C H A P T E R

31

Cognitive Disorders
Anita Amelia Thompson Heisterman

key terms
agnosia
aphasia
apraxia
cognitive mental disorders
confabulation
delirium
dementia
sundowning

learning objectives
On completion of this chapter, you should be able to accomplish the following:
1. Define the term cognitive mental disorder.
2. Discuss the incidence and significance of cognitive disorders.
3. Identify clinical features or behaviors associated with cognitive disorders.
4. Compare possible etiologies of various cognitive disorders, especially Alzheimer’s disease.
5. Explain the continuum of care and interdisciplinary treatment/management for clients and families dealing with cognitive disorders.
6. Discuss common interventions for cognitive disorders.
7. Apply the steps of the nursing process to care for clients with cognitive disorders.
Cognitive mental disorders are characterized by a disruption of or deficit in cognitive function, which encompasses orientation, attention, memory, vocabulary, calculation ability, and abstract thinking (see Chap. 10). Specific categories delineated by the American Psychiatric Association (APA, 2000) include the following:

1. Delirium, dementia, and amnestic and other cognitive disorders
2. Mental disorders resulting from a general medical condition (see Chap. 39)
3. Substance-related disorders (see Chap. 30)

This chapter focuses on delirium and dementia. Amnestic disorders are covered briefly, in line with their classification in the Diagnostic and Statistical Manual of Mental Disorders, 4th ed., text revision (DSM-IV-TR).

**ETIOLOGIC AND DIAGNOSTIC CHALLENGES OF COGNITIVE DISORDERS**

**Delirium** usually results from an acute disruption in the homeostasis of the brain. Once the cause of disruption is eliminated or subsides, related cognitive deficits generally resolve in a few days to weeks. In contrast, **dementia** results from primary brain pathology that usually is irreversible, chronic, and progressive. Prognosis with dementia depends on whether a cause can be identified and reversed. For example, prompt oxygen treatment for dementia stemming from hypoxia can prevent further damage. A comparison of the characteristics of delirium versus dementia is shown in Table 31.1.

With most cognitive disorders, the brain is temporarily or permanently compromised. Usual consequences include disturbed perceptions, delusions, paranoia, and aggressive and disruptive behaviors. Clients may sense that their thinking is impaired and become frustrated, anxious, frightened, and distraught. High emotion may compound an already disordered state.

Most cognitive disturbances belong to one of the following categories:

- Primary brain disease
- Response of the brain to systemic (e.g., metabolic, cardiovascular) disturbance
- Unique reaction of brain tissue to an exogenous substance
- Residual effects of or withdrawal from an exogenous substance (APA, 2000)

Many illnesses and medications can impair cognition. Any physical illness may present initially with neurologic

### Table 31.1: Delirium Versus Dementia

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Delirium</th>
<th>Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
<td>Rapid development</td>
<td>Gradual and insidious development</td>
</tr>
<tr>
<td>Duration</td>
<td>Brief duration of 1 month or less, depending on cause</td>
<td>Long, with progressive deterioration</td>
</tr>
<tr>
<td>Course</td>
<td>Diurnal alterations, more nocturnal exacerbations</td>
<td>Stable progression of symptomatology</td>
</tr>
<tr>
<td>Thinking and short-term memory</td>
<td>Disorganized and impaired</td>
<td>Short-term and long-term memory impairments, with eventual complete loss</td>
</tr>
<tr>
<td>Orientation</td>
<td>Markedly decreased, especially to environmental cues</td>
<td>Progressively decreases</td>
</tr>
<tr>
<td>Language</td>
<td>Rambling, pressured, irrelevant</td>
<td>Difficulty recalling the correct word; later may lose language</td>
</tr>
<tr>
<td>Perceptual disturbance</td>
<td>Environment unclear, progressing to illusions, hallucinations, and delusions</td>
<td>Often absent but can progress to paranoia, delusions, hallucinations, and illusions</td>
</tr>
<tr>
<td>Level of consciousness</td>
<td>Cloudiness that fluctuates; inattentiveness to hyperalert with distractibility</td>
<td>Not affected</td>
</tr>
<tr>
<td>Sleep</td>
<td>Day–night reversal, insomnia, vivid dreams and nightmares</td>
<td>May develop day-night reverse in later stages</td>
</tr>
<tr>
<td>Psychomotor actions</td>
<td>Sluggish to hyperactive; change of range unpredictable</td>
<td>Not affected initially, late in illness, restlessness with pacing</td>
</tr>
<tr>
<td>Emotional status</td>
<td>Anxious with changes in sleep; fearful if experiencing hallucinations; weeping; yelling</td>
<td>Depression/anxiety when insight into condition is present; late in pathology, anger with outbursts</td>
</tr>
</tbody>
</table>
situations, behavioral manifestations, or both. Thus, cognitive disorders may be difficult to diagnose and involve multiple visits to several practitioners, extensive laboratory and diagnostic tests, and many examinations over an extended period. Such intensive care usually is necessary to establish what is causing or contributing to the cognitive decline so that healthcare providers can initiate appropriate treatment or management. Failure to treat a reversible condition may cause further damage, functional decline, or death.

Another complication is that multiple factors may underlie the clinical presentation of a cognitive disorder. For example, the same client may have Alzheimer’s disease (dementia) and acute intoxication from overmedication (delirium). Or a client with the chronic problem of vascular dementia may experience delirium while hospitalized with pneumonia. Dementia itself is a risk factor for delirium. Thus, connecting the correct etiology and symptoms can challenge the most capable clinicians. As a practice standard, any change from the client’s baseline functioning is a clue to investigate causes beyond the primary diagnosis.

**DELIURUM**

**Delirium** is characterized by rapid onset of cognitive dysfunction and disrupted consciousness. It also is referred to as intensive care unit psychosis, acute brain syndrome, acute confusion, and acute toxic psychosis.

**Incidence and Prevalence**

Growing rates of delirium mirror the increasing older adult population and are expected to continue to rise. Delirium is the most common psychiatric syndrome in general hospitals, occurring in as many as 50% of elderly inpatients. It is associated with significantly increased morbidity and mortality both during and after hospitalization (Balas et al., 2007; McAvay et al., 2006; Rigney, 2006). Approximately 30% to 40% of clients older than 65 years experience delirium while hospitalized for a medical condition; another 10% to 15% have delirium on admission (Sadock & Sadock, 2007). The prevalence of repeated episodes of acute confusion in nursing homes for those older than 75 years is 60%; more than 80% of clients with terminal illnesses experience delirium-related cognitive impairment (Sadock & Sadock, 2007).

Delirium related to surgery is common among all age groups. Estimates are that 30% of clients in surgical intensive care units, 40% to 50% of clients recovering from hip surgery, and more than 50% of postcardiotomy clients experience delirium (Sadock & Sadock, 2007).

**Etiology**

Any process, disorder, or agent that disrupts integrity of the central nervous system (CNS) and diffusely impairs its cellular functioning can induce delirium (Box 31.1). Researchers have postulated numerous risk factors: aging, postoperative status, metabolic disorders, drug withdrawal, and toxicity secondary to drugs or other exogenous substances.

Older adults are at significant risk for delirium, particularly those with pre-existing cognitive impairment and postoperative clients. With aging, the neurologic system becomes more vulnerable to insults caused by underlying systemic conditions. Indeed, delirium often predicts or accompanies physical illness in older adults (Cole, 2004). This population also is at risk because of the number of medications (over-the-counter and prescription) many of them use (Figure 31.1). Medications, particularly those that exert effects on the CNS, are frequent causes of delirium (Gurwitz et al., 2003).

Any disturbance in any organ or system can disrupt overall metabolism and neurotransmission, leading to cognitive decline. Infections and fluid and electrolyte imbalances are common examples. Not surprisingly, medications are the primary exogenous offenders, especially in older adults. Often, an interplay of several factors leads to delirium (Foreman et al., 2003).

**Signs and Symptoms/Diagnostic Criteria**

Clinical pictures of delirium vary. Nevertheless, the three salient features that comprise the main diagnostic criteria are (1) disordered cognition, (2) attention deficit, and (3) disturbed consciousness (DSM-IV-TR Box 31.1).

In delirium, cognition becomes disorganized. Clients appear confused and cannot reason, handle complex tasks, or problem-solve. Associated speech may be pressured, rambling, bizarre, incoherent, or nearly absent. Impaired orientation and spatial ability may cause clients to confuse reality with imagery and dreams. Suspiciousness and persecutory delusions are common (Sadock & Sadock, 2007).

Clients may experience disturbed perceptions. Hallucinations usually are graphic and can induce anxiety verging on panic. Agitated clients can become combative to elude perceived threats. Mood alterations can lead to great lability, from irritability and dysphoria to euphoria (Sadock & Sadock, 2007).

Memory, particularly short-term, becomes impaired. Another feature is an inability to focus or shift attention. Clients may have trouble attending to environmental stimuli. Attention problems usually are more pronounced at night. Clients may be disoriented to time, place, and person (Sadock & Sadock, 2007). In severe cases, they mistake the unfamiliar for the familiar. For example, they may identify and subsequently call healthcare providers by the names of siblings, spouses, or children.

Additional features of delirium include reduced consciousness, disrupted sleep–wake cycles, and abnormal psycho-motor behaviors. Clients may fluctuate between alertness and somnolence. They may be drowsy during the day and nap sporadically at night, becoming extremely agitated on awakening.

**Checkpoint Questions**

1. How does delirium differ from dementia?
2. What is a frequent cause of delirium in older adults?
Psychomotor activity may range from hypoalert and hypoactive (typical of metabolic dysfunction) to hyperalert and hyperactive (common with drug withdrawal), to any combination. Hypoalert, hypoactive clients show minimal activity, appear stuporous, and are slow to respond. Others may mistakenly perceive them to have depression, missing the signs of delirium (Fick et al., 2007). Hyperalert, hyperactive clients are animated to the point of agitation and frequently have loud and pressured speech. They may remove intravenous (IV) lines and other tubes, “pick” at the air or sheets, or try (often successfully) to climb over side rails or the ends of beds. In addition, they often exhibit the classic, autonomic responses of dilated pupils, elevated pulse, and diaphoresis. See Case Vignette 31.1.

Implications and Prognosis
Delirium indicates an underlying medical problem and should be considered an urgent condition. Prognosis for recovery is good if the cause is recognized and managed promptly. With early identification and treatment, delirium usually lasts 3 to 5 days but may continue (rarely) for as long as 3 weeks. Failure to reverse the underlying cause may result in irreversible brain damage or death.

(Sadock & Sadock, 2007).
Delirium Due to a General Medical Condition
- The client has disturbed consciousness (reduced environmental awareness) and decreased capacity to focus, sustain, or shift attention.
- Cognition changes (e.g., memory deficit, disorientation, language disturbance) or perceptual disturbances are not better explained by a pre-existing, established, or evolving dementia.
- The change or disturbance develops quickly (usually hours to days) and tends to fluctuate.
- Evidence from the history, physical examination, or laboratory tests supports that the disturbance is caused by a general medical condition.

Substance-withdrawal Delirium
- Consciousness is disturbed; ability to focus, sustain, or shift attention is reduced.
- Cognition changes or perceptual disturbances are not better explained by a pre-existing, established, or evolving dementia.
- The disturbance develops quickly (usually hours to days) and tends to fluctuate.
- Evidence from the history, physical examination, or laboratory tests supports that symptoms developed during or shortly after a withdrawal syndrome.

Substance-intoxication Delirium
- Consciousness is disturbed, and ability to focus, sustain, or shift attention is reduced.
- Cognition changes or perceptual disturbances are not better explained by a pre-existing, established, or evolving dementia.
- The disturbance develops quickly (usually hours to days) and tends to fluctuate.
- Evidence from the history, physical examination, or laboratory tests supports either (1) symptoms developed during substance intoxication or (2) medication use is related to the disturbance.

Delirium Due to Multiple Etiologies
- Consciousness is disturbed, and ability to focus, sustain, or shift attention is reduced.
- Cognition changes or perceptual disturbances are not better explained by a pre-existing, established, or evolving dementia.
- The disturbance develops quickly (usually hours to days) and tends to fluctuate.
- Evidence from the history, physical examination, or laboratory tests supports more than one etiology (e.g., a medical condition and substance intoxication).

Delirium Not Otherwise Specified
The client’s delirium does not meet criteria for any specific type of delirium. For example, clinical presentation is suspected to result from a medical condition or substance, but evidence to establish a specific etiology is insufficient.

Case Vignette 31.1

Meredith, 75 years old and frail, is admitted to the hospital with a hip fracture. She undergoes surgery on a general unit to repair the hip. Postoperatively, she initially appears alert and oriented, although she is in pain. She is receiving intravenous fluids and has an indwelling urinary catheter, both of which are to be discontinued in the morning.

The evening of the first postoperative day, Meredith tells the nurse that bugs are on the walls and that she wants to leave “this place.” Upon further questioning, Meredith becomes mildly agitated and tells the nurse to “get out!” The nurse notifies the physician of the change in Meredith’s mental status.

The physician orders computed tomography (CT) scanning to rule out a possible brain injury sustained in the initial fall. He also orders chest radiography and a urine culture. Results of the CT scan and chest radiography are normal; however, the urine culture reveals a urinary tract infection. The physician prescribes antibiotics to treat it and haloperidol, as needed, for the agitation.

Reflection and Critical Thinking
- What risk factors did Meredith have for experiencing delirium?
- How is Meredith’s experience consistent with the etiology and clinical features of delirium? Could anything have been done to prevent this episode?
Interdisciplinary Goals and Treatment
Interdisciplinary goals are to identify clients at risk for delirium, recognize early signs, and quickly institute measures to correct underlying causes. In addition to early diagnosis and prompt treatment, therapeutic goals include managing acute confusion to maximize cognitive function, avoid injury, and prevent further decline.

