The clarity and purpose of an individual’s personal journey depend on the ability to reflect on its meaning. Cognition represents a fundamental human feature that distinguishes living from existing. This mental capacity has a distinctive, personalized impact on the individual’s physical, psychological, social, and spiritual conduct of life. For example, the ability to “remember” the connections between related actions and how to initiate them depends on cognitive processing. Moreover, this cognitive processing has a direct relationship to activities of daily living. Although primarily an intellectual and perceptual process, cognition is closely integrated with an individual’s emotional and spiritual values. When human beings can no longer understand facts or connect the appropriate feelings to events, they have trouble responding to the complexity of life’s challenges. Emotions take a back seat to profound disturbances in cognitive processing that
either cloud or destroy the meaning of the journey. The labyrinth of current knowledge about cognitive disorders requires a compassionate understanding of the client and family. Nursing interventions are focused on protecting patient dignity, preserving functional status, and promoting quality of life for cognitively impaired clients.

There are three main cognitive disorders: delirium, dementia, and amnestic disorder. Cognitive disorder not otherwise specified is a category defined by the Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR) that allows for the diagnosis of cognitive disorders that do not meet the criteria for delirium, dementia, or amnestic disorders (American Psychiatric Association [APA], 2000). Cognitive disorders not otherwise specified are presumed to be caused by a specific medical condition, a pharmacologically active agent, or possibly both (Sadock & Sadock, 2004). See Figure 21-1 for the location of these disorders on the mental health continuum.

Figure 21-2 identifies the three main cognitive disorders and gives the DSM-IV-TR criteria for each. This chapter addresses the broad categories of delirium and dementia because these are by far the most common conditions that nurses encounter.

**PREVALENCE**

Delirium “is characterized by a disturbance of consciousness and a change in cognition such as impaired attention span and disturbances of consciousness, that develop over a short period” (APA, 2000, p. 135; Sadock & Sadock, 2004, p. 46). Delirium is always secondary to another condition, such as a general medical condition or substance use (drugs of abuse, a medication, or toxin exposure), or it may have multiple causes. When the cause cannot be determined, delirium is classified as delirium not otherwise specified. Delirium is a transient disorder, and if the underlying medical cause is corrected, complete recovery should occur. Delirium secondary to substance abuse is discussed in Chapter 27. This chapter highlights delirium secondary to medical conditions, because delirium is one of the most commonly encountered mental disorders in medical practice; it is often overlooked or misdiagnosed.

Delirium is a significant risk for all hospitalized and elderly medically ill people. As many as 60% of nursing home residents 75 years of age or older may be delirious at any one time and up to 80% of those with
terminal illness develop delirium near death (APA, 2000).

Dementia usually develops more slowly and is characterized by multiple cognitive deficits that include impairment in memory without impairment in consciousness (Sadock & Sadock, 2004). The majority of dementias are irreversible; those dementias that have a reversible component are secondary to other pathological processes (e.g., neoplasms, trauma, infections, and toxin exposure). When the underlying causes are treated, the dementia often improves. However, most dementias, such as dementias of the Alzheimer type, are related to a primary encephalopathy. Alzheimer’s disease accounts for 60% to 80% of all dementias in the United States. Vascular dementia, dementia with Lewy bodies, and frontotemporal dementia together account for 15% to 20% of dementias; other disorders (normal-pressure hydrocephalus, vita-

<table>
<thead>
<tr>
<th>COGNITIVE DISORDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Delirium</strong></td>
</tr>
<tr>
<td>A. Disturbance of consciousness (i.e., reduced clarity of awareness of the environment with reduced ability to focus, sustain, or shift attention).</td>
</tr>
<tr>
<td>B. A change in cognition (memory deficit, disorientation, language disturbance) or the development of a perceptual disturbance that is not better accounted for by a preexisting, established, or evolving dementia.</td>
</tr>
</tbody>
</table>
| C. The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.  
  Due to: |
| 1. A general medical condition  
  or  
  2. Substance-induced (intoxication or withdrawal)  
  or  
  3. Multiple etiologies (both 1 and 2 above)  
  or  
  4. Not known (not otherwise specified) |
| **Amnestic Disorder** |
| A. The development of memory impairment as manifested by impairment in the ability to learn new information or the ability to recall previously learned information. |
| B. The memory disturbance causes significant impairment in social or occupational functioning and represents a significant decline from a previous level of functioning. |
| C. The memory disturbance does not occur exclusively during the course of a delirium or a dementia. |
| **Dementia** |
| A. The development of multiple cognitive deficits manifested by both: |
| 1. Memory impairment (impaired ability to learn new information or to recall previously learned information). |
| 2. One (or more) of the following cognitive disturbances: |
| (a) Aphasia (language disturbance) |
| (b) Apraxia (impaired ability to carry out motor activities despite intact motor function) |
| (c) Agnosia (failure to recognize or identify objects despite intact sensory function) |
| (d) Disturbance in executive functioning (i.e., planning, organizing, sequencing, abstracting) |
| B. The cognitive deficits in criteria A1 and A2 each cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning. |


The average lifetime prevalence of Alzheimer’s disease is about 5% by age 65, 10% to 15% by age 75, and 20% to 40% by age 85 (Alzheimer’s Disease and Related Disorders Association [ADRSA], 2004). Primary dementias have no known cause or cure; thus, they are progressive and irreversible.

Amnestic disorder is characterized by loss in both short-term memory (including the inability to learn information) and long-term memory, sufficient to cause some impairment in the person’s functioning (Kaplan & Kaplan, 2004; Kochanek, Smith, & Andersen, 2001). This memory impairment exists in the absence of other significant cognitive impairments. These amnestic disorders are always secondary to underlying causes and are classified, for example, as general medical condition, substance induced; persistent amnestic disorder; and amnestic disorder not otherwise specified.
Delirium

Nurses frequently encounter delirium on medical and surgical units in the general hospital setting. During certain phases of a hospital stay, confusion may be noted (e.g., after surgery or after the introduction of a new drug). The second or third hospital day may herald the onset of confusion for older people and difficulty adjusting to an unfamiliar environment.

