (falls)	Oral $$ Syringe $$$
Pimavanserin (Nuplazid®)	**Parkinson's Disease psychosis** ***Oral*** ■ 34 mg 1x per day	**Potential ADRs** ■ CNS depression ■ Orthostatic hypotension (falls) ■ QTc prolongation	$$$

APPENDIX continued

APPENDIX E continued

Agent (Brand Name)	Indications and Dosage	Adverse Drug Reactions	Cost
Quetiapine (Seroquel®)	**MDD (in combination with anti-depressants)** ***Oral*** ■ ER – 50 mg/day ■ May increase by 50 mg 1x/day to an effective dose (max 300 mg/day) **Agitation associated with dementia (off label)** ■ 25–75 mg/day in 1 dose or 2 divided doses ■ Increase gradually based on response and tolerability ■ If no response in 4 weeks, begin taper to discontinuation **Agitation associated with delirium (off label)** ***Oral*** ■ 50 mg 2x/day ■ May increase as necessary **Psychosis in Parkinson's disease (off label)** Oral ■ 25 mg/day in 1 dose or 2 divided doses ■ Increase gradually based on response and tolerability	**Highest risk for CNS depression compared with other antipsychotics** **Other potential ADRs** ■ Anticholinergic effects ■ Blood dyscrasias ■ Extrapyramidal symptoms ■ Hyperglycemia ■ Hyperlipidemia ■ Altered cardiac conduction, QTc prolongation ■ Hyperprolactinemia ■ Hypothyroidism ■ Neuroleptic malignant syndrome ■ Orthostatic hypotension (falls) ■ Weight gain	IR $ ER $$

APPENDIX continued

APPENDIX E continued

Agent (Brand Name)	Indications and Dosage	Adverse Drug Reactions	Cost
Risperidone (Risperdal®)	**Major depressive disorder (in combination with antidepressants) (off label)** ***Oral*** ■ 0.25 – 0.5 mg/day ■ Increase based on response and tolerability (max 3 mg/day) **Agitation associated with delirium (off label)** ***Oral*** ■ 0.25 mg 2x/day ■ Increase based on response and tolerability (max 4 mg/ day; doses >4 mg/day rarely more effective)	**Highest risk for extrapyramidal symptoms and hyperprolactinemia compared with other antipsychotics** **Other potential ADRs** ■ Altered cardiac conduction, QTc prolongation ■ Anticholinergic effects ■ Blood dyscrasias ■ CNS depression ■ Dyslipidemia ■ Hyperglycemia ■ Neuroleptic malignant syndrome ■ Orthostatic hypotension (falls) ■ Weight gain	$
Ziprasidone (Geodon®)	**Major depressive disorder (in combination with antidepressants)** ***Oral*** ■ 20 mg 2x/day ■ May increase dose by 20 mg 2x/day at weekly increments based on response and tolerability (max 80 mg 2x/day) **Psychosis in Parkinson's disease (off-label)** ***Oral*** ■ 20–40 mg/day in 1 dose or 2 divided doses ■ Increase daily dose in 20–40 mg increments every 2–7 days (max 160 mg/day) ■ If no response in 4 weeks, begin taper to discontinuation	**Highest risk for QTc prolongation compared with other antipsychotics** **Other potential ADRs:** ■ Blood dyscrasias ■ DRESS ■ Dyslipidemia ■ Extrapyramidal symptoms ■ Hyperglycemia ■ Hyperprolactinemia ■ Neuroleptic malignant syndrome ■ Orthostatic hypotension (falls) ■ Weight gain	$$

ADR, adverse drug reaction; CNS, central nervous system; DRESS, drug rash with eosinophilia and systemic symptoms; ER, extended release; IR, immediate release; MDD, major depressive disorder

1. Wilson MP, Pepper D, Currier GW, Holloman GH Jr, Feifel D. The psychopharmacology of agitation: consensus statement of the American Association for Emergency Psychiatry Project BETA Psychopharmacology Workgroup. West J Emerg Med. 2012;13(1):26-34. doi:10.5811/westjem.2011.9.6866

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