Medical Interventions
Medical interventions focus on the underlying cause and thus vary. In cases of hypoperfusion or cerebral hypoxia, supplemental oxygen may significantly improve delirious symptoms. Similarly, withdrawing medications or giving antibiotics for infections may lead to improvement.

Environmental Interventions
Team members must avoid use of physical and chemical restraints as much as possible. When these measures are absolutely necessary, they require utmost caution. The impetus for chemical or physical restraint clearly must be to protect clients from harm. Indeed, any type of restraint is a risk factor for, and may compound, delirium.

The team structures the environment to ensure safety as well as to maximize cognitive abilities and psychological comfort for clients. A fine balance exists between overstimulation and understimulation. Tailoring the environment to enhance the client’s cognitive capability is essential. Providing a private room is beneficial, so that staff can minimize noxious and confusing environmental stimuli and maximize the services of supportive family or staff who can continually remain with clients. However, the healthcare team cannot completely extinguish stimuli. Doing so may cause clients to withdraw and focus internally. Television often inundates clients with confusing sensory input, whereas soft music provides appropriate stimulation. Adequate lighting during the day and evening promotes realistic environmental perceptions. Clients should use any sensory aids (eg, glasses, hearing aids) that they normally require.

Client safety during episodes of delirium must not be compromised. Staff must be alerted if clients are at risk for wandering or leaving the premises. The propensity of clients with delirium to pull tubes, climb over side rails, or fall may require staff to institute one-on-one observation or encourage relatives to stay with clients at all times (Figure 31.2). Consistency from staff in terms of assignments and unhurried, daily routines is helpful, as are continuous visits by loved ones. Encouraging relatives to bring familiar objects from home (eg, personal effects, photographs) can increase the comfort level of clients with their current environment.

Cognitive and Psychosocial Interventions
Staff members can try to direct activity and cognitive focus by reorienting clients to the environment with calendars, clocks, and seasonal decorations. Ongoing interactions with clients are important. Therapeutic communication about the day’s activities, repetition of explanations for the hospitalization, and reassurance that any hallucinations and delusions are part of the transient condition of delirium are helpful to clients.
causes can prevent deleterious effects, as well as the progression and ramifications of acute confusion.

All clients should undergo a baseline neurologic examination at the onset of care for any illness. Clients at increased risk for delirium (eg, older adults, those with head injury) should have mental status examinations (MSEs) routinely throughout treatment (see Chap. 10). Nurses should evaluate for delirium in clients who show subtle or overt changes from baseline in mental status, orientation, or level of consciousness.

Use of systematic assessment and screening tools can enhance detection and management. The Delirium Observation Screening Scale (DOS) is a useful 25-item tool based on DSM-IV-TR criteria (Schuurmans et al., 2003). The Registered Nurses Association of Ontario (RNAO, 2003) has recommended the widely used Confusion Assessment Method (CAM) in its practice guidelines. The CAM focuses on (1) acute onset and fluctuating course of the condition, (2) inattention, (3) disorganized thinking, and (4) altered level of consciousness. Both the DOS and the CAM are specific to delirium. The Folstein Mini-Mental State Examination (MMSE) is excellent for evaluating cognitive function; however, it does not differentiate delirium from dementia. It includes questions that test orientation, attention span, recall, and ability to execute simple instructions. The MMSE also can be used in conjunction with the DOS or CAM to test the client’s improvement or deterioration (ASSESSMENT TOOL 31.1). Once delirium is diagnosed and as treatment progresses, ongoing assessment of mental status is necessary to monitor the client’s recovery.

In addition to experiencing cognitive changes, disoriented clients are likely to be anxious and emotionally distraught. Nurses assess for any changes in anxiety level. If anxiety escalates to overt agitation, clients can become dangerous to self and others. Carefully assessing anxiety and watching for signs of agitation (eg, increased motor activity, labile mood, combativeness) can alert staff to the need for interventions that increase psychological comfort and decrease the potential for danger.

Nurses also monitor the client’s ability to perform daily self-care. Confused clients may be too distracted to eat or drink adequately; they may be inattentive to hygiene. Ongoing assessment of functional ability is necessary for their comfort and physical well-being.

### Nursing Diagnosis

Nursing diagnoses common to clients with delirium include the following (NANDA-I, 2007):

- **Acute Confusion** related to delirium of known or unknown etiology
- **Risk for Injury** related to confusion and cognitive deficits
- **Bathing/Hygiene, Toileting, Feeding, and Dressing/Grooming Self-Care Deficit** related to cognitive impairment
- **Deficient Knowledge** of family related to client diagnosis, progression, and prognosis

### Outcome Identification and Planning

Planning is a collaborative effort of the entire treatment team in conjunction with family and clients (as able). Nurses must deliberately design the plan of care to meet each client’s unique needs. General goals of care for clients with delirium, linked to the Nursing Outcomes Classification (NOC), are as follows (Moorhead et al., 2008):

- **Risk Control**: The client will remain physically safe.
- **Self-Care: Activities of Daily Living**: The client’s basic needs will be met until self-care ability resumes.
- **Cognitive Orientation**: The client will return to baseline cognitive functioning.

---

**Think About It 31.1**

James Serby brings his 75-year-old wife, Helen, to the clinic. She has a history of Parkinson’s disease and diabetes. Mr. Serby states that his wife hasn’t seemed herself for the last few days. She is lethargic during the day and sometimes seems confused. He states her blood glucose levels have been elevated and that she frequently has been incontinent of urine. The nurse evaluates Mrs. Serby’s mental status. The client is not sure of the day or year and has trouble with short-term memory. Is the client experiencing delirium or dementia? Provide support for your conclusion. Explain what Mrs. Serby’s priority need is and why.

**ASSESSMENT TOOL 31.1**

Sample Mini-Mental Status Examination Questions

- What is the year?
- What is today’s date?
- In what city (town) are we?
- Spell “globe” backward.
- Repeat the following statement: “A rolling stone gathers no moss.”
- Write a sentence of your own choice. (Nurse evaluates whether sentence has a subject, predicate [verb], and object.)

Managing Symptoms of Delirium
Primary nursing interventions for delirium involve addressing the underlying cause and preventing further decline. Safety, hydration, nutrition, comfort, and pain management are core elements of care (Foreman et al., 2003). Simple physical and psychological comfort measures such as warmth, companionship, fluid provision, and reassurance are elemental (FIGURE 31.3).

Pain, too many stimuli, abrupt changes in routine, poor sleep, and insensitivity from others easily can worsen confusion and agitation. Nurses perform many activities to help promote a therapeutic milieu for those with acute confusion. In fact, environmental management is one of the most influential interventions for this condition. Confused clients are calmer when nurses eliminate stimuli that invite misinterpretation, such as abstract pictures or excessive noise. Conversely, cues such as clocks, recognizable photos, and calendars help restore orientation to time and place. One caveat is to avoid an understimulating environment, which also can be detrimental. The key is to remove difficult-to-interpret cues and replace them with simple, easy-to-recognize ones.

Confused clients also benefit from consistent routines implemented by familiar staff or family. Even though clients may be disoriented, they often recognize and are reassured by the presence of supportive relatives. Staff and family should reinforce the predictability of routines by telling clients what they are doing, what to expect, the time of day, and other relevant data as they proceed with activities. Consistency is stabilizing for these clients.

Directed activity may be helpful. Agitated clients may benefit from psychomotor tasks that distract them from anxiety. Bags with familiar items to “pack” and “unpack,” Velcro to fasten and unfasten, and zippers to open and close provide sensory stimulation at a level adjusted to the client’s compromised function. However, because inability to focus and attend to tasks is a hallmark of delirium, not all clients can or should participate in such activity.

Nurses approach clients calmly and empathetically, calling them by name and introducing themselves to facilitate attention and correct interpretation. They also are careful not to approach clients from behind, which allows minimal time to make adjustments. So that clients do not become frustrated, nurses avoid frequently quizzing them about orientation or posing questions that require decision making or abstract thinking. Instead, family and staff communicate in simple, direct sentences and focus on what is meaningful to clients.

Because clouded consciousness waxes and wanes, nurses never should assume that clients do not need or will not understand explanations. Recognizing their fears is helpful. Nurses may respond to fear with “It must be difficult to be so frightened, but I want you to know that I will not go far and I will do what needs to be done to keep you safe.” Nurses must accept the sometimes bizarre behavior of clients with delirium and not demean or correct them for actions that they cannot control (CHALLENGING BEHAVIORS 31.1).

Occasionally, clients become so agitated that they need medication. Staff members must seriously consider this option when a client’s behavior threatens the safety of self, family, or staff. Haloperidol (Haldol), a neuroleptic given either orally or by injection, is most commonly used for symptoms of delirium. It has minimal anticholinergic effects and does not cause the serious cardiovascular and respiratory side effects found with some other classes of antipsychotics. Extrapyramidal side effects are possible (Lacasse et al., 2006). Haloperidol is inexpensive and can be given orally in concentrated form at 1 to 2 mg every 2 to 4 hours. Older adults should receive 0.25 to 0.5 mg every 4 hours.

Atypical antipsychotics, including quetiapine (Seroquel), risperidone (Risperdal), olanzapine (Zyprexa), aripiprazole (Abilify), and ziprasidone (Geodon), occasionally are used to treat agitation related to cognitive disorders. Olanzapine, risperidone, and ziprasidone are available as intramuscular injections. Although considered first-line treatments for agitation related to dementia, they have not yet been adequately and systematically studied to support short-term use over haloperidol for acute agitation in delirium (Alexopoulos et al., 2004). In fact, all antipsychotics, including Haldol, have warnings from the U.S. Food and Drug Administration (FDA) regarding potential cardiac events in older adults from pro-
Challenging Behaviors 31.1
The Client Who Has Acute Confusion

**Situation:** Your assigned client has just arrived in the emergency department (ED). She is an 81-year-old woman who is emaciated, dirty, disheveled, and odiferous. She is yelling “Help me. Help me.” At other times, she is difficult to arouse. She picks at her clothing and is attempting to get off the stretcher.

**Your Potential Feelings:** Anxiety, concern, repugnance

**What Is Going On?** The client is delirious from an unknown etiology. She cannot focus her attention, and her consciousness waxes and wanes. The top three culprits that cause delirium are medications, infections, and metabolic disturbances.

longation of the Q-T interval. Expert consensus guidelines recommend tapering use of antipsychotics over 1 week once delirium has been stabilized (Alexopoulos et al., 2004).

For clients with hepatic dysfunction, lorazepam (Ativan) orally, intramuscularly, or intravenously may be used in doses from 0.5 to 2 mg. Lorazepam can affect respiratory and cardiac function; thus, nurses must monitor clients taking it. In some instances, lorazepam increases agitation and must be discontinued. Its use is most appropriate during alcohol withdrawal and for short-term treatment of anxiety (Alexopoulos et al., 2005).

**Providing a Safe Environment**
Because clients with clouded cognition are likely to misinterpret environmental clues, they are vulnerable to harm. Many also behave unsafely, such as pulling out tubes or wandering from units. Making the environment safe helps prevent harm that might result from confusion. Nurses place personal and familiar items (eg, call light, water pitcher, eyeglasses) close at hand so that clients are not injured while attempting to get them. Clients with delirium have sustained significant injuries by wandering into traffic, falling down stairs, or getting lost. Alerting staff and family to the possibility that clients may escape or wander and arranging for continuous observation if necessary helps prevent accidents.

Many clients with delirium, especially older adults, are injured climbing over raised bed rails. Beds should remain in the lowest position with rails down unless policy demands otherwise. Regular toileting may help prevent clients from attempting to get out of bed alone. Lighting needs to be bright enough so clients can see accurately. This is especially important at night and significant for older adults who need brighter light to see at all.

Nurses should not use restraints. Physical limitation may cause clients to become agitated and fearful, which increases stress and risk for injury. If restraints are the only option, nurses should identify the reason for use and find alternatives, such as providing the presence of loved ones, consistent caregivers, and attention to sleep, nutrition, toileting, and pain (O’Connell & Mion, 2003; Park et al., 2005). Because foreseeing all potential environmental dangers is impossible, nurses frequently check on these clients. At times, even this level of care is insufficient. Nurses may ask relatives to stay with loved ones, especially at night or during more agitated periods.

**Assisting With Personal Care**
The distractibility and cognitive disorganization of clients with delirium may seriously hamper their ability to maintain ADLs. Potential consequences include poor nutrition and hydration, discomfort from wet clothing, skin breakdown, and immobility. Nurses must support the efforts of clients to carry out whatever activities of daily living (ADLs) they can, as well as assume responsibility for those necessary activities that clients cannot manage. Establishing a routine to carry out activities also is helpful to confused clients. This routine should include regular toileting, offering fluids and food, and providing an opportunity for passive or active exercise (Figure 31.4).

**Providing Client and Family Education**
Clients who realize that their thinking is disordered may be frightened. Nurses must explain the nature of delirium. Clients and families need to realize that associated confusion and abnormal behavior have a biologic basis and are transient. Explaining the process, progress, and prognosis of delirium should alleviate some anxiety and apprehension. The team must continually update family as to the state of the underlying problem and the progress being made to resolve it. Relatives need to become partners with the team in planning care and implementing some interventions, such as reorientation.
Incidence and Prevalence
The U.S. National Institute of Neurological Disorders (National Institute of Neurological Disorders and Stroke [NINDS], 2007) reports that at least 6.8 million people have chronic cognitive impairment related to dementia; in some communities 50% of those 85 years or older have dementia. Given that those older than 85 years are the fastest-growing segment of older adults and that the large cohort born after World War II is now entering its seventh decade, incidence and prevalence of dementia are likely to increase. See HEALTHY PEOPLE 2010 31.1 for national objectives related to dementia and other cognitive disorders.