Delirium occurs more frequently in elderly than in younger clients. Surgery, drugs, urinary tract infections, pneumonia, cerebrovascular disease, and congestive heart failure are some of the most common causes. Delirium is also commonly seen in children with fever.

The essential feature of delirium is a disturbance in consciousness coupled with cognitive difficulties. Thinking, memory, attention, and perception are typically disturbed. The clinical manifestations of delirium develop over a short period (hours to days) and tend to fluctuate during the course of the day. Sundowning, in which symptoms and problem behaviors become more pronounced in the evening, may occur in both delirium and dementia.

Because delirium increases psychological stress, supportive interventions that lower anxiety and promote calm and security can foster a sense of control. Clients with delirium may appear withdrawn, agitated, or psychotic. Also, underlying personality traits often become exaggerated.

The priorities of treatment are to identify the cause and make an appropriate medical or surgical intervention. If the underlying disorder is corrected, complete recovery is possible. If, however, the underlying disorder is not corrected and persists, sustained neuronal damage can lead to irreversible changes. Box 21-1 lists common causes of delirium. Nursing concerns therefore center on the following:

- Performing a comprehensive nursing assessment to aid in identifying the cause
- Assisting with proper health management to eradicate the underlying cause

### TABLE 21-1

<table>
<thead>
<tr>
<th></th>
<th>Delirium</th>
<th>Dementia</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
<td>Sudden, over hours to days</td>
<td>Slowly, over months</td>
<td>May have been gradual with exacerbation during crisis or stress</td>
</tr>
<tr>
<td>Cause or contrib-</td>
<td>Hypoglycemia, fever, dehydration, hypotension; infection, other conditions that disrupt body’s homeostasis; adverse drug reaction; head injury; change in environment (e.g., hospitalization); pain; emotional stress</td>
<td>Alzheimer’s disease, vascular disease, human immunodeficiency virus infection, neurological disease, chronic alcoholism, head trauma</td>
<td>Lifelong history, losses, loneliness, crises, declining health, medical conditions</td>
</tr>
<tr>
<td>uting factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognition</td>
<td>Impaired memory, judgment, calculations, attention span; can fluctuate through the day</td>
<td>Impaired memory, judgment, calculations, attention span, abstract thinking; agnosia</td>
<td>Difficulty concentrating, forgetfulness, inattention</td>
</tr>
<tr>
<td>Level of conscious</td>
<td>Altered</td>
<td>Not altered</td>
<td>Not altered</td>
</tr>
<tr>
<td>Activity level</td>
<td>Can be increased or reduced; restlessness, behaviors may worsen in evening (sundowning); sleep-wake cycle may be reversed</td>
<td>Not altered; behaviors may worsen in evening (sundowning)</td>
<td>Usually decreased; lethargy, fatigue, lack of motivation; may sleep poorly and awaken in early morning</td>
</tr>
<tr>
<td>Emotional state</td>
<td>Rapid swings; can be fearful, anxious, suspicious, aggressive, have hallucinations and/or delusions</td>
<td>Flat; delusions</td>
<td>Extreme sadness, apathy, irritability, anxiety, paranoid ideation</td>
</tr>
<tr>
<td>Speech and</td>
<td>Rapid, inappropriate, incoherent, rambling</td>
<td>Incoherent, slow (sometimes due to effort to find the right word), inappropriate, rambling, repetitious</td>
<td>Slow, flat, low</td>
</tr>
<tr>
<td>language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prognosis</td>
<td>Reversible with proper and timely treatment</td>
<td>Not reversible; progressive</td>
<td>Reversible with proper and timely treatment</td>
</tr>
</tbody>
</table>
Preventing physical harm due to confusion, aggression, or electrolyte and fluid imbalance
Using supportive measures to relieve distress

**Application of the Nursing Process**

**ASSESSMENT**

**Overall Assessment**

Generally, the nurse suspects the presence of delirium when a client abruptly develops a disturbance in consciousness that is manifested in reduced clarity of awareness of the environment. The person may have difficulty with orientation, first to time, then to place, and last to person. For example, a man with delirium may think that the year is 1972 instead of the correct year, that the hospital is home, and that the nurse is his wife. Orientation to person is usually intact to the extent that the person is aware of the self’s identity. The ability to focus, sustain, or shift attention is impaired.

Questions need to be repeated because the individual's attention wanders, and the person might easily get off track and need to be refocused. Conversation is made more difficult because the person may be easily distracted by irrelevant stimuli.

Fluctuating levels of consciousness are unpredictable. Disorientation and confusion are usually markedly worse at night and during the early morning. In fact, some clients may be confused or delirious only at night and may remain lucid during the day. Some clinicians use the Mini-Mental State Examination to screen or follow the progress of an individual with delirium.

Nursing assessment includes (1) cognitive and perceptual disturbances, (2) physical needs, and (3) mood and behavior.

**Cognitive and Perceptual Disturbances**

It may be difficult to engage delirious persons in conversation because they are easily distracted and display marked attention deficits. Memory is impaired. In mild delirium, memory deficits are noted on careful questioning. In more severe delirium, memory problems usually take the form of obvious difficulty in processing and remembering recent events. For example, the person might ask when a son is coming to visit, even though the son left only an hour earlier.

Perceptual disturbances are also common. Perception is the processing of information about one’s internal and external environment. Various misinterpretations of reality may take the form of illusions or hallucinations.

**Illusions** are errors in perception of sensory stimuli. For example, a person may mistake folds in the bedclothes for white rats or the cord of a window blind for a snake. The stimulus is a real object in the environment; however, it is misinterpreted and often becomes the object of the client’s projected fear. Illusions, unlike delusions or hallucinations, can be explained and clarified for the individual.