Signs and Symptoms/Diagnostic Criteria
The clinical presentations of disorders within the subcategory of dementia do not differ significantly. All are characterized by ongoing multiple cognitive deficits, memory impairment severe enough to compromise social or occupational function, and decline from previous functioning (APA, 2000). The distinctiveness of the disorders arises from their differing origins (DSM-IV-TR Box 31.2).

EVALUATION
As stated previously, signs and symptoms of delirium may fluctuate each day. A perspective on how well clients are recovering may evolve over several days. Because clients have varying baseline cognitive function, nurses evaluate each person’s progress according to previous level. Indicators of resolving confusion include the following:

- Improved score on the chosen assessment scale (CAM, DOS, or MMSE)
- Improved ability to communicate
- Increased ability to focus attention
- Increased ability to make decisions
- Reduced delusional behavior
- Improved ability to care for self
- Decreased anxiety and agitation

Check your answers online for immediate feedback.

Checkpoint Questions
5. What medication is used most commonly to treat the symptoms of delirium?
6. Why should restraints be avoided as much as possible in clients with delirium?

DEMENTIA
Dementia is the term used for a syndrome characterized by several cognitive deficits that result from a general medical condition, use of a substance, or multiple biologic etiologies. Although there are several types, all forms of dementia affect memory and cognition.

HEALTHY PEOPLE 2010 31.1
Objectives Related to Cognitive Disorders
1-1. Increase the proportion of persons with health insurance.
1-4. Increase the proportion of persons who have a specific source of ongoing care.
1-6. Reduce the proportion of families that experience difficulties or delays in obtaining healthcare or do not receive needed care for one or more family members.
1-15. Increase the proportion of persons with long-term care needs who have access to the continuum of long-term care services.
17-3. Increase the proportion of primary care providers, pharmacists, and other healthcare professionals who routinely review with their patients aged 65 years and older and patients with chronic illnesses or disabilities all new prescribed and over-the-counter medicines.
18-6. Increase the number of persons seen in primary healthcare who receive mental health screening and assessment.
18-14. Increase the number of states, territories, and the District of Columbia with an operational mental health plan that addresses mental health crisis interventions, ongoing screening, and treatment services for elderly persons.

Impaired Reasoning
Dementia affects reasoning. Clients no longer seem able to respond to everyday problems at work or home. Ultimately, their thought processes degenerate so much that they show significant deficits in abstract thinking. They cannot cognitively adapt to new situations. This impairment severely limits their competence to adjust to the dynamics of life (APA, 2000). For example, if the bathroom at home floods, a client with dementia may be in a quandary about how to respond. Clients also may begin to exhibit uncharacteristic disregard for social conduct. For example, they may disrobe in public, exhibit inappropriate sexual behavior, suddenly use profanity, and strike out at others when frustrated. Families find such changes alarming and distressing.

Compromised Spatial Ability and Orientation
Because their ability to process sensory information diminishes, clients gradually begin to experience confusion, which...
affects attentiveness to the environment. As consciousness decreases, clients cannot concentrate, their attention span progressively declines, and they become distractible. They also may become disoriented. Eventually, they can no longer recognize or identify familiar objects (eg, parts of a telephone), a condition called agnosia. When sensory input falls below certain minimum requirements and when the brain is affected structurally so that it no longer perceives and interprets stimuli adequately, orientation decreases.

Disorientation and problems with spatial ability can make driving a point of contention. Relatives often recognize that affected clients are no longer safe drivers. Clients who continue driving may do so aimlessly for hours, unable to find their way home. Nevertheless, they usually have little insight into this declining ability.

Clients with dementia seem unable to organize items around the house. They get lost and cannot find their way around their neighborhood or home. They do not know where they are, how they came to be there, why they are there, or how they fit into the milieu. One man with early-stage dementia described his experience as having lost his “internal road map.” Getting lost in a familiar place is often the incident relatives identify as the onset of dementia in loved ones.

Language Deficits
Frequently, clients with dementia have difficulty finding the words they want to use (aphasia) in conversation (Figure 31.5). This problem can result in a frustrating process of “charades,” relying on others to guess the forgotten word (eg, referring to Thanksgiving as the time of the turkey or pumpkin). In addition, they may have difficulty following conversations.

Behavioral Problems
Behavior refers to individual responses to continual internal and external changes and to the brain’s physiologic soundness. When something interferes with or interrupts brain integrity, maladaptive behavior often follows. This behavior is not to be confused with that of delirium, even though aberrant behavior is a hallmark of both conditions.

No key behavioral characteristic occurs in every client with dementia, but most changes become more pronounced after sunset (a phenomenon known as sundowning). Clients may become more irritable and suspicious and misinterpret visual or auditory cues. Because of their diffuse cognitive impairment, they may experience illusions and hallucinations (see Chap. 29). Family members may report that loved ones have developed poor hygiene and become defensive or apathetic. Clients may find that they cannot perform motor tasks (eg, brushing the teeth, combing the hair) despite intact motor function, a condition known as apraxia (APA, 2000).

Types of Dementia
TABLE 31.2 compares the characteristics of the most common forms of dementia. Alzheimer’s disease is discussed in the most detail below because of its frequency and growing emergence as a national health problem.

Alzheimer’s Disease
Alzheimer’s disease (AD) is the most prevalent form of dementia. Approximately 4.5 million Americans have it, a number that has more than doubled since 1980 (Hebert et al., 2003). Incidence and prevalence directly correlate with increased age. The illness occurs in 10% of people 65 years or older and rises to nearly 50% of those 85 years or older. As the population continues to grow and age, the number of people with AD will likely reach 11 to 16 million by 2050 (Hebert et al., 2003).

The incidence of AD is higher in women than in men, which may be because women outlive men. According to the National Institute on Aging (NIA, 2007), approximately 10% of cases are familial and result from mutations on chromosomes 1, 14, and 21. Familial AD (FAD) always has an onset before 65 years.

ETIOLOGICAL FACTORS. Hallmark pathologic features of AD are neurofibrillary tangles and beta-amyloid plaques.
that destroys ACh) have shown efficacy in slowing AD (Birks et al., 2000; Birks & Harvey, 2006). Thus, neuronal destruction and resulting disruption of ACh transmission are involved in the elusive etiology of AD.

Extensive research continues to unravel the mysterious etiology of AD. Multiple and diverse studies are investigating the role of genetics, inflammation, oxidative stress, vascular in the brain on postmortem examination (Understanding Biologic Foundations 31.1). In fact, AD is definitively diagnosed according to these findings. The disease results in neuronal death and disrupted neurotransmission. Especially affected is acetylcholine (ACh), a critically important neurotransmitter for memory and cognition. Clinical studies with acetylcholinesterase inhibitors (drugs that inhibit the enzyme that destroys ACh) have shown efficacy in slowing AD (Birks et al., 2000; Birks & Harvey, 2006). Thus, neuronal destruction and resulting disruption of ACh transmission are involved in the elusive etiology of AD.

Extensive research continues to unravel the mysterious etiology of AD. Multiple and diverse studies are investigating the role of genetics, inflammation, oxidative stress, vascular

<table>
<thead>
<tr>
<th>Cognition</th>
<th>Level of Consciousness</th>
<th>Memory</th>
<th>Appearance</th>
<th>Emotions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer's disease</td>
<td>Global intellectual impairment</td>
<td>Insidious onset characterized initially by “mistakes in judgment,” progressing to inability to comprehend, agaphria, aphasia, and finally to unresponsiveness</td>
<td>Clouding late in disease; short-term memory loss initially progressing to both short-term and long-term loss</td>
<td>Progressive loss of grooming habits as a result of forgotten social behaviors and decreasing coordination required to dress</td>
</tr>
<tr>
<td>Pick’s disease</td>
<td>Intellect intact</td>
<td>Lack of insight into disease process</td>
<td>Not affected</td>
<td>Very poor hygiene</td>
</tr>
<tr>
<td>Huntington’s chorea</td>
<td>Insight into the psychological degenerative changes</td>
<td>Increasingly a problem as pathology progresses but without aphasia, agnosia, or apraxia</td>
<td>Choreiform movements</td>
<td>Disheveled</td>
</tr>
<tr>
<td>Wernicke-Korsakoff syndrome</td>
<td>Cannot learn new information because of an inability to retain facts</td>
<td>Alert Cannot learn new or recall previously learned material</td>
<td>Suspended in time Recall limits to 2–3 min Extensive memory loss</td>
<td>Unsteady gait from peripheral neuropathies</td>
</tr>
<tr>
<td>Vascular dementia</td>
<td>Not affected</td>
<td>Proceeds in a stepwise progression as mini-strokes occur</td>
<td>Does not handle new situations well</td>
<td>Deterioration of hygienic standards</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cognition</th>
<th>Level of Consciousness</th>
<th>Memory</th>
<th>Appearance</th>
<th>Emotions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer's disease</td>
<td>Global intellectual impairment</td>
<td>Insidious onset characterized initially by “mistakes in judgment,” progressing to inability to comprehend, agaphria, aphasia, and finally to unresponsiveness</td>
<td>Clouding late in disease; short-term memory loss initially progressing to both short-term and long-term loss</td>
<td>Progressive loss of grooming habits as a result of forgotten social behaviors and decreasing coordination required to dress</td>
</tr>
<tr>
<td>Pick’s disease</td>
<td>Intellect intact</td>
<td>Lack of insight into disease process</td>
<td>Not affected</td>
<td>Very poor hygiene</td>
</tr>
<tr>
<td>Huntington’s chorea</td>
<td>Insight into the psychological degenerative changes</td>
<td>Increasingly a problem as pathology progresses but without aphasia, agnosia, or apraxia</td>
<td>Choreiform movements</td>
<td>Disheveled</td>
</tr>
<tr>
<td>Wernicke-Korsakoff syndrome</td>
<td>Cannot learn new information because of an inability to retain facts</td>
<td>Alert Cannot learn new or recall previously learned material</td>
<td>Suspended in time Recall limits to 2–3 min Extensive memory loss</td>
<td>Unsteady gait from peripheral neuropathies</td>
</tr>
<tr>
<td>Vascular dementia</td>
<td>Not affected</td>
<td>Proceeds in a stepwise progression as mini-strokes occur</td>
<td>Does not handle new situations well</td>
<td>Deterioration of hygienic standards</td>
</tr>
</tbody>
</table>
Neurologic Alterations in Alzheimer’s Disease

**Neurofibrillary tangles.** The microscopic study image shows normal neurons versus the characteristic tangles of AD.

**Cortical atrophy.** Compare the normal brain on the left with the brain ravaged by AD on the right.

**Brain scans.** Dark bluish purple areas signify areas of lost brain activity. Compare the multi-colored normal brain scan on the left with the vast bluish regions found in the client with AD on the right.
changes, metabolism, beta-amyloid and tau proteins, lifestyles and education levels, hormones, and growth factors. The etiology of AD may be a combination of genetic vulnerability and exposure to environmental and psychosocial stressors. Research supported by the NIA has focused not only on etiology, but also on risk and protective factors and efforts to slow disease progression.

Ultimately, researchers may find that interacting etiologies are responsible for AD. Certainly, the course of the illness varies widely. A person may have biologic markers for AD but show no symptoms and function well (Snowdon, 2003). AD is considered to be clinically heterogeneous; that is, symptomatology varies during its average 8- to 10-year course. Various groups have attempted to stage the progressive functional decline of AD (Box 31.2). Doing so helps clients, family members, and healthcare providers to plan for the extensive management necessary for those with the illness.

**Genetics.** Researchers continue to investigate genetics in AD. The incidence of AD has been associated with Down syndrome (defect in chromosome 21); those with FAD have mutations on chromosomes 1, 14, and 21. Even those with nonfamilial or sporadic AD seem at increased risk if they carry the apolipoprotein E (apoE) gene on chromosome 19. This gene has three forms, and having an apoE4 gene from both parents seems to increase risk (NIA, 2007). Searching for clues to the formation of beta-amyloid plaques, investigators also are looking at other chromosomes.

**Oxidative Stress.** Oxidative stress is cellular damage caused by oxygen-free radicals. Some researchers believe that aging results from oxidative stress. They are attempting to determine if free radicals contribute to the tangles and plaques that lead to neuron death in AD. Results have been inconclusive; it is unclear whether oxidative stress precedes or results from the plaques and tangles (NIA, 2007). Although it has yet to be replicated, one study demonstrated some benefit of vitamin E, an antioxidant, in slowing the progression of AD (Tabet et al., 2000). Two animal studies found that antioxidants combined with behavioral enrichment enhanced cognition in dogs (Milgram et al., 2004, 2005). The practice guidelines of the Quality Standards Subcommittee of the American Academy of Neurology support the use of up to 1,000 IU of vitamin E twice a day (Doody et al., 2001). Many clinicians empirically prescribe 400 to 800 units of vitamin E with cholinesterase inhibitors to people diagnosed with dementia.

**Immunology.** Some studies showing abnormally high antibody titers in clients with AD raised the possibility of an immunologic etiology. Researchers thought that immunization could prevent beta-amyloid plaques, leading to a vaccine for AD. However, clinical trials were discontinued because of subsequent inflammation in the brains of some participants. Research continues with the discovery that passive immunization removed beta-amyloid from the brains of immunized mice (NIA, 2007). Similar investigations into the tau proteins that make up neurofibrillary tangles have revealed that a modified piece of tau given as a vaccine to mice helped eliminate tau from the brain (NIA, 2007). Investigators have found that specific forms of tau and beta amyloid must be present to create conditions leading to AD. Beta amyloid seems to trigger various changes that lead to tau alterations, causing an atmosphere that creates tangles that contribute to neuron death (NIMDS, 2007).