**Hallucinations** are false sensory stimuli (see Chapter 20). Visual hallucinations are common in delirium. Tactile hallucinations may also be present. For example, delirious individuals may become terrified when they “see” giant spiders crawling over the bedclothes or “feel” bugs crawling on or under their bodies. Auditory hallucinations occur more often in other psychiatric disorders, such as schizophrenia and depression.

The delirious individual generally possesses an awareness that something is very wrong. For example, the delirious person may state, “My thoughts are all

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**BOX 21-1**

**Common Causes of Delirium**

Postoperative states
Drug intoxications and withdrawals
- Alcohol, anxiolytics, opioids, and central nervous system stimulants (e.g., cocaine and crack cocaine)
Infections
- Systemic: pneumonia, typhoid fever, malaria, urinary tract infection, and septicemia
- Intracranial: meningitis and encephalitis
Metabolic disorders
- Dehydration
- Hypoxia (pulmonary disease, heart disease, and anemia)
- Hypoglycemia
- Sodium, potassium, calcium, magnesium, and acid-base imbalances
- Hepatic encephalopathy or uremic encephalopathy
- Thiamine (vitamin B1) deficiency (Wernicke’s encephalopathy)
- Endocrine disorders (e.g., thyroidism or parathyroidism)
- Hypothermia or hyperthermia
- Diabetic acidosis
Drugs
- Digitalis, steroids, lithium, levodopa, anticholinergics, benzodiazepines, central nervous system depressants, tricyclic antidepressants
- Central anticholinergic syndrome due to use of multiple drugs with anticholinergic side effects
Neurological diseases
- Seizures
- Head trauma
- Hypertensive encephalopathy
Tumor
- Primary cerebral
Psychosocial stressors
- Relocation or other sudden changes
- Sensory deprivation or overload
- Sleep deprivation
- Immobilization
- Pain

- Preventing physical harm due to confusion, aggression, or electrolyte and fluid imbalance
- Using supportive measures to relieve distress
and misperceptions. Short periods of social interaction help reduce anxiety and may interact with the client whenever the client is awake. Aids, and adequate lighting without glare can maximize orientation to time. Eyeglasses, hearing aids, and adequate lighting without glare can maximize the person’s ability to interpret more accurately what is going on in the environment. The nurse should interact with the client whenever the client is awake. Short periods of social interaction help reduce anxiety and misperceptions.

**Physical Needs**

**Physical Safety.** A person with delirium becomes disoriented and may try to “go home.” Alternatively, a person may think that he or she is home and may jump out of a window in an attempt to get away from “invaders.” Wandering, pulling out intravenous lines and Foley catheters, and falling out of bed are common dangers that require nursing intervention.

An individual experiencing delirium has difficulty processing stimuli in the environment. Confusion magnifies the inability to recognize reality. The physical environment should be made as simple and as clear as possible. Objects such as clocks and calendars can maximize orientation to time. Eyeglasses, hearing aids, and adequate lighting without glare can maximize the person’s ability to interpret more accurately what is going on in the environment. The nurse should interact with the client whenever the client is awake. Short periods of social interaction help reduce anxiety and misperceptions.

**Bacteriological Safety.** Self-care deficits, injury, or hyperactivity or hypoactivity may lead to skin breakdown and may leave a person prone to infection. Often, this condition is compounded by poor nutrition, forced bed rest, and possible incontinence. These areas require nursing assessment and intervention.

**Biophysical Safety.** Autonomic signs, such as tachycardia, sweating, flushed face, dilated pupils, and elevated blood pressure, are often present. These changes must be monitored and documented carefully and may require immediate medical attention.

Changes in the sleep-wake cycle are noted, and in some cases, a complete reversal of the night-day sleep-wake cycle can occur. The client’s level of consciousness may range from lethargy to stupor or from semicoma to hypervigilance. In hypervigilance clients are extraordinarily alert and their eyes constantly scan the room; they may have difficulty falling asleep or may be actively disoriented and agitated throughout the night.

It is also important that the nurse assess all medications, because the nurse is in a position to recognize drug reactions or potential interactions before delirium actually occurs.

**Moods and Physical Behaviors**

The delirious individual’s behavior and mood may change dramatically within a short period. Moods may swing back and forth from fear, anger, and anxiety to euphoria, depression, and apathy. These labile moods are often accompanied by physical behaviors associated with feeling states. A person may strike out from fear or anger or may cry, call for help, curse, moan, and tear off clothing one minute and become apathetic or laugh uncontrollably the next. In short, behavior and emotions are erratic and fluctuating. Lack of concentration and disorientation complicate interventions. The following vignette illustrates the fear and confusion a client may experience when admitted to an intensive care unit (ICU).

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**VIGNETTE**

A 55-year-old married man, Mr. Arnold, is admitted to the ICU after having a three-vessel coronary artery bypass. Mr. Arnold’s surgery has taken longer than usual and has necessitated his remaining on a cardiac pump for 3 hours. He arrives in the ICU without further complications. On awakening from the anesthesia, he hears the nurse exclaim, “I need to get a gas.” Another nurse answers in a loud voice, “Can you take a large needle for the injection?” During this period, Mr. Arnold experiences the need to urinate and asks the nurse very calmly if he can go to the bathroom. Her reply is, “You don’t need to go; you have a tube in.” He again complains about his discomfort and assures the nurse that if she will let him go to the bathroom, he will be fine. The nurse informs Mr. Arnold that he cannot urinate and that he has to keep the “mask” on so that she can get the “gas” and check his “blood levels.” On hearing this, Mr. Arnold begins to implore more loudly and states that he sees the bathroom sign. He assures the nurse that he will only take a minute. In reality, the sign is an exit sign.

To prove to him that a bathroom does not exist in the ICU and that the sign does not indicate a bathroom, the nurse takes off the restraints so that his head can be raised to see the sign. He abruptly breaks away from the nurse’s grasp and runs toward the entrance to the ICU. He discovers a door, which is the entrance to the nurses’ lounge, barricades himself in the room, and pulls out his chest tube, Foley catheter, and intravenous lines. He finds the bathroom that is connected to the lounge. Ten minutes later, the nurses and security personnel break through the barricade and escort Mr. Arnold back to bed.

When he becomes fully alert and oriented a day later, Mr. Arnold tells the nurses his perception of the previous day’s events. Initially, he had thought he had been kidnapped and was being held against his will (the restraints had been tight). When the nurse yelled about blood gas, he had thought she was going to kill him with noxious gas through his face mask (the reason he did not want to wear the face mask). All he could think about was escaping his tormentor and executioner. In this case, the nurse had not assessed the alterations in Mr. Arnold’s mental status and allowed him to get out of bed. The medical jargon and loud voices had perpetuated his confusion and distortion of reality.

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What are some more helpful interventions the nurses could have used? What could the nurses have done differently? What would you have done? What initial nursing actions would you have taken to assess his bladder?
For example, the nurses could have told Mr. Arnold where he was and that the nursing staff were caring for him; they could have better explained the function of his Foley catheter.

**Self-Assessment**

In many cases, delirium is easily associated with a medical disease. First, delirium is usually encountered on a medical or surgical unit; and second, delirium usually responds to specific medical or surgical interventions, depending on the underlying cause. Frequently, this syndrome reverses within a few days or less when the underlying cause is identified and treated. Because the behaviors exhibited by the client can be directly attributed to temporary medical conditions, intense personal reactions are less likely to arise. In fact, intense conflicting emotions are less likely to occur in nurses working with a client with delirium than in nurses working with a client with dementia, which is discussed later in this chapter.

**Assessment Guidelines: Delirium**

1. Assess for fluctuating levels of consciousness, which is key in delirium.
2. Interview family or other caregivers to establish the client’s normal level of consciousness and cognition.
3. Assess for past confusional states (e.g., prior dementia diagnosis).
4. Identify other disturbances in medical status (e.g., infection, dyspnea, edema, presence of jaundice).
5. Identify any electroencephalographic, neuroimaging, or laboratory abnormalities documented in the client’s record.
6. Assess vital signs, level of consciousness, and neurological signs.
7. Assess potential for injury (is the client safe from falls, wandering?).
8. Assess the need for comfort measures (e.g., to address pain or cold, improve positioning).
9. Monitor factors that worsen or improve symptoms.
10. Assess for availability of immediate medical interventions to help prevent irreversible brain damage.
11. Remain nonjudgmental. Confer with other staff readily when questions arise.

**NURSING DIAGNOSIS**

Safety needs play a substantial role in nursing care. Clients with delirium often perceive the environment in a distorted way. Objects in the environment are often misperceived (illusions and/or hallucinations). People and objects may be misinterpreted as threatening or harmful. Clients often act on these misinterpretations. For example, if feeling threatened or thinking that common medical equipment is harmful, the client may pull off an oxygen mask, pull out an intravenous or nasogastric tube, or try to flee. In such a case, the person demonstrates a risk for injury related to confusion, as evidenced by sensory deficits or perceptual deficits.

If fever and dehydration are present, fluid and electrolyte balance will need to be managed. If the underlying cause of the client’s delirium results in fever, decreased skin turgor, decreased urinary output or fluid intake, and dry skin or mucous membranes, then the nursing diagnosis of deficient fluid volume is appropriate. Fluid volume deficit may be related to fever, electrolyte imbalance, reduced intake, or infection.

Perceptions are disturbed during delirium. Hallucinations, distractibility, illusions, disorientation, agitation, restlessness, and/or misperception are major aspects of the clinical picture. When some of these symptoms are present, acute confusion is an appropriate nursing diagnosis.

Because disruption in the sleep-wake cycle may be present, the client may be less responsive during the day and may become disruptively wakeful during the night. Restful sleep is not achieved, day or night; therefore, disturbed sleep pattern related to impaired cerebral oxygenation or disruption in consciousness is a likely diagnosis.

Sustaining communication with a delirious client is difficult. Impaired verbal communication related to cerebral hypoxia or decreased cerebral blood flow, as evidenced by confusion or clouding of consciousness, may be diagnosed.

Fear is one of the most common of all nursing diagnoses and may be related to illusions, delusions, or hallucinations, as evidenced by verbal and nonverbal expressions of fearfulness.

Other nursing concerns include self-care deficit, disturbed thought processes, and impaired social interaction.

Table 21-2 identifies nursing diagnoses for any confused client (with delirium or dementia).

**OUTCOME CRITERIA**

The overall outcome is that the delirious client will return to the premorbid level of functioning. Table 21-3 includes outcomes for acute confusion from the Nursing Outcomes Classification (NOC) (Moorhead, Johnson, & Maas, 2004). However, for many of the diagnoses that we would use for the delirious client, NOC is not specific enough. Although the client can demonstrate a wide variety of needs, risk for injury is always present. Appropriate outcomes are as follows:

- Client will remain safe and free from injury while in the hospital.
During periods of lucidity, client will be oriented to time, place, and person with the aid of nursing interventions, such as the provision of clocks, calendars, maps, and other types of orienting information.

Client will remain free from falls and injury while confused, with the aid of nursing safety measures. Because level of consciousness can change throughout the day, the client needs to be checked for orientation frequently.