**Hormones.** Researchers have explored hormones, specifically estrogen, and nerve growth factors. Although initial animal studies suggested that hormone replacement therapy in postmenopausal women protected against cognitive decline, later evidence found that women taking combined estrogen and progesterin were at significantly increased risk for dementia (Schumaker et al., 2003). Investigation into nerve growth factors (proteins that regulate neuronal maturation, survival, and repair) led to the development of memantine (Galantamine), a drug that is beneficial for cognition and function in moderate to severe AD (McShane et al., 2006).

**Inflammation.** Vascular disease and AD share risk factors, so investigators continue to study the relationship between...
neuron death from stroke and from AD (NIA, 2007; NINDS, 2007). Studies by the NIA (2007) found that the inflammatory response following stroke led to rapid formation of beta-amyloid. With a possible relationship between inflammation and AD, some researchers believe that anti-inflammatory medications (eg, ibuprofen, aspirin) may help prevent AD. Although studies have not clearly supported this notion (Tabet & Feldman, 2003) and guidelines do not support nonsteroidal anti-inflammatory drugs (NSAIDs) as treatment (Doody et al., 2001), some clinicians empirically prescribe them for clients with AD and no evidence of vascular dementia. Researchers are studying other medications used for cardiovascular treatment as preventive drugs against AD (NINDS, 2007). Reports from the longitudinal Honolulu Asia Aging Study indicate increased formation of plaques and tangles in the brains of those with high cholesterol levels. Reducing cholesterol levels with statins has been shown to prevent pathogenesis associated with AD (Scott & Laake, 2001).

PREVENTIVE FACTORS. Research has not been limited to biologic etiologies. Incidence of AD is higher among people living in industrialized areas and from lower socioeconomic groups (NIA, 2007). Many factors could account for these findings, including environmental toxins, diet, lifestyle, and stress. Several large epidemiological studies and research initiatives (Abbott et al., 2004; Larson et al., 2006; Podewils et al., 2005; Weuve et al., 2004) have shown a lower incidence of cognitive decline in people who regularly exercise. Researchers also are investigating the roles of leisure, education, and cognitive stimulation. Frequent participation in cognitively stimulating activities may be associated with decreased incidence of AD (Snowdon, 2003) (FIGURE 31.6). Similarly, a high level of education may be a protective factor. Although education may stimulate neuronal connections, the finding also could result from the degree of exposure to risk factors associated with socioeconomic status. The herb ginkgo biloba has many promising properties, including increasing blood supply, reducing blood viscosity, modifying neurotransmitters, and reducing the density of oxygen-free radicals (see Chap. 17). Its efficacy in improving memory is inconclusive and requires further research (Birks & Grimley-Evans, 2007).

Vascular Dementia

The second most common form of dementia is vascular dementia. Although its overall incidence is considerably less than that of AD, some researchers allege that it is the most common dementia in men and in those older than 85 years. Risk factors for vascular dementia parallel those for stroke: hypertension, smoking, hyperlipidemia, atrial fibrillation, and diabetes. Computed tomography scanning and magnetic resonance imaging (MRI) often verify the brain disease in this particular dementia. On examination clients may have carotid bruits, funduscopic abnormalities, or enlarged heart chambers (Sadock & Sadock, 2007).

In vascular dementia, cognitive deficits arise from multiple infarcts in the cortex and white matter of the brain following hemorrhage or stroke. Clients experience a faster onset with vascular dementia than with AD, and a stepwise or fluctuating progression, rather than a steady and gradual deterioration. They show focal neurologic signs. Specific symptoms depend on the affected brain sectors and the extent of damage. Frequently, accompanying neurologic evidence of cerebrovascular disease includes paresis (limb paralysis) or headaches. Clients with vascular dementia also experience impaired memory, aphasia, apraxia, agnosia, and difficulties with executive functioning. Mixed dementias (both vascular and AD) are common (NINDS, 2007).

Lewy Body Disease

Lewy body disease is sometimes mistaken for AD because of clinical similarity but is associated with earlier and more prominent visual hallucinations, parkinsonian features, and disturbed behaviors. The exact incidence is unknown because only four population studies have been conducted, but the estimated prevalence of Lewy body disease is 22% of all dementias (Rahknonen et al., 2003). On autopsy, Lewy inclusion bodies in the cerebral cortex confirm diagnosis. A distinguishing characteristic is significant adverse reactions to antipsychotic drugs (NINDS, 2007).

Parkinson’s Disease

Parkinson’s disease progresses slowly and has no known cure. This neurodegenerative illness affects 1 million Americans. Although its predominant feature is immobility, cognitive decline runs concurrently in more than 30% of clients (NINDS, 2007). Decreasing brain cells in the substantia nigra result in depletion of dopamine (UNDERSTANDING BIOLOGIC FOUNDATIONS 31.2). Clients exhibit involuntary muscle movements at rest, overall slowness, and rigidity. Most often, they have postural instability and disturbed gait. Intellectual deficits vary, but their progression is insidious. Unlike other types, Parkinson’s dementia does not impair language capabilities. It does impair memory retrieval and executive function. While
Prenatal and presymptomatic testing for Huntington’s is possible but not always available. Moreover, the test has a high-anxiety quotient for at-risk people because currently there is no cure.

Clients with Huntington’s disease experience chorea, or involuntary, jerky, arrhythmic movements that intensify with stress. At one time, the illness was commonly referred to as Huntington’s chorea. Clumsiness, muscle weakness, and gait disturbance are also present (NINDS, 2007). Chorea usually peaks 10 years after onset and then stabilizes or decreases. This particular dementia causes no aphasia, agnosia, or apraxia.

Huntington’s disease, a hereditary disorder associated with dementia, results from a faulty gene for a protein called huntingtin. Because it is autosomal-dominant, children of an affected parent have a 50% chance of inheriting the trait-carrying gene. Men and women are affected equally. The disease inevitably develops in those with the trait in their 30s or 40s. Time from onset to death is approximately 15 years (NINDS, 2007).
but does result in memory deficits, slowed thinking, problems with attention, and deficient judgment. Cognitive symptoms often begin as mild emotional manifestations (eg, irritability) and progress to anxiety and depression (NINDS, 2007). As the frontal lobe deteriorates, clients become labile, impulsive, easily frustrated, irritable, hostile, and aggressive. The illness becomes increasingly relentless, and clients often exhibit mood or intermittent explosive disorders.

Human Immunodeficiency Virus Dementia

Human immunodeficiency virus (HIV) dementia is seen more frequently in a younger population than are the other dementias because HIV is more prevalent in younger people. Although dementia occurs in as many as 75% of those with HIV, other causes such as infections, tumors, and adverse drug reactions need consideration (Sadock & Sadock, 2007). MRI of the brain often reveals some type of pathologic change, and clients usually manifest other symptoms accompanying HIV. Clinicians should be alert for mild cognitive decline or neurologic symptoms such as headaches, vision changes, and neuropsychopathies that might signal CNS involvement in clients with AIDS (Sadock & Sadock, 2007).

Those with HIV dementia show memory loss, poor judgment, and decreased executive function. At times, motor movements are delayed. Progression of HIV dementia differs from other forms with a predictably steady mental deterioration. Some clients with HIV dementia have daily episodes of memory loss and confusion alternating with mental clarity. Problems also can stabilize for months to years before downward progression ensues. Antiretroviral drugs used to treat HIV/AIDS can delay onset and reduce symptoms (NINDS, 2007).

Pick’s Disease

Pick’s disease accounts for approximately 5% of progressive dementias. Onset is at 40 to 60 years of age; studies show that Pick’s occurs slightly more often in men, usually those with an affected first-degree relative (Sadock & Sadock, 2007). Although the cause is unknown, researchers suspect a genetic component. Pick’s disease is another degenerative dementia whose clinical picture so resembles AD that in several instances differentiation happens only on autopsy. General microscopic findings include atrophy of the frontotemporal regions of the brain, in contrast to the more parietal-temporal distribution of AD (Sadock & Sadock, 2007). Investigators do not clearly understand why this atrophy occurs, but they believe it to explain aberrant behaviors seen with Pick’s disease. In beginning stages, people with Pick’s disease have less disorientation and memory loss than do those with AD and more personality changes, including loss of social constraints (resulting in frequent social and behavioral problems).

Creutzfeldt-Jakob Disease

With a global incidence of approximately one new case per 1 million people per year, this rare, rapidly progressive, and ultimately fatal disease results from a protein-like agent called a prion (NINDS, 2007). Symptoms ensue after age 60 years. Although 5% to 10% of U.S. cases are thought to be genetic, the disease is thought to spread through contact with contaminated human brain tissue or from improperly sterilized neurosurgical tools. Ingestion of certain neurologic parts of cows infected with a prion similar to the one causing Creutzfeldt-Jakob disease has been the source of contamination in British and U.S. outbreaks. This type is a variant of the classic Creutzfeldt-Jakob disease and is more common in adults younger than 60 years. Both forms are termed “spongiform” because of the spongy appearance of the cerebral and cerebellar cortex (NINDS, 2007). In older adults, the disease may be misdiagnosed as AD, but symptoms are initially more suggestive of a psychiatric illness other than dementia (NINDS, 2007).

Clients with Creutzfeldt-Jakob disease pass through three distinct stages. Initially, mental abnormalities progress to a rapidly deteriorating dementia. Then, jerking, seizure-like activity appears, with ataxia, dystarhria, and other cerebellar signs. Extrapyramidal signs, sensory disruption, and seizures are other manifestations during the middle phase. Coma marks the final phase, with clients dying of infections and respiratory problems (NINDS, 2007).

Implications and Prognosis

Prognosis for people with dementia is poor. Currently, no cures are available; however, certain interventions appear to delay or slow progression of some forms and symptoms.

Interdisciplinary Goals and Management

Clients and families truly need participation from an entire healthcare team for a comprehensive management regimen. Overall goals for clients with dementia include physical care, a safe environment, behavior management, and psychosocial support and education of clients and caregivers. See EVIDENCE-BASED PRACTICE SPOTLIGHT 31.1.

Clients with dementia benefit from as early a diagnosis as possible to promote interventions that slow illness progression. Early diagnosis also gives relatives time to adjust and rearrange their lives as they increasingly assume the caregiver role. The healthcare team interacts most intensively with clients during early stages, when clients are still aware of and thus most frustrated and depressed about cognitive losses. As the disease becomes more incapacitating, healthcare providers expand their involvement with relatives, often forming close-knit partnerships. These alliances promote the physical health and safety of clients and support the whole family.

As they lose cognitive abilities, clients develop more extensive and demanding needs. Families need teaching from physicians and nurses on how to care for loved ones who can no longer independently handle ADLs. Relatives (most often spouses or daughters) usually assume the role of primary caregiver. In doing so, they take on an exhausting and constant job for people who show decreasing appreciation and, with time, no longer even recognize them. This is not only physically but also emotionally stressing. Healthcare providers
EVIDENCE-BASED PRACTICE SPOTLIGHT 31.1

Nonpharmacologic Treatment of Dementia-Related Agitation

Overview of Effective Treatment: Interventions based on understanding the meaning of behavior and a comprehensive biopsychosocial assessment allow nurses to modify the environment and adapt nursing care to client needs. Major practice recommendations support assessing patterns of agitated behaviors, avoiding triggers for these behaviors, implementing general communication techniques, and using specific interventions, including sensory enhancement/relaxation, social contact, behavior therapy, structured activities, and environmental modifications. These have been found to decrease agitation and reduce the need for physical and chemical restraints. The strongest evidence based on randomized controlled studies supports the use of individualized music that stimulates remote memory and sensation.

What Has Not Been Shown Effective: Restraints have not been shown effective in preventing injury or reducing dementia-related agitation. In fact, increased agitation and injury have been associated with restraint use. The current standard of care is restraint free, requiring both institutional policies and individualized care of cognitively impaired clients. Although antipsychotic medications are effective for short-term management of agitation, they are not without risk.

Implications for Practice: Physical and chemical restraints are associated with increased risk to people with cognitive impairment. Comprehensive assessment and individualized care along with environmental modifications are evidence-based nursing interventions that can significantly improve the care and reduce agitated behaviors in people with dementia.

References

must be resources to family for innovative care tactics, referrals to community offerings for respite and home healthcare, information about support groups, and group or personal counseling. Such support helps family to care for loved ones and delays or permanently avoids the institutionalization of clients.

Medical and Supportive Interventions
Family caregivers need to know how to meet the physical needs of loved ones as self-care capabilities diminish. Some families need minimal information and guidance; others require more tangible assistance (eg, home health aides).

Changing the environment often can assuage behavioral problems as dementia progresses. Sometimes, however, behavioral problems are best managed pharmacologically. Behaviors that warrant medication include extreme agitation, depression, and disinhibition. Clients with dementia taking any medications require careful monitoring because the drugs actually can cause or compound behavioral problems. Sometimes, merely lowering a dosage, discontinuing the medication, or substituting another drug resolves issues.

Psychopharmacologic Interventions
One finding in AD is diminished cholinergic neurotransmission, resulting in too little ACh in the cholinergic system. Although the cause of this problem remains unknown, it happens early in the disease. Compelling evidence shows that drugs that inhibit ACh destruction or increase cholinergic activity can slow deterioration of memory and function. Systematic reviews of two such drugs, rivastigmine and donepezil, support their efficacy for treatment of AD and dementia related to Parkinson’s disease (Birks et al., 2000; Maidmant et al., 2006).

Cholinesterase inhibitors increase availability of ACh by interfering with the enzyme that breaks it down. These centrally acting drugs help elevate the level of ACh by decreasing the binding sites of acetylcholinesterase, which lengthens the potential for cholinergic activity. These drugs are effective as long as some cells still produce ACh (Sunderland et al., 2004). Thus, they are most efficacious for mild to moderate AD. Even then, their effects on cognition are modest, with only small improvements and possible slowing of deterioration. However, clinical evidence suggests that cholinesterase inhibitors have significant benefits by improving function for clients and decreasing burden for caregivers (Geldmacher, 2007).

Tacrine (Cognex) was the first centrally acting, noncompetitive acetylcholinesterase inhibitor to be created. The liver rapidly absorbs and metabolizes tacrine, making it vulnerable to toxicity and requiring ongoing monitoring of liver function,
especially the level of alanine aminotransferase (ALT), every week for the first 18 weeks of use of tacrine. Because of the potential for liver toxicity, tacrine is no longer used. Rivastigmine (Exelon), galantamine (Reminyl), and donepezil (Aricept) are more widely used cholinesterase inhibitors. Rivastigmine now has an FDA warning because of cardiac complications noted in two large clinical trials. The most common drug is donepezil. In some people, donepezil delays the progression of dementia for 6 to 12 months. It has a longer duration than tacrine, does not require monitoring of liver function, and is administered only once a day at bedtime. Clients usually start with 5 mg/day, increasing to 10 mg/day after 4 to 6 weeks. Higher doses may not help all clients, and donepezil has an increased risk of cholinergic side effects (nausea, diarrhea, insomnia). Donepezil can cause irregular heartbeats in clients with heart conditions (Sunderland et al., 2004). See Chapter 16 as well.

Memantine has shown promise in improving symptoms in people with mild to moderate dementia. It is particularly useful for vascular dementia and in combination with cholinesterase inhibitors. It has shown a detectable effect on cognitive function and functional decline measured at 6 months in people with moderate to severe AD (McShane et al., 2006). Twenty milligrams a day seems to prevent neurodegenerative changes (Sunderland et al., 2004). Other drugs thought to have some neuroprotective promise (discussed earlier) for people with early signs or family history of AD are anti-inflammatory medications such as ibuprofen; statins (for lipid control); antioxidants, particularly vitamin E; and ginkgo biloba.

Psychosocial Interventions
Because of dementia’s grim prognosis, clients and family need support from the interdisciplinary team to endure the shock of its initial diagnosis. They also need guidance for the future. In early stages, clients may need emotional support to deal with their cognitive losses. Caregivers need progressive help from professionals to deal with their own exhaustion, depression, and frustration. Family needs to participate in care planning and receive education about available assistance with the physical care they render.

Psychoeducational approaches have been shown to enhance caregivers’ coping (Hepburn et al., 2003). Although perceived caregiver burden may not change significantly, psychosocial interventions are associated with significant reduction in caregiver psychological distress, as well as improved caregiver knowledge and client mood (Brodaty et al., 2003). These data are vital because enhanced caregiver coping and self-care may help delay or prevent institutionalization of clients with dementia, as well as caregiver morbidity. See Evidence-Based Practice Spotlight 31.2.

Checkpoint Questions
9. What is the hallmark pathologic feature of AD?
10. What is the second most common form of dementia?
11. What hereditary disease is associated with dementia?
12. Which class of drugs has been proven to be moderately successful in slowing the cognitive decline of dementia?

Apply the Nursing Process
Dementia

Assessment
The first step in determining nursing approaches to management is assessment. Clients require screening for any underlying, treatable physical problems that accentuate or are co-morbid with dementia. Any condition in Box 31.3 can confound diagnosis. All potentially reversible and treatable causes must be ruled out before a diagnosis is made. Doing so necessitates extensive history taking, thorough physical assessment (including neurologic and mental status examinations), and diagnostic testing (Assessment Tool 31.2). If screening procedures reveal treatable illnesses, action should be initiated to resolve them. Treating underlying illnesses expedites recovery from any delirium, improves overall health and delays further decline, and eliminates symptoms that can obscure dementia and thus prevent timely diagnosis. Once clients have been evaluated and treated for underlying medical conditions, nurses can proceed with assessment of cognitive functioning.

Behavior
Nurses assess various components of behavior and function (Assessment Tool 31.3). A functional assessment with a screening tool that measures not only physical ADLs but also instrumental ADLs (IADLs) can be useful for determining the level of impairment and degree of assistance needed. An example is the Functional Assessment Questionnaire (FAQ).

Assessment of the client’s ability to perform ADLs is one of the most important parameters in the detection of dementia. Clients may have minimal to no insight about when decline in cognition and function or behavioral changes began. Family must be involved in supplying information
### Interventions for Cognitive Disorders

<table>
<thead>
<tr>
<th>Disorders/ Behavior</th>
<th>Support for treatment</th>
<th>Positive effects—consistent evidence</th>
<th>Inconsistent evidence—unproven</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Delirium           | Evidence-based treatments | Psychosocial: Expert consensus guidelines support individual and environmental comfort measures to manage agitation  
Pharmacologic: Haloperidol, Ativan | Not enough controlled studies to show psychosocial interventions as consistently effective | Treatment consists of removing the underlying cause of delirium |
| Dementia           | Evidence-based treatments | Psychosocial  
*Individual*: Sensory enhancement/relaxation, social contact, behavior therapy, structured activities, environmental modifications, music therapy  
*Caregiver*: Support and psychoeducation  
Pharmacologic  
Cholinesterase inhibitors: donepezil (Aricept), rivastigmine (Exelon)  
NMDA receptor antagonist: Memantine (Namenda)  
Antipsychotics: typical: haloperidol; atypical: olanzapine, risperidone, quetiapine | Validation therapy  
Statins  
Antioxidants  
Anti-inflammatory  
Vitamins such as B₁₂, B₉, and folate | Individual psychosocial interventions based on expert consensus guidelines, level C  
Randomized trials, level B  
Meta-analysis, level A  
Best for early stage; tacrine (Cognex) rarely used because of hepatic effects. Galantamine (Reminyl) less used because of cardiac effects  
Best for midstage; reduces memory loss and may improve function, but does not change the course of the illness. If memory unchanged after 6 months, treatment is successful.  
There is midlevel but no strong evidence to support off-label use of atypical antipsychotics for dementia-related agitation/psychosis. All atypical agents increase risk of death in elderly; olanzapine and risperidone increase risk of stroke for elderly. |

### Specific considerations based on type of dementia

- Treatment varies slightly with the type of dementia. For vascular dementia, agents that treat the underlying cause (statins, antihypertensives) may prevent further deterioration. Antipsychotics should not be used for Lewy body dementia.
because they may be more reliable sources. Nurses question clients and family in a nonjudgmental, nonthreatening way and recognize that denial is common. Clients may try to cover up gaps in memory, and family may rationalize disruptive behavior as “quirks.”

Mental Status
Several tools to assess mental status are available (Assessment Tool 31.4). An example is the Short, Portable Mental Status Questionnaire (SPMSQ) developed by Pfeiffer. The MMSE remains the gold standard for assessment of memory. Its excellent reliability and validity make it widely used in various clinical settings, including primary care. Scores below 23 indicate a need for further evaluation in high school graduates; scores below 26 should prompt further investigation in those with higher education levels. Although the MMSE does not assess abstract thinking, nurses can assess it by asking clients to interpret a proverb such as “a rolling stone gathers no moss.” Failure to adequately explain such a saying may indicate problems with abstract reasoning, concentration, or executive functioning. However, nurses need to consider first whether clients would be familiar with a particular proverb based on age and culture.

Another useful and simple clinical tool is the Clock Draw Test, first developed by Shuman in 1986. Nurses ask clients to draw a clock, put numbers on it, and put the hands at a specified time (Figure 31.7). This simple test of executive functioning, visuospatial skills, and general organization can measure cognition over time (Levenson et al., 2005).

Perceptual Problems
Nurses may discover perceptual problems by observing behavior and exploring odd or unusual comments of clients. Nurses may discover perceptual problems by observing behavior and exploring odd or unusual comments of clients.

<table>
<thead>
<tr>
<th>Differential Diagnosis for Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug withdrawal (benzodiazepines, alcohol, opioids, cocaine)</td>
</tr>
<tr>
<td>Endocrine disturbance (thyroid disorder, Cushing’s syndrome, Addison’s disease)</td>
</tr>
<tr>
<td>Heavy metal toxicity (lead, mercury, arsenic)</td>
</tr>
<tr>
<td>Infections (HIV/AIDS, neurosyphilis, viral hepatitis, systemic)</td>
</tr>
<tr>
<td>Bowel impactions</td>
</tr>
<tr>
<td>Metabolic disruption (fluid and electrolyte imbalances, hepatic encephalopathy, uremia, porphyria, hypoxia, hypotension, chronic obstructive pulmonary disease)</td>
</tr>
<tr>
<td>Neoplastic</td>
</tr>
<tr>
<td>Neurologic disease (Parkinson’s disease)</td>
</tr>
<tr>
<td>Nutritional (deficiencies in vitamin B12, folate, or thiamine; malnutrition)</td>
</tr>
<tr>
<td>Pain</td>
</tr>
<tr>
<td>Seizures</td>
</tr>
<tr>
<td>Sensory deficits or overload</td>
</tr>
<tr>
<td>Trauma</td>
</tr>
</tbody>
</table>

Family members may provide invaluable associated data.

Orientation
Nurses must ask such questions about orientation to person, place, time, and date skillfully so as not to insult clients’ intelligence. They phrase questions conversationally or inform clients that some basic questions are part of the examination. Nurses also should ask family members if clients become more restless, agitated, or confused in the evening (sundowning).

Memory
Incidents evoking remote memory usually are easy to elicit from clients, but more recent events may prove problematic. Nurses can assess recent memory by evaluating responses of clients to questions involving events of the previous hour, day, or week. Use of the MMSE, described previously, can provide ongoing objective data about short-term memory.

Family
Family members, as indicated previously, are vital resources for historical data. They often can provide much information concerning a client’s ability to carry out ADLs and IADLs. Interactions between family and client during the interview also can reveal the condition of the client’s social skills and family dynamics.

Nurses must assess family members, especially caregivers, for signs of stress or burnout. Although this issue might not be pertinent during early stages of dementia, it becomes paramount as clients progressively degenerate and demands for physical care mount. It also becomes a factor as the role of “caregiver” increasingly becomes dominant, while the roles of spouse, companion, confidante, and lover fade. Loss of these roles can result in loneliness and depression. Early detection of caregiver and family stress may help prevent elder abuse and neglect, preserve family relationships, and prevent caregiver morbidity.

Education
Nurses must determine the needs of clients and family for information and instruction about the illness, its management, and support. Caregivers can provide better assistance when they know what to expect as the disease progresses and how to address common problems. Burnout, guilt, and frustration may be ameliorated when family members understand the commonality of and how to handle their feelings. Use of psychoeducational approaches has been demonstrated effective in enhancing family coping and reducing caregiver depression and anger (Coon et al., 2003; Hepburn et al., 2003).

Nursing Diagnoses
There are as many nursing diagnoses for clients with dementia as there are possible symptoms. Although nursing diag-
Risk for Injury related to cognitive and psychomotor impairments reducing ability to adapt to changing environment

Caregiver Role Strain related to the ongoing and mounting needs of the client as evidenced by expressions of sadness, guilt, despair, and stress

Cognitive Disorders

CHAPTER

ASSESSMENT TOOL 31.2

Screening Tests for Dementia

<table>
<thead>
<tr>
<th>Test</th>
<th>Clinical importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. White blood cell count with differential</td>
<td>1. Infection</td>
</tr>
<tr>
<td>2. Complete blood count with differential; hemoglobin (Hb)</td>
<td>2. Anemia and hematocrit (Hct)</td>
</tr>
<tr>
<td>3. Erythrocyte sedimentation rate (ESR)</td>
<td>3. Infection or vasculitis</td>
</tr>
<tr>
<td>4. Urine examination and toxicology test</td>
<td>4. Urine examination and toxicology test</td>
</tr>
<tr>
<td>a. Sugar and acetone</td>
<td>a. Diabetes</td>
</tr>
<tr>
<td>b. Leukocytes</td>
<td>b. Infection</td>
</tr>
<tr>
<td>c. Barbiturates and other toxic substances</td>
<td>c. Toxicity</td>
</tr>
<tr>
<td>d. Albumin</td>
<td>d. Renal failure</td>
</tr>
<tr>
<td>e. Porphyria screen</td>
<td>e. Renal failure</td>
</tr>
<tr>
<td>f. Heavy metals (lead, mercury, manganese, aluminum, arsenic); can be done as serum test as well</td>
<td>f. Heavy metal intoxication</td>
</tr>
<tr>
<td>5. Serum tests</td>
<td>a. Renal failure</td>
</tr>
<tr>
<td>a. Blood urea nitrogen</td>
<td>b. Renal failure</td>
</tr>
<tr>
<td>b. Creatinine</td>
<td>c. Diabetes, hypoglycemia</td>
</tr>
<tr>
<td>c. Glucose</td>
<td>d. Thyroid disease</td>
</tr>
<tr>
<td>d. Triiodothyronine (T₃), thyroxine (T₄)</td>
<td>e. Evaluation for imbalance, including Na⁺, K⁺, Ca²⁺, Cl⁻, PO₄; parathyroid-induced changes in calcium, phosphate</td>
</tr>
<tr>
<td>e. Electrolytes</td>
<td>f. Bromides still are present in some common drugs and overuse may inadvertently lead to toxicity</td>
</tr>
<tr>
<td>f. Mg²⁺, Br⁻</td>
<td>g. Wilson’s disease</td>
</tr>
<tr>
<td>g. Copper</td>
<td>h. Nutritional problems, thiamin deficiency, iron deficiency</td>
</tr>
<tr>
<td>h. Serum folate level, ferritin, iron</td>
<td>i. Dementia, delirium, malnutrition</td>
</tr>
<tr>
<td>i. Vitamin B₁₂</td>
<td>j. Increased in hepatic disease</td>
</tr>
<tr>
<td>j. Aspartate aminotransferase (AST)</td>
<td>k. Increased in hepatic disease</td>
</tr>
<tr>
<td>k. Bilirubin</td>
<td>l. Syphilis</td>
</tr>
<tr>
<td>l. Venereal Disease Research Laboratory (VDRL) or rapid plasma reagin (RPR)</td>
<td>m. Barbiturate, ethanol (ETOH), other drug overdose</td>
</tr>
<tr>
<td>m. Drug levels—specific search for evidence of drugs</td>
<td>n. Present in AIDS dementia</td>
</tr>
<tr>
<td>n. Human immunodeficiency virus (HIV)</td>
<td>o. Elevated in myocardial infarction, hepatic disease, and central nervous system damage</td>
</tr>
<tr>
<td>o. Lactate dehydrogenase (LDH)</td>
<td>p. Associated with variety of cognitive disorders</td>
</tr>
<tr>
<td>p. Parathyroid hormone</td>
<td></td>
</tr>
<tr>
<td>6. Routine radiographs</td>
<td>6. Routine radiographs</td>
</tr>
<tr>
<td>a. Chest</td>
<td>a. Infection, heart failure</td>
</tr>
<tr>
<td>b. Skull</td>
<td>b. Evidence of increased intracranial pressure, fractures</td>
</tr>
<tr>
<td>7. Electroencephalogram (EEG)</td>
<td>7. Ictal phenomena</td>
</tr>
<tr>
<td>8. Computed tomography (CT) scan</td>
<td>8. Brain tumor, subdural hematoma, infection, hemorrhage</td>
</tr>
<tr>
<td>9. Magnetic resonance imaging (MRI)</td>
<td>9. More sensitive for detection of vascular changes than CT</td>
</tr>
<tr>
<td>10. Spinal tap—cerebrospinal fluid (CSF)</td>
<td>10. Infection, hemorrhage</td>
</tr>
<tr>
<td>11. Ultrasound—carotid or Doppler</td>
<td>11. Detect vascular dementia</td>
</tr>
</tbody>
</table>