### Table 21-2

**Potential Nursing Diagnoses for the Confused Client**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Nursing Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wanders, has unsteady gait, acts out fear from hallucinations or illusions, forgets things (leaves stove on, doors open)</td>
<td>Risk for injury</td>
</tr>
<tr>
<td>Awake and disoriented during the night <em>(sundowning)</em>, frightened at night</td>
<td>Disturbed sleep pattern</td>
</tr>
<tr>
<td>Too confused to take care of basic needs</td>
<td>Self-care deficit (specify)</td>
</tr>
<tr>
<td></td>
<td>Ineffective coping</td>
</tr>
<tr>
<td></td>
<td>Functional urinary incontinence</td>
</tr>
<tr>
<td></td>
<td>Imbalanced nutrition: less than body requiremets</td>
</tr>
<tr>
<td></td>
<td>Deficient fluid volume</td>
</tr>
<tr>
<td>Sees frightening things that are not there <em>(hallucinations)</em>, mistakes everyday objects for something sinister and frightening <em>(illusions)</em>, may become paranoid and think that others are doing things to confuse him or her <em>(delusions)</em></td>
<td>Disturbed sensory perception</td>
</tr>
<tr>
<td></td>
<td>Impaired environmental interpretation syndrome</td>
</tr>
<tr>
<td></td>
<td>Disturbed thought processes</td>
</tr>
<tr>
<td>Does not recognize familiar people or places, has difficulty with short-and/or long-term memory, forgetful and confused</td>
<td>Impaired memory</td>
</tr>
<tr>
<td></td>
<td>Impaired environmental interpretation syndrome</td>
</tr>
<tr>
<td></td>
<td>Acute/chronic confusion</td>
</tr>
<tr>
<td>Has difficulty with communication, cannot find words, has difficulty in recognizing objects and/or people, incoherent</td>
<td>Impaired verbal communication</td>
</tr>
<tr>
<td>Devastated over losing place in life as known (during lucid moments), fearful and overwhelmed by what is happening to him or her</td>
<td>Spiritual distress</td>
</tr>
<tr>
<td></td>
<td>Hopelessness</td>
</tr>
<tr>
<td></td>
<td>Situational low self-esteem</td>
</tr>
<tr>
<td></td>
<td>Grieving</td>
</tr>
<tr>
<td>Family and loved ones overburdened and overwhelmed, unable to care for client’s needs</td>
<td>Disabled family coping</td>
</tr>
<tr>
<td></td>
<td>Interrupted family processes</td>
</tr>
<tr>
<td></td>
<td>Impaired home maintenance</td>
</tr>
<tr>
<td></td>
<td>Caregiver role strain</td>
</tr>
</tbody>
</table>

### Table 21-3

**NOC Outcomes Related to Acute Confusion**

*Acute confusion:* Abrupt onset of a cluster of global, transient changes and disturbances in attention, cognition, psychomotor activity, level of consciousness, and/or sleep-wake cycle

<table>
<thead>
<tr>
<th>Nursing Outcome and Definition</th>
<th>Intermediate Indicators</th>
<th>Short-Term Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Orientation: Ability to identify person, place and time accurately*</td>
<td>Identifies correct day</td>
<td>Identifies self</td>
</tr>
<tr>
<td></td>
<td>Identifies correct month</td>
<td>Identifies significant other</td>
</tr>
<tr>
<td></td>
<td>Identifies correct year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identifies correct season</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identifies current place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identifies significant current events</td>
<td></td>
</tr>
<tr>
<td>Neurological Status: Consciousness: Arousal, orientation, and attention to the environment*</td>
<td>Shows cognitive orientation</td>
<td>Opens eyes to external stimuli</td>
</tr>
<tr>
<td></td>
<td>Communicates appropriately for situation</td>
<td>Obey commands</td>
</tr>
<tr>
<td></td>
<td>Makes motor responses to noxious stimuli</td>
<td></td>
</tr>
</tbody>
</table>

The Nursing Interventions Classification (NIC) (Dochterman & Bulechek, 2004) can be used as a guide to develop interventions for a client with delirium (Box 21-2). Medical management of delirium involves treating the underlying organic causes. If the underlying cause of delirium is not treated, permanent brain damage may ensue. Judicious use of antipsychotic or antianxiety agents may also be useful in controlling behavioral symptoms.

A client in acute delirium should never be left alone. Because most hospitals and health facilities are unable to provide one-to-one supervision of the client, family members can be encouraged to stay with the client.

**EVALUATION**

Long-term outcome criteria for a delirious person include the following:
- Client will remain safe.
- Client will be oriented to time, place, and person by discharge.
- Underlying cause will be treated and ameliorated.

### Dementia: Alzheimer’s Disease

There are over 4 million people diagnosed with Alzheimer’s disease. Over 19 million Americans are affected by the disease, including family members and other caretakers of individuals with Alzheimer’s disease. The prediction is that 14 million Americans will be diagnosed with this disease by 2059 (ADRDA, 2004). It is the third most costly disease after heart disease and cancer, with the bulk of the financial burden carried by families. Although many of you reading this textbook will not choose to be psychiatric-mental health nurses, all of you will be confronted with the care of the client with Alzheimer’s disease. You must be prepared to respond. It is a devastating disease.

### BOX 21-2

**Delirium Management (NIC)**

**Definition:** Provision of a safe and therapeutic environment for the patient who is experiencing an acute confusional state

**Activities:**
- Assist with needs related to nutrition, elimination, hydration, and personal hygiene.
- Maintain a hazard-free environment.
- Provide appropriate level of supervision and surveillance to monitor patient and to allow for therapeutic actions as needed.
- Use physical restraints, as needed.
- Avoid frustrating patient by quizzing with orientation questions that cannot be answered.
- Inform patient of person, place, and time, as needed.
- Provide consistent physical environment and daily routine.
- Provide caregivers who are familiar to the patient.
- Use environmental cues (e.g., signs, pictures, clocks, calendars, and color coding of environment) to stimulate memory, reorient, and promote appropriate behavior.
- Provide a low-stimulation environment for patient in whom disorientation is increased by overstimulation.
- Encourage use of aids that increase sensory input (e.g., eyeglasses, hearing aids, and dentures).
- Approach patient slowly and from the front.
- Address patient by name when initiating interaction.
- Reorient patient to health care provider with each contact.
- Communicate with simple, direct, descriptive statements.
- Prepare patient for upcoming changes in usual routine and environment before their occurrence.
- Provide new information slowly and in small doses, with frequent rest periods.
- Focus interpersonal interactions on what is familiar and meaningful to patient.