noses must reflect the uniqueness of each client, a plan of care might include the following (NANDA-I, 2007):

- **Chronic Confusion** related to cerebral degeneration
- **Self-Care Deficit** related to cognitive and motor impairments
- **Risk for Injury** related to cognitive and psychomotor impairments reducing ability to adapt to changing environment
- **Caregiver Role Strain** related to the ongoing and mounting needs of the client as evidenced by expressions of sadness, guilt, despair, and stress
Subjective Data

Behavioral Changes (Often Asked of the Family)
Is there a change in behavior? If so,
   a. How does the present behavior differ from former behavior?
   b. When was this change in behavior first recognized?

Emotional Changes
• Are any of the following present: depression, anxiety, paranoia, agitation, grandiosity, confabulation?
• Does the client have insight into the fact that “things are not right”?
• Is the client complaining of many physical ailments for which there are no bases?
• Are certain previous personality traits becoming predominant or exaggerated?

Social Changes
• Is the client exhibiting embarrassingly loud and jocular behavior?
• Is there sexual acting-out beyond the bounds of propriety?
• Has the client shown signs of short temper, irritability, or aggressiveness?
• Is there an increasing inability to make social judgments?

Intellectual Behavior
• Has the ability to remember recent events decreased?
• Has the ability to problem-solve decreased? (This might be especially apparent in the work or job area.)
• Do new environments or even old environments result in the client’s disorientation?
• Is it difficult for the client to carry out complex motor skills? Do his or her efforts result in many errors?
• Are any of the following language problems present:
   • Has the client’s language changed?
   • Does the client’s language ramble and wander from the point of the conversation?
   • Is the point of the conversation never clearly stated?
   • Is there difficulty comprehending complex material?
   • Does the client have trouble remembering names of people and objects?
   • Does the client have difficulty writing?

Functional Capacity
• Are there any changes in the client’s ability to perform activities of daily living (ADLs)?
• Is there difficulty transferring or ambulating?
• Is there difficulty bathing, dressing, or grooming?
• Is there difficulty eating or toileting?
• Are there any changes in the client’s ability to perform instrumental ADLs (IADLs)?

Objective Data

Level of Consciousness
Is the client confused, sleepy, withdrawn, adynamic, apathetic?

Appearance
Is there decreased personal hygiene?

Attention
• Does the client have decreased ability to repeat digits after the interviewer?
• Do other stimuli in the environment easily distract the client from the interviewer?
• Does the client focus on only one of the stimuli in the environment, and is he or she unable to turn attention from the one stimulus?

Language
• Outflow of words decreases.
• Patterns of repetitive, tangential, or concrete speech appear.
• Writing skills decrease more rapidly than the spoken word.

Memory
Test the client’s ability to remember four unrelated words and recent events. (Confabulation and anger often will be used by the client to move the interviewer away from questions related to memory.)

Constructional Ability
The client is instructed to copy a series of line drawings; the client often is unable to do this, or the ability to do so declines dramatically over time.

Cortical Function
• The client’s ability to perform arithmetic is faulty and reveals many errors.
• Proverb interpretation—Usually, the client gives only a concrete interpretation of the proverb.
• Similarities—The client often denies similarities between two objects and instead gives a concrete answer. For example, when asked, “What is the similarity between a tiger and a cat?,” the client may reply, “One is small and one is large. There is no similarity.”

Questionnaire for Dementia

• Is the client able to make a grocery list, shop for food, and handle money?
• Is the client able to use the telephone?
• Can the client prepare a meal and complete housekeeping tasks?

ASSESSMENT TOOL 31.3

Objective Data

Level of Consciousness
Is the client confused, sleepy, withdrawn, adynamic, apathetic?

Appearance
Is there decreased personal hygiene?

Attention
• Does the client have decreased ability to repeat digits after the interviewer?
• Do other stimuli in the environment easily distract the client from the interviewer?
• Does the client focus on only one of the stimuli in the environment, and is he or she unable to turn attention from the one stimulus?

Language
• Outflow of words decreases.
• Patterns of repetitive, tangential, or concrete speech appear.
• Writing skills decrease more rapidly than the spoken word.

Memory
Test the client’s ability to remember four unrelated words and recent events. (Confabulation and anger often will be used by the client to move the interviewer away from questions related to memory.)

Constructional Ability
The client is instructed to copy a series of line drawings; the client often is unable to do this, or the ability to do so declines dramatically over time.

Cortical Function
• The client’s ability to perform arithmetic is faulty and reveals many errors.
• Proverb interpretation—Usually, the client gives only a concrete interpretation of the proverb.
• Similarities—The client often denies similarities between two objects and instead gives a concrete answer. For example, when asked, “What is the similarity between a tiger and a cat?,” the client may reply, “One is small and one is large. There is no similarity.”
Caregiver Well-Being: The caregivers will take measures to ensure adequate respite and find ongoing avenues for support.

Family Coping: The client’s caregivers and family will have psychosocial support and resources for respite care.

IMPLEMENTATION
Interventions for clients with dementia and their families are numerous and range the entire holistic spectrum. Some common NIC labels include, but are not limited to, Caregiver Support, Coping Enhancement, Dementia Management, Environmental Management, Reality Orientation, Respite Care, and Support Group (Bulechek et al., 2008).

CASE IN POINT 31.1 describes nursing care for a client and family facing Alzheimer’s disease.

Managing the Client’s Health
Essential nursing actions are facilitating optimal functioning and preventing further decline by promoting physical

(text continues on page 681)
**Betty’s Story**

Betty, 76 years old, lives with her daughter and son-in-law. She moved in with them 11 years ago, following the death of her husband. Betty has many friends and has stayed active. Her daughter Audrey and son-in-law Linc have accompanied Betty to a doctor’s appointment.

Audrey reports to the nurse that she is concerned about her mother’s behavior. “I’m not surprised that she forgot my birthday last week because she’s having difficulty recalling when she’ll celebrate hers! Lately she’s forgotten other things, like bingo games. She’s also been avoiding her weekly bridge game with friends, telling me she’s too tired or doesn’t feel like it.” Audrey reports that Betty, normally an early riser and fastidious, has been staying in bed late and spending days in her pajamas. “I asked her about this, thinking she wasn’t feeling well. She told me angrily, ‘Why can’t I enjoy my old age? Why should I be busy every minute?’” Audrey relates that a few months ago, Betty got lost coming back from a grocery trip. After meandering over several back roads, it became clear that she was lost, and she called Linc for help. Upon questioning by the nurse, Betty states that she just wanted to go for a drive.

Betty undergoes physical, neurologic, mental status, and functional evaluations, a battery of laboratory tests, and a computed tomography scan. She uses some words inappropriately and scores 22 on the Mini-MSE. No other significant findings appear. The physician gives a diagnosis of Dementia of Alzheimer’s Type: Late Onset, Uncomplicated. Because the disease is in an early stage, she prescribes donepezil (Aricept).

The nurse is discussing with the family the prognosis and needs for future care. Betty is very upset. Initially, she denies her problem but then cries and admits that she has been concerned about her mental functioning. Discussion centers on the need for support and that eventually Audrey and Linc may need help for Betty to remain at home. All agree that Betty should remain as active as possible and continue bridge and cognitively stimulating activities.

**Nursing Diagnosis: Anticipatory Grieving** related to recent diagnosis of dementia as evidenced by changes in current status, initial denial of problems, and reaction to diagnosis

**NOC: Grief Resolution:** The client will verbalize feelings about diagnosis and potential decline in functional ability.

**NOC: Psychosocial Adjustment: Life Change:** The family will set realistic goals, maintain productivity, and use effective coping strategies.

**NIC: Grief Work Facilitation**
- Assist the client to identify and express fears and feelings. Help her deal with her initial reaction. Listen carefully and empathetically. Communicate acceptance. Include significant others (FIGURE A). Encouraging the client to express feelings and listening empathetically help her release sadness and fear. They also help her to feel that others care.
- Instruct the family about the phases of grieving; support the client’s progression through them. *Loss of cognitive function is one of the most frightening changes a person can face. The family needs time to process their feelings.*

*FIGURE A. The nurse encourages the client and family to share feelings about the diagnosis of AD and gives acceptance and support.*
CHAPTER 31 Cognitive Disorders

Case in Point 31.1 (continued)

Betty’s Story

- Help the client identify existing coping strategies and consider new ones. Examples include living in the present, meditating, praying, and practicing deep breathing or relaxation. Establishing a plan for stress management can help the client during times of fear and anxiety. Stress-reduction techniques also may increase feelings of well-being.

**NIC: Anticipatory Guidance**

- Assist the family to identify available resources. Doing so reveals additional support. Options allow the family to find solutions for problems, which enhances feelings of control.
- Rehearse techniques needed to cope with upcoming crises as appropriate. Practicing techniques facilitates their use when needed.

**Nursing Diagnosis: Risk for Injury** related to cognitive impairment as evidenced by progressive changes in memory and executive function

**NOC: Personal Safety Behavior:** The client will remain free from injury.

**NOC: Safe Home Environment:** The family will adjust the home as necessary to ensure it is in optimal condition to maintain safe and independent living for the client.

**NIC: Environmental Management: Safety**

- Identify danger areas and safety hazards in the home. Instruct the family to make garages and basements unavailable to the client because dangerous items often are stored there. Teach them to lock medications, poisons, cleaning agents, and other toxic fluids in secure containers or rooms. Ensure that doors leading outside are locked or have alarms installed. Instruct the family to secure windows and any doors on the upper floors of the home. Decreasing cognitive skills increase the client’s risk for injury. Keeping certain areas off-limits and the rest of the house safe and secure optimizes the client’s freedom at home while protecting her.
- Modify the environment to minimize hazards and risks. Plug electrical outlets and remove electrical items that pose hazards. Move the thermostat on the hot water heater to its lowest setting. Remove all electrical appliances from counters and control knobs from the stove and oven. Making the home safer should give the family some peace of mind about the client’s safety. Monitoring the home is the best intervention for maintaining safety. Interventions will help prevent accidental burns or fires.
  - Recommend appropriate protective and adaptive devices (FIGURE B). Protective devices limit mobility or access to harm; adaptive devices increase environmental safety.
  - Provide emergency phone numbers; have the family keep them readily available. Quick access is crucial during a crisis.

**Nursing Diagnosis: Chronic Confusion** related to Alzheimer’s disease as evidenced by memory impairment, forgetfulness, and client’s statements about changes in mental functioning

**NOC: Cognition:** The client will exhibit adequate mental functioning with assistance.

**NIC: Dementia Management**

- Control environmental stimulation. Help establish a calming atmosphere. Encourage the family to remove household clutter and to provide adequate lighting without glare. Create predictability and simplify choices. Assist the family to establish a daily routine for grooming, meals, and activities; teach them to ask relatives and friends to visit, but to do so one or two at a time. Controlled stimulation will help the client feel secure at home. Simple choices and tasks that she can complete successfully prevent frustration and loss of self-esteem. Nonglare lighting is less disruptive and helps decrease perceptual difficul-

FIGURE B. The family installs guard rails along the client’s bed to protect against falling or wandering at night. They place a commode in her bedroom as well so that she does not have to leave her room during sleep (and risk injury) if she develops the urge for elimination.

(continued on page 678)
ties. Limiting visitors allows the client to continue socializing but in a controlled way.

- Introduce self when initiating contacts with the client; address her distinctly by name. Speak slowly in a clear, low, warm, and respectful tone of voice. These measures prevent startling the client. Using her name helps reorient her as needed.
- Use distraction, not confrontation, to manage behavioral problems. Confrontation increases the client’s frustration and stress.
- Provide space for the client to pace or wander safely; provide finger foods if the client cannot sit and eat. Providing space minimizes the risk of injury; finger foods can help promote adequate nutrition.
- Encourage one-to-one and group activities geared to the client’s cognitive abilities and interests. When giving directions, do so one at a time. Limiting choices and activities minimizes overstimulation, which can increase anxiety. Individual simple directions prevent the client from becoming overwhelmed.
- Use symbols to locate areas or important items. Symbols may be easier for the client to comprehend than the written word.

**NIC: Cognitive Stimulation**

- Orient the client to person, place, and time. Provide environmental memory cues. Cut out pictures from magazines and place them on cabinets and drawers to illustrate contents. Provide a large-print calendar in a conspicuous spot and record all appointments there (FIGURE C). Encourage the client to review the calendar daily. Reinforce and repeat information. Environmental cues will help jog the client’s memory and keep her as independent as possible for as long as possible. Repetition promotes awareness.

**Nursing Diagnosis: Decisional Conflict** related to uncertainty about future health and resources

**NOC: Decision Making:** The family will verbalize appropriate plans for the future.

**NOC: Participation in Healthcare Decisions:** The family will identify available support for achieving outcomes.

**NIC: Decision-making Support**

- Establish communication; facilitate articulation for goals of care. Communication is important for the therapeutic relationship: knowledge of goals facilitates an individualized plan of care.
- Provide information as requested. Describe options available for care, including full-time nursing at home, adult day care centers, nursing homes, and other long-term facilities (FIGURE D). Help the family explore the advantages or disadvantages of each option. Supply all information as requested but avoid portraying a hopeless prognosis. Respect the client’s right to receive or not receive information. Family members need information so they can plan for the future. The current plan of caregiving by the family participates in a thorough home evaluation and demonstrates substantially adequate lighting and handrails, use of personal alarm system, accessible assistive devices, and furniture arrangement to reduce risks. No injuries or problems have occurred since the initial visit. They also have posted emergency numbers and a hotline in key locations. The client is maintaining adequate cognitive function with assistance. She demonstrates only mild compromise in attention, concentration, and cognitive orientation. She can identify self, place, and time and respond to cues.

**Case in Point 31.1 (continued)**

**Betty’s Story**

10/7/08: The family participates in a thorough home evaluation and demonstrates substantially adequate lighting and handrails, use of personal alarm system, accessible assistive devices, and furniture arrangement to reduce risks. No injuries or problems have occurred since the initial visit. They also have posted emergency numbers and a hotline in key locations. The client is maintaining adequate cognitive function with assistance. She demonstrates only mild compromise in attention, concentration, and cognitive orientation. She can identify self, place, and time and respond to cues.

**FIGURE C.** The nurse works with the family to establish a calendar that lists all of the month’s events so that they can be more organized while integrating the client’s situation into their lifestyle. The month and year are displayed in large letters and numbers to reinforce time orientation for the client.

**FIGURE D.** The nurse discusses various options for short-term and long-term care with the family.

(continued on page 679)
daughter and son-in-law alone will not be feasible if the client needs more than their resources allow. The client still may be in denial; the healthcare team needs to respect her right to not receive information.

• Help the client clarify values and make important decisions while cognitive function is high. Encourage her to provide advance directives. Facilitating decisions now helps ensure that others can carry out the client’s wishes if she cannot make necessary legal decisions.

Nursing Diagnosis: Interrupted Family Processes related to changes in client’s health status as evidenced by progressive cognitive changes and changes in usual roles

NOC: Family Coping: The family will demonstrate positive coping measures to deal with changes.

NIC: Family Process Maintenance

• Identify effects of role changes on family processes. Promote family cohesion. Help family members, including the client, identify their feelings about role and health status changes. Help them resolve any guilt feelings. Identify effective coping mechanisms; encourage their use as family adjusts to changes. Discuss strategies for normalizing family life. Open communication about the effects of AD will help family members. The client may feel guilt about not being able to help more or becoming a “burden” on the family; caregivers may have resentment about increased responsibilities.

• Minimize disruptions by facilitating family routines and rituals. Encouraging normal activities reduces feelings of guilt or anxiety related to the client’s current condition.

• Discuss existing social support mechanisms; assist the family to use them. Help them resolve any conflicts; suggest attending an Alzheimer’s support group. Identify home care needs and how these might be incorporated into the family lifestyle (FIGURES E and F). Helping the family resolve feelings and identify appropriate coping behaviors will decrease stress. Support groups are a tremendous resource for sharing feelings and gaining insight and help. Incorporating home care needs minimizes disruptions.

Nursing Diagnosis: Risk for Caregiver Role Strain related to increasing requirements for care as evidenced by progressive nature of disorder

NOC: Caregiver Stressors: The caregiver will identify need for assistance in caring for her mother.

NOC: Caregiver Emotional Health and Caregiver Physical Health: The daughter will obtain essential respite and support to maintain her own functioning while caring for her mother.

• Determine the caregiver’s level of knowledge and acceptance of role. Provide practical support. Explore her reaction and help her identify stressors, tasks, or behaviors

Betty’s Story

FIGURES E and F. The family arranges for ongoing visits from a home health aide, who provides assistance with meals and housecleaning. Such help is often necessary to account for the extra demands that the client’s illness places on the entire family.
that are most frustrating or anxiety producing. Help her develop a plan for managing them. Provide support for her decisions. Give information about the disease and local support groups. Helping the caregiver become aware of her feelings, strengths, the progressive nature of AD, and available supports will empower her to manage the increasing demands of caregiving while protecting her emotional state. Thinking through and planning ahead will help her manage responsibilities.

• Teach techniques to improve the security of the client. Techniques for client security reduce the risk of injury to the client and caregiver.

• Explore with the caregiver how she is coping; teach stress management techniques and healthcare maintenance strategies to sustain her physical and mental health. Determining coping and providing instruction about stress management and healthcare maintenance strategies enhance her ability to provide the necessary care.

• Give encouragement to the caregiver during setbacks for the client. Setbacks can promote guilt, frustration, and anxiety. Encouragement helps preserve the caregiver’s self-esteem.

NIC: Emotional Support

• Provide emotional support. Make supportive or empathetic statements. Emotional support helps to reduce feelings of anxiety in stressful situations.

• Encourage the caregiver to get adequate rest and to maintain her own physical, emotional, and spiritual health. Help her recognize that caregiving is stressful. Encourage her to express feelings of anxiety, anger, or sadness. Encourage her not to feel ashamed or guilty if she experiences impatience, frustration, sadness, or anger. Deep breathing, meditation, and visualization, as well as physical exercise and adequate rest, can help the caregiver manage feelings of anxiety and stress. Finding sources for personal comfort and happiness will help her maintain an identity separate from her caregiving role. She then can come to understand that these emotions are natural when caring for someone who may be unhappy, ungrateful, or difficult.

NIC: Respite Care

• Monitor the caregiver’s endurance. Establish a plan for respite care. Encourage her to set realistic limits on what and how much she can do. Counsel her to avoid becoming isolated and to accept help from others. The caregiver cannot perform total full-time care alone.

• Coordinate volunteers for in-home services. Arrange for substitute caregivers. Identify community resources for respite care or other family members or friends who can regularly relieve the caregiver for a few hours at a time (FIGURE G). Respite is essential to prevent burnout, which is common among full-time caregivers, especially those who are socially isolated or have no relief from their duties.

Case in Point 31.1 (continued)

Betty’s Story

B. Morita, RN

EPILOGUE

Nine months have passed since Betty was first diagnosed with AD. Since then, Audrey and Linc have been providing care with support from family, friends, the local Alzheimer’s association, and health services. However, in the past month, Betty’s condition has deteriorated. She has become increasingly confused, with mood fluctuations, and cannot dress or wash herself. She also has become incontinent of urine, mostly at night. Audrey reports, “She tried to make tea yesterday and left the stove on. Sometimes, she doesn’t recognize me.” Two days ago, Betty got out of bed during the night, fell, and fractured her hip. She was admitted to the local hospital for treatment. Linc says, “My wife is so exhausted. Her mother needs so much care. I don’t think Audrey can handle this anymore. We’re meeting with a social worker to make a decision about moving Mom to a nursing home.”

FIGURE G. The client attends a day program once a week so that her daughter has an outlet for respite care.
health, environmental stability, and emotional well-being. Because exogenous substances can initiate or exacerbate aberrant behavior, nurses must be sensitive to the response of clients to prescribed medications. In addition to knowing the side effects and toxic reactions of specific drugs that clients receive, nurses also must be alert to possible drug interactions.

Nurses assess for any symptoms of physical illness. Prompt recognition and appropriate intervention may stop an episodic illness from becoming co-morbid, or a co-morbid illness from accelerating mental dysfunction. Nurses pay particular attention to nutrition and hydration, as well as to bowel and bladder elimination. Clients with dementia may resist or neglect eating, and poor hydration usually accompanies poor diet. Nurses offer foods and fluids throughout the day. Giving food in small portions or offering finger foods may increase the likelihood of eating.

Constipation or impaction from insufficient bulk or water can have serious consequences if not treated promptly. Clients may be unable to articulate feelings of fullness; caregivers should keep a record of bowel movements to monitor regularity. Insufficient fluids can lead to urinary stasis and urinary tract infections. Monitoring fluid intake so that clients receive at least 2,000 mL/day (unless contraindicated by renal or cardiac disease) helps prevent infection and maintain health.

Enhancing Sensory Capabilities
For clients with trouble interpreting the environment, sensory aids, such as eyeglasses and hearing aids, can be instrumental in helping them feel more in control. Nurses can provide reading material in large type, if necessary, and speak to clients directly and carefully to further maximize ability to process sensory input. Caregivers also need to be aware that sensory disturbances are not limited to sight and hearing but also may involve perception of pain and temperature. Thus, caregivers must take precautions with hot liquids and bath water to avoid burning clients. Diminished or altered pain perception further emphasizes the need for surveillance by staff of the client’s physical condition.

Meeting the Client’s Physical Needs
The ability of clients to care for themselves decreases as the severity of dementia increases. The healthcare team and family need to reevaluate continually the client’s capacity for self-care. Caregivers can help by enhancing the environment to facilitate the limited ability of clients to perform ADLs and IADLs and by fulfilling unmet needs themselves. Sometimes, clients display aberrant behavior because of unmet needs. An underlying medical problem may be undetected, or clients may be in pain. As ability to communicate decreases, caregivers and healthcare staff need to observe clients carefully to try to discern the meaning behind their actions. Something as basic as discomfort from constipation can drive problem behavior, which may subside after a basic need has been met.

Encouraging Appropriate Behaviors
Clients with dementia often cannot change their behavior. Therefore, the most successful nursing intervention may be to change what clients experience. Restructuring the environment to make it less formidable is especially helpful. Pharmacologic intervention may be necessary to manage behavior that is harmful to clients, their family, or the healthcare team.

Modifying the Environment
Clients with dementia face multiple dangers resulting from impaired cognitive abilities. Safety concerns include falls, poisoning, wandering and getting lost, and injury to self or others from dangerous objects. Starting fires and getting burned also are fairly common. All these situations are worsened by the client’s inability to respond quickly to emergencies. Environmental modification can be the key to managing behavior and keeping clients safe. Pathologic changes in the brain decrease the ability of clients to interpret the environment accurately. Many clients overreact, especially when multiple cues bombard them. Decreasing noise, choices, pain, and overstimulating interactions can help clients maintain stable, appropriate behaviors. Simply controlling environmental light may decrease hallucinations or illusions. Instituting routines and simplifying choices help easily confused clients.

Times when personal care is being given, such as bathing, seem especially to agitate clients with dementia. There often is a way to modify the environment to provide positive experiences for clients. Sometimes, changing the site of the bath or giving a bed bath instead of a shower or tub bath in the bathroom of the home or the institution is helpful (Figure 31.8). Adapting bath time to the client’s usual schedule, rather than the institutional routines, may be helpful (Thiru-Chelvam, 2004).

The goals of care for people with dementia are to enhance function and prevent further decline. Preservation
of function requires nurses to encourage clients to perform their own ADLs, rather than to do these tasks for them. Cueing and prompting are two strategies designed to preserve functioning. For example, a nurse might put toothpaste on a toothbrush and hand it to the client as a cue to brush the teeth. The nurse may lay out clothing in the order in which the client should put it on. Prompting involves verbal step-by-step directions, but only as much direction as clients need. Such interventions provide assessment data as well.

Enhancing environmental cues may be beneficial for clients. Clocks and calendars strategically placed may help keep clients oriented. Reality orientation, sensitively applied, can be beneficial, but care must be taken to avoid frustrating clients and causing more problems. Although validation therapy has not been found consistently useful for those with cognitive impairment (Neal & Briggs, 2003), validating and attending to the feeling behind the content of communication is a vital component of psychiatric nursing care.

Management of disruptive behaviors exhibited by clients, such as wandering, attempting to leave, entering others’ rooms, and hoarding items, can challenge nurses as well as family caregivers. At times, efforts to intervene in such behaviors seem only to result in further agitation and even aggression (CHALLENGING BEHAVIORS 31.2). Formal research into nonpharmacologic interventions has been hindered by the need for a common language and a systematic approach (Cohen-Mansfield, 2003). Although such investigations are now being conducted to determine which interventions are consistently most helpful, empirical evidence suggests a multimodal, individualized approach to be most effective (Werner, 2003). All behavior has meaning and should be viewed as an attempt by clients to communicate a need. Therefore, attempting to discern and respond to the need expressed by clients may help calm them. For example, if a client is wandering, the nurse should walk with her (FIGURE 31.9). If a client is taking clothing from another person’s room, the nurse should attempt to distract him by giving him laundry to sort and fold. The more nurses know about their clients’ former routines, occupations, and lifestyles, the more individualized care can be. Developing creative and flexible interventions and providing safe alternatives to potentially harmful behaviors is a key to less disruptive behavior. To help guide care, evidence-based practice guidelines for nonpharmacologic management of agitated behaviors are available at www.dissemination-core@iuiowa.edu (McGonigal-Kenney & Schutte, 2004).