- Identify etiological factors causing delirium.
- Initiate therapies to reduce or eliminate factors causing delirium.
- Monitor neurological status on an ongoing basis.
- Provide unconditional positive regard.
- Encourage visitation by significant others, as appropriate.
- Recognize and accept patient’s perceptions or interpretation of reality (hallucinations or delusions).
- State your perception in a calm, reassuring, and nonargumentative manner.
- Respond to the theme or feeling tone, rather than the content, of the hallucination or delusion.
- When possible, remove stimuli that create misperception in a particular patient (e.g., pictures on the wall or television).
- Maintain a well-lit environment that reduces sharp contrasts and shadows.
- Verbal acknowledge patient’s fears and feelings.
- Prepare patient for upcoming changes in usual routine.
- Administer prn (as needed) medications for anxiety or agitation.
- Identify etiological factors causing delirium.
- Initiate therapies to reduce or eliminate factors causing delirium.
- Monitor neurological status on an ongoing basis.
- Provide unconditional positive regard.
- Encourage visitation by significant others, as appropriate.
- Recognize and accept patient’s perceptions or interpretation of reality (hallucinations or delusions).
- State your perception in a calm, reassuring, and nonargumentative manner.
- Respond to the theme or feeling tone, rather than the content, of the hallucination or delusion.
- When possible, remove stimuli that create misperception in a particular patient (e.g., pictures on the wall or television).
- Maintain a well-lit environment that reduces sharp contrasts and shadows.
- Client will remain safe.
- Assist with needs related to nutrition, elimination, hydration, and personal hygiene.
- Maintain a hazard-free environment.
- Place identification bracelet on patient.
- Provide appropriate level of supervision and surveillance to monitor patient and to allow for therapeutic actions as needed.
- Use physical restraints, as needed.
- Avoid frustrating patient by quizzing with orientation questions that cannot be answered.
- Inform patient of person, place, and time, as needed.
- Provide a consistent physical environment and daily routine.
- Provide caregivers who are familiar to the patient.
- Use environmental cues (e.g., signs, pictures, clocks, calendars, and color coding of environment) to stimulate memory, reorient, and promote appropriate behavior.
- Provide a low-stimulation environment for patient in whom disorientation is increased by overstimulation.
- Encourage use of aids that increase sensory input (e.g., eyeglasses, hearing aids, and dentures).
- Approach patient slowly and from the front.
- Address patient by name when initiating interaction.
- Reorient patient to health care provider with each contact.
- Communicate with simple, direct, descriptive statements.
- Prepare patient for upcoming changes in usual routine and environment before their occurrence.
- Provide new information slowly and in small doses, with frequent rest periods.
- Focus interpersonal interactions on what is familiar and meaningful to patient.

It is important to distinguish between normal forgetfulness and the memory deficit of Alzheimer’s disease. Severe memory loss is not a normal part of growing older. Slight forgetfulness is a common phenomenon of the aging process (age-associated memory loss), but not memory loss that interferes with one’s activities of daily living. Table 21-4 outlines memory changes in normal aging and memory changes seen in dementia.

Most people who live to a very old age never experience a significant memory loss or any other symptom of dementia. Most of us know of people in their eighties and nineties who lead active lives, with the intellect intact. Margaret Mead, Pablo Picasso, Duke Ellington, Count Basie, Ansel Adams, Sonny Coles, and George Burns are all examples of people who were still active in their careers when they died; all were older than 75 years of age (Picasso was 91 years; George Burns was 100 years). The slow, mild cognitive changes associated with aging should not impede social or occupational functioning.

Dementia, on the other hand, is marked by progressive deterioration in intellectual functioning, memory, and the ability to solve problems and learn new skills; a decline in the ability to perform activities of daily living; and a progressive deterioration of personality accompanied by impairment in judgment. A person’s declining intellect often leads to emotional changes such as mood lability, depression, and aggressive acting out as well as to neurological changes that produce hallucinations and delusions. There are several types of dementia, including dementia of the Alzheimer’s type, vascular dementia, Lewy body disease, Pick’s disease, Huntington’s chorea, alcohol-related dementias (including Korsakoff’s syndrome), Creutzfeldt-Jakob disease, and the dementias associated with Parkinson’s disease, acquired immunodeficiency syndrome (AIDS), and head trauma.

Dementias can be classified as primary or secondary. Primary dementia is not reversible, is progressive, and is not secondary to any other disorder. As mentioned, Alzheimer’s disease accounts for about 70% of all dementias, and vascular dementia accounts for about 20% of all dementias (Kochanek et al., 2001). Both Alzheimer’s and vascular dementias are primary, progressive, and irreversible.

Secondary dementia occurs as a result of some other pathological process (e.g., vascular, metabolic, nutritional, or neurological). AIDS-related dementia is an example of a secondary dementia that is increasingly seen in health care settings. The exact prevalence of AIDS-related dementia is not known, although it is estimated to occur in as many as 40% of individuals with human immunodeficiency virus (HIV) infection and in up to 90% of clients dying of AIDS (Ress, 2003). This phenomenon is now commonly referred to as HIV encephalopathy. Other secondary dementias can result from viral encephalitis, pernicious anemia, folic acid deficiency, and hypothyroidism.

Korsakoff’s syndrome is an example of a secondary dementia and is caused by thiamine (vitamin B₁) deficiency, which may be associated with prolonged, heavy alcohol ingestion. Along with progressive mental deterioration, Korsakoff’s syndrome is marked by peripheral neuropathy, cerebellar ataxia, confabulation, and myopathy (APA, 2000).

Alzheimer’s disease attacks indiscriminately, striking men and women, black and white, rich and poor, and individuals with varying degrees of intelligence. Although the disease can occur at a younger age (early onset), most of those with the disease are 65 years of age or older (late onset).

### Theory

Although the cause of Alzheimer’s disease is not known, numerous hypotheses have been put forward regarding its cause.

### Pathological Findings

#### Alzheimer’s Tangles

Alzheimer’s disease results in cerebral atrophy with neuritic plaques and neurofibrillary tangles, which are microscopic abnormalities in brain tissue. β-amyloid

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**TABLE 21-4**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Normal Aging</th>
<th>Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of change</td>
<td>Slowing</td>
<td>More severe and increasing</td>
</tr>
<tr>
<td></td>
<td>Cautiousness</td>
<td>Variable</td>
</tr>
<tr>
<td>Reduced ability to solve new problems</td>
<td>More severe and increasing</td>
<td></td>
</tr>
<tr>
<td>Mildly impaired memory</td>
<td>More severe and increasing</td>
<td></td>
</tr>
<tr>
<td>Mild decline in fluid intelligence</td>
<td>More severe and increasing intellectual impairment</td>
<td></td>
</tr>
<tr>
<td>Extent of damage</td>
<td>Difficulty in word finding, but no dysphasia, dyspraxia, agnosia</td>
<td>Dysphasia, dyspraxia, agnosia often found</td>
</tr>
<tr>
<td>Rate of change</td>
<td>Very slow change over many years</td>
<td>More rapid though gradual changes</td>
</tr>
</tbody>
</table>
protein is the main component of neuritic plaques, one of the abnormal structures found in the brains of Alzheimer’s clients. These abnormalities can be described as follows:

Neurofibrillary tangles are mainly composed of hyperphosphorylated tau protein and initially form in the neurons in the hippocampus, the part of the brain responsible for recent (short-term) memory. Therefore, memory is negatively affected.

Neuritic plaques are cores of degenerated neuron material that lie free of the cell bodies on the ground substances of the brain. The quantity of plaques has been correlated with the degree of mental deterioration.

Granulovascular degeneration is the filling of brain cells with fluid and granular material. Increased degeneration accounts for increased loss of mental function.

Brain atrophy is observable, with wider cortical sulci and enlarged cerebral ventricles, as demonstrated by computed tomography (CT) and magnetic resonance imaging (MRI) (APA, 2000).

Genetic Findings

Family members of people with Alzheimer’s dementia are at greater risk for developing the disease than are those in the general population (Prasher et al., 2003).

Recent developments have helped in the understanding of Alzheimer’s disease. A study of sibling pairs (N = 292) who showed evidence of late-onset Alzheimer’s disease were studied. The genes that seemed to show the highest hereditary link were on chromosomes 1, 9, 10, and 19 (Alzheimer’s Disease Education and Referral [ADEAR] Center, 2004; Korn, 2000). Although each of these chromosomes is suspected of carrying genetic risk factors for late-onset Alzheimer’s disease, chromosome 19 has received the greatest attention.

The apolipoprotein E (APOE) gene on chromosome 19, which occurs in several different forms, or alleles, has been implicated in late-onset Alzheimer’s disease. The alleles that occur most frequently are the following:

- APOE ε4
- APOE ε2
- APOE ε3

People inherit one APOE allele from each parent. Having one or two copies of the ε4 allele increases a person’s risk of getting Alzheimer’s disease. However, it is important to note that the presence of two copies of the ε4 allele does not guarantee that the person will develop the disease. Some people with two copies of the ε4 allele do not develop clinical signs of Alzheimer’s disease, whereas others with no ε4 alleles do. The ε3 allele is the most common form found in the general population and may play a neutral role in the development of Alzheimer’s disease. The rarer ε2 form appears to be associated with lower risk for the disease (ADEAR Center, 2004).

Herpes simplex virus type 1 (HSV-1) has been found on autopsy in the brains of many elderly people who died with dementia. Researchers believe that HSV-1 in the nervous systems of ε4 allele carriers is a risk factor for Alzheimer’s disease (Strandberg et al., 2003).

Nongenetic Findings

Until recently, the only risk factors that seemed to play a role in noninherited cases of Alzheimer’s disease were increasing age, Down syndrome, and, most likely, head injury.

An interesting research discovery, however, is the finding of inflammation and high cholesterol levels in the brains of clients who died with Alzheimer’s disease. These findings suggest that anti-inflammatory agents and the statins (cholesterol-lowering drugs) may help to prevent Alzheimer’s disease. The Framingham study confirms that elevated homocysteine levels and folic acid deficiency may also be risk factors for Alzheimer’s disease (ADEAR Center, 2002).

Neurochemical Changes

Some studies have indicated that people with Alzheimer’s dementia have drastically reduced levels of the enzyme acetyltransferase, which is needed to synthesize the neurotransmitter acetylcholine. Some theorists propose that the cognitive defects that occur in Alzheimer’s disease, especially memory loss, are a direct result of the reduction in the amount of acetylcholine available to the brain.

There is also ongoing investigation as to the role of estrogen in the development of Alzheimer’s disease. Prior to the release of findings from the Women’s Health Initiative Memory Study, researchers believed that estrogen was protective against Alzheimer’s disease. However, this study demonstrated an increased risk for dementia in postmenopausal women taking estrogen with progesterin (Shumaker et al., 2003).

Application of the Nursing Process

ASSESSMENT

Overall Assessment

Alzheimer’s disease is commonly characterized by progressive deterioration of cognitive functioning. Initially, deterioration may be so subtle and insidious that others may not notice. In the early stages of the
disease, the affected person may be able to compensate for loss of memory. Some people may have superior social graces and charm that give them the ability to hide severe deficits in memory, even from experienced health care professionals. This hiding is actually a form of denial, which is an unconscious protective defense against the terrifying reality of losing one’s place in the world. Family members may also unconsciously deny that anything is wrong as a defense against the painful awareness that a loved one is deteriorating. As time goes on, symptoms become more obvious, and other defensive maneuvers become evident. Confabulation (making up stories or answers to maintain self-esteem when the person does not remember) is noticed. For example, the nurse addresses a client who has remained in a hospital bed all weekend:

Nurse: Good morning, Ms. Jones. How was your weekend?

Client: Wonderful. I discussed politics with the President, and he took me out to dinner.

or

I spent the weekend with my daughter and her family.

Confabulation is not the same as lying. When people are lying, they are aware of making up an answer; confabulation is an unconscious attempt to maintain self-esteem.