Those caring for clients with cognitive disorders can monitor their interactions with them. Usually, caregivers with a calm demeanor have more success handling or interacting with clients manifesting problems. An attentive, gentle approach is especially helpful when personal care is required. In fact, Werezak and Morgan’s (2003) investigations led them to suggest that the psychosocial environment is the most important element of care for people with dementia.

At times, there may seem to be no way to resolve the emotional frustration, agitation, or outbursts of clients who

---

**Challenging Behaviors 31.2**

**The Client Who Is Disruptive**

**Situation:** Your assigned client is an 81-year-old woman with Alzheimer’s disease. She has been wandering in and out of other client rooms, taking their clothing and belongings. When you attempt to redirect her, she yells “Get out of my way. I am trying to do my work” and takes a swing at you.

**Your Potential Feelings:** Fear, frustration, surprise

**What Is Going On?** The client cannot perceive reality and may believe she is home and that the clothing belongs to her or a family member. She may think you are an intruder or are attempting to harm her.

**Strategy:** Step back, literally and figuratively, and determine what the client is attempting to communicate through her behavior. Formulate a response based on your assessment.

**Nurse Action/Communication:** You might say, “I have some laundry I need to put away. Can you come help me sort and fold it?” Walk with her to her room and provide her with some towels to fold.
Performing Pharmacologic Interventions
Cholinesterase inhibitors are moderately successful at slowing the cognitive decline of dementia (Birks et al., 2000; Birks & Harvey, 2006). Healthcare teams must determine which medication is best for each client and educate family

are angry with their environment and those in it. Caregivers might find it beneficial to redirect or distract clients. They can do so by asking to see personal items, such as photographs, and then talking about illustrated family members and life events (Therapeutic Communication 31.1).

Therapeutic Communication 31.1
A Client with Dementia

Ann Tepsin, a 64-year-old woman with dementia, comes to the day care center three times a week. Today, Annie’s husband tells Roy Smith, the nurse, that Annie was awake most of the previous night. After her husband leaves, Annie begins to follow Roy in and out of the day room, activity room, kitchen, and sunroom. Around 10:30 am, she asks Roy, “Are we going to eat soon?”

Ineffective Dialogue

ROY: It’s too early to eat, Annie. You eat at 11:30, just after ceramics.

ANNIE: (Walks with Roy out of the day room) When will I eat? Do I eat soon?

ROY: (Looks at watch and shakes his head) You don’t eat until later. I have to go into the sunroom to work on the plants.

ANNIE: (Follows Roy to the sunroom) When will I eat?

ROY: (Sighs and continues to water the plants) Annie, are you hungry?

ANNIE: NO! I’m not hungry! Why do you ask that?

ROY: (Notices Annie’s behavior is beginning to escalate and feels puzzled as to why she is getting upset) Annie, go back to the other room and look at your memory book. (Points to Annie’s pocketbook) It’s in your purse. I’ll walk you there. (Walks Annie to the day room, sits her at a table and tells another nurse to keep an eye on Annie)

ANNIE: (Sits at the table, looking confused and sad)

Effective Dialogue

ROY: It’s too early to eat, Annie. Lunch is at 11:30, just after ceramics.

ANNIE: (Walks with Roy out of the day room) When will I eat? Do I eat soon?

ROY: (Stops, looks directly at Annie, and smiles) Annie, you eat at lunch time, 1 hour from now. Let’s go into the sunroom. You can help me water the plants. (Remains patient with Annie, sensing that she is trying to express something other than her words)

ANNIE: (Helps Roy bring plants to the sink in the sunroom) When did you say I will eat?

ROY: (Stops watering the plants, looks at Annie, and smiles) Annie, are you hungry? (Uses positive and “cueing” nonverbal behavior)

ANNIE: NO! I’m not hungry! Why do you ask that? (Gets louder)

ROY: (Realizes Annie’s behavior is beginning to escalate) Annie, I remember seeing a picture of you in your garden. Would you show me that picture again? I think it’s in your memory book in your purse. (Points to Annie’s pocketbook) Would you show me the picture of you in your garden?

ANNIE: (Looks at her purse and then rummages through it and pulls out a little photo book) You want to see my pictures?

ROY: Yes, let’s go sit on the sofa and look at them. (Goes over and sits down, patting the cushion for Annie to sit. Annie comes over and begins thumbing through the book, telling Roy about the pictures.)

Reflection and Critical Thinking

• What types of communication did Annie exhibit in both scenarios? Assess the reason for Annie’s repetitive speech. Why might she be more hungry, tired, or insecure this morning?
• What nonverbal cues did Roy give in the first scenario? How did these differ from his actions in the second scenario? What were the results of the differences?
• What methods of communication did Roy use in the second scenario that ultimately were more effective than those he used in the first?
Preserving the Family Unit

Family members must be prepared for the personal toll that their new role as caregivers may take. Nurses can provide information concerning creative ways to care for loved ones, including providing counseling and information about respite care. Day care for clients is one possibility that allows relatives to rest from their extensive caregiving activities and allows them to continue with their own daily routines and responsibilities (Figure 31.10). Through day care, a spouse or child may be able to retain a job and income and have the energy to care for the client during evening and weekend hours. Some communities have overnight respite care to give the caregiver welcomed “down time.”

Family support groups and individual family counseling may help some families experiencing stress or having difficulty coping. As previously noted, one of the most effective interventions is to educate family members about the necessary skills of caregiving. Nurses empower families when they work with relatives to increase their problem-solving skills. Showing family members that they have options and linking them to community-based services are tremendous contributions.

Although many families wish to keep their loved ones at home as long as possible, all must recognize that long-term care is an option. Only the family can make this decision, but professional care providers should tactfully raise this issue occasionally.

Evaluation

Outcomes for clients may focus less on improving cognition and more on maintaining current functioning for as long as possible and on successful adaptations by clients and family to the ongoing decline. When evaluation of the plan of care reveals that interventions are no longer effective or feasible, the healthcare team and family (and clients, if possible) need to devise different interventions. Indicators of an effective care plan include the following:

- The client’s physical needs are met.
- The client is well nourished and well hydrated.
- The client does not sustain injuries.
- Episodes of wandering or agitation are infrequent and managed successfully.
- The caregiver reports satisfaction with his or her quality of life and has social supports and respite care options in place.

Amnestic Disorders

Amnestic disorders include conditions with short-term memory loss as the hallmark. Memory deterioration is so great that it prevents clients from functioning at previous levels of social and occupational performance and seriously deters them from learning new information. They typically cannot recollect events as recent as 2 minutes earlier; they may have difficulty recalling events or knowledge that they formerly knew. Acuteness of remote memory recall varies, and clients become adept at confabulation to hide deficits.

Brain damage leaves clients disoriented to time and place to some degree but not to personhood (APA, 2000). They have a superficiality of emotions that precludes deep ties with others. They frequently adopt a blandness of affect. Progression of symptomatology depends on the underlying etiology and its severity.

Classifications of amnestic disorders are listed in DSM-IV-TR Box 31.3. Like dementia, the symptomatologies share commonalities; etiologies are the differentiating factors.

Wernicke’s syndrome and Korsakoff syndrome co-occur so frequently that they present a classic picture and thus often are combined and referred to as Wernicke-Korsakoff syndrome. By itself, Wernicke’s produces ataxia, confusion, and paralysis of some ocular motor muscles. Both syndromes result from compulsive ingestion of alcohol that supersedes nutritional intake (see Chap. 30). Indeed, this syndrome usually is found in 40- to 70-year-old clients with alcoholism and a history of steady and progressive alcohol intake. In time, they develop a vitamin B₁ (thiamin) deficiency that directly interferes with glucose production (the brain’s main nutrient), resulting in symptomatology (Sadock & Sadock, 2007). Clients have great difficulty with recent memory, specifically learning new information. Because they cannot recall recent events, they fill in memory gaps with fabricated or imagined data (confabulation). This is truly a case of anterograde amnesia. Clients have no awareness of their memory defect, nor do they care.

The prognosis for people experiencing amnestic disorders varies greatly. As with other cognitive disorders, etiology determines duration and severity. With Wernicke-Korsakoff syndrome, administration of thiamin can help alleviate some ataxia. Generally, however, memory impairment remains.

Figure 31.10 Adult day care centers can provide respite outlets for family members who have to work or need a reprieve from the ongoing work involved in preserving the health and safety of clients with dementia. They also may provide a socialization outlet, particularly for clients with mild to moderate problems.
dying and death, and emotional responses of family members struggling with their own fears and guilt challenge the physical stamina and mental acumen of the most dedicated and experienced nurses.

To preserve “self,” nurses overcome with responsibilities may begin to burn out. Some nurses may begin to approach client care with a “policy-only” mentality and sequester themselves emotionally from situations or interactions. They may personally develop problems with substances and health and may engage in frequent absenteeism, tardiness, and turnover. Nurses who find themselves burning out must recognize the signs of this stress reaction and take steps to intervene before becoming locked into a pattern. Those who notice signs of burnout should seek help from healthcare professionals and their supervisors.

**Nurse’s Self-Care**

Nurses working with clients who have dementia may experience challenging feelings that arise from knowing there is, as yet, no cure for the ongoing cerebral degeneration. Those who work with clients who have dementia deliver highly stressful care. In nursing homes especially, staff members face arduous work environments with intense labor and client demands. Debilitating illnesses, the psychological overlay of dying and death, and emotional responses of family members struggling with their own fears and guilt challenge the physical stamina and mental acumen of the most dedicated and experienced nurses.

To preserve “self,” nurses overcome with responsibilities may begin to burn out. Some nurses may begin to approach client care with a “policy-only” mentality and sequester themselves emotionally from situations or interactions. They may personally develop problems with substances and health and may engage in frequent absenteeism, tardiness, and turnover. Nurses who find themselves burning out must recognize the signs of this stress reaction and take steps to intervene before becoming locked into a pattern. Those who notice signs of burnout should seek help from healthcare professionals and their supervisors.

**Checkpoint Questions**

13. What is the hallmark of amnestic disorders?

14. What is confabulation?

**Chapter Summary**

- Cognitive disorders appear throughout the general population. They are especially prominent among older adults.
- Possible etiologies of cognitive disorders include primary brain disease, systemic disturbances, influences of exogenous substances, and withdrawal and residual effects of exogenous substances.
- Aberrant behaviors associated with cognitive disorders may include deficits in the sensorium, attention span, orientation, perception, and memory.
- Symptoms of cognitive disorders may be approached in terms of acute onset and chronic progression.
- Gathering and analyzing assessment data for a client with a cognitive disorder requires participation of family members or friends who have been in close contact with the client.
4. The nurse questions the wife of a client with dementia to assess if she is at risk for depression or anxiety related to her caregiving activities. Which of the following statements or questions would be most useful in eliciting information?
   a. “You must feel overwhelmed by your caregiving responsibilities. Tell me about it.”
   b. “Why don’t you tell me about what your usual day is like?”
   c. “Do you feel stressed by your caregiving responsibilities?”
   d. “Do you wish you had more help with your husband?”

5. A client with early-stage Alzheimer’s disease is started on donepezil. The nurse is evaluating the caregiver’s understanding of the medication and determines that the caregiver has understood the instructions when she makes which of the following statements?
   a. “My husband will only need to take this medication once a day.”
   b. “This medicine will not affect his stomach and can be taken between meals.”
   c. “This medication will prevent my husband’s memory problems from worsening.”
   d. “This medication may cause urinary retention. I’ll monitor his intake and output.”

Study Questions

1. Delirium develops in a 78-year-old man recovering from emergency hip surgery. He seems to be hallucinating and is mildly confused. Which of the following would the nurse do first?
   a. Loosely apply a vest restraint.
   b. Obtain an order for haloperidol.
   c. Arrange for an unlicensed assistant to sit with the client.
   d. Move the client to a room close to the nurse’s station.

2. An 82-year-old woman with no history of neurologic dysfunction is admitted to the hospital with a possible bowel obstruction. She has been vomiting for several days. In addition to managing her medical care, nurses are monitoring the client for signs of delirium. Which of the following assessment findings would suggest that delirium may be developing in the client?
   a. The client removes her IV line and tries to climb over the side rails to get out of bed.
   b. The client has trouble finding the right word when speaking.
   c. The client requests pain medication frequently.
   d. The client is not sleeping well at night.

3. A 70-year-old woman with dementia, Alzheimer’s type lives at home with her husband, who is her full-time caregiver. The nurse is teaching the husband about interventions to prevent injury. Which of the following suggestions would be most appropriate?
   a. Put childproof caps on bottles containing cleaning fluids.
   b. Put cleaning fluids on a high shelf.
   c. Lock cleaning fluids in a cabinet in the kitchen.
   d. Store cleaning fluids in plain bottles in the garage.

Critical Thinking Questions

1. Reread CASE VIGNETTE 31.1 and CASE IN POINT 31.1. Compare how the memory of each client is affected. What are the differences and similarities in behavior?

2. Compare and contrast the prognoses for both clients.

3. What nursing interventions would be appropriate for each client?

4. Would you work with the families differently? How and why?


75 years or older. *Journal of Neurology, Neurosurgery and Psychiatry, 74*(5), 720.


web resources

Alzheimer’s Association: [www.alz.org](http://www.alz.org)

Alzheimer’s Disease Education and Referral (ADEAR) Center: [http://alzheimer’s.org](http://alzheimer’s.org)

Children of Aging Parents (CAPs): [www.aoa.dhhs.gov/coa/dir77.html](http://www.aoa.dhhs.gov/coa/dir77.html)

Eldercare Locator: [www.aoa.dhhs.gov/elderpage/locator.html](http://www.aoa.dhhs.gov/elderpage/locator.html)