Perseveration (the repetition of phrases or behaviors) is eventually seen and is often intensified under stress. The avoidance of answering questions is another mechanism by which the client is able to maintain self-esteem unconsciously in the face of severe memory deficits.

Therefore, (1) denial, (2) confabulation, (3) perseveration, and (4) avoidance of questions are four defensive behaviors the nurse might notice during assessment.

Cardinal symptoms observed in Alzheimer’s disease are the following (APA, 2000):

- **Amnesia or memory impairment.** Initially, the person has difficulty remembering recent events. Gradually, deterioration progresses to include both recent and remote memory.

- **Aphasia** (loss of language ability), which progresses with the disease. Initially, the person has difficulty finding the correct word, then is reduced to a few words, and finally is reduced to babbling or mutism.

- **Apraxia** (loss of purposeful movement in the absence of motor or sensory impairment). The person is unable to perform once-familiar and purposeful tasks. For example, in apraxia of gait, the person loses the ability to walk. In apraxia of dressing, the person is unable to put clothes on properly (may put arms in trousers or put a jacket on upside down).

- **Agnosia** (loss of sensory ability to recognize objects). For example, the person may lose the ability to recognize familiar sounds (auditory agnosia), such as the ring of the telephone, a car horn, or the doorbell. Loss of this ability extends to the inability to recognize familiar objects (visual or tactile agnosia), such as a glass, magazine, pencil, or toothbrush. Eventually, people are unable to recognize loved ones or even parts of their own bodies.

- **Disturbances in executive functioning** (planning, organizing, abstract thinking). The degeneration of neurons in the brain results in the wasting away of working components in the brain. These cells contain memories, receive sights and sounds, cause hormones to secrete, produce emotions, and command muscles into motion.

A person with Alzheimer’s disease loses a personal history, a place in the world, and the ability to recognize the environment and, eventually, loved ones. Alzheimer’s disease robs family and friends, husbands and wives, and sons and daughters of valuable human relatedness and companionship, which results in a profound sense of grief. Alzheimer’s disease robs society of productive and active participants. Because of these devastating effects, it challenges mental health professionals and social agencies, the medical and nursing professions, and researchers looking for possible solutions.

### Diagnostic Tests for Dementia

A wide range of problems may masquerade as dementia and may be mistaken for Alzheimer’s disease. For example, in the elderly depression and dementia present with similar symptoms. It is important that nurses and other health care professionals be able to assess some of the important differences among depression, dementia, and delirium. See Table 21-1 for important differences among these three phenomena.

Other disorders that often mimic dementia include drug toxicity, metabolic disorders, infections, and nutritional deficiencies. A disorder that mimics dementia is sometimes referred to as a pseudodementia. That is, although the symptoms may suggest dementia, a careful examination may reveal another diagnosis altogether. This reinforces the importance of performing a comprehensive assessment when symptoms of dementia are present to identify nondementia causes.

Making a diagnosis of Alzheimer’s disease includes ruling out all other pathophysiological conditions through the history and through physical and laboratory tests, many of which are identified in Box 21-3.

CT, positron emission tomography, and other developing scanning technologies have diagnostic capabilities because they reveal brain atrophy and rule out other conditions, such as neoplasms. The use of mental status questionnaires such as the Mini-Mental State Examination and various other tests to identify deterioration in mental status and brain damage are important parts of the assessment.
Alzheimer’s dementia also meet the studies indicate that many people diagnosed with and delirium however, that dementia and depression or dementia the disorder frequently confused with dementia. Medical and nursing personnel should be cautioned,

Assessment for Stage of the Disease
Alzheimer’s disease is classified according to the stage of the degenerative process. The number of stages defined ranges from three to seven, depending on the source. However, four stages, as discussed subsequently, are commonly used to categorize the progressive deterioration seen in those diagnosed with Alzheimer’s disease. Table 21-5 can be used as a guide as we review the four stages of Alzheimer’s disease and highlight the deficits associated with each stage.

Stage 1: Mild Alzheimer’s Disease. The loss of intellectual ability is insidious. The person with mild Alzheimer’s disease loses energy, drive, and initiative and has difficulty learning new things. Because personality and social behavior remain intact, others tend to minimize and underestimate the loss of the individual’s abilities. The individual may still continue to work, but the extent of the dementia becomes evident in new or demanding situations. Depression may occur early in the disease but usually lessens as the disease progresses. Activities such as doing the marketing or managing finances are noticeably impaired during this phase.

BOX 21-3
Basic Workup for Dementia
- Chest and skull radiographic studies
- Electroencephalography
- Electrocardiography
- Urinalysis
- Sequential multiple analyzer 12-test serum profile
- Thyroid function tests
- Folate level
- Venerale Disease Research Laboratories (VDRL), human immunodeficiency virus tests
- Serum creatinine assay
- Electrolyte assessment
- Vitamin B12 level
- Liver function tests
- Vision and hearing evaluation
- Neuroimaging (when diagnostic issues are not clear)

In addition to performing a complete physical and neurological examination, it is important to obtain a complete medical and psychiatric history, description of recent symptoms, review of medications used, and nutritional evaluation. The observations and history provided by family members are invaluable to the assessment process.

As already mentioned, depression in the elderly is the disorder frequently confused with dementia. Medical and nursing personnel should be cautioned, however, that dementia and depression or dementia and delirium can coexist in the same person. In fact, studies indicate that many people diagnosed with Alzheimer’s dementia also meet the DSM-IV-TR criteria for a depressive disorder.

Assessment for Stage of the Disease
Alzheimer’s disease is classified according to the stage of the degenerative process. The number of stages defined ranges from three to seven, depending on the source. However, four stages, as discussed subsequently, are commonly used to categorize the progressive deterioration seen in those diagnosed with Alzheimer’s disease. Table 21-5 can be used as a guide as we review the four stages of Alzheimer’s disease and highlight the deficits associated with each stage.

Stage 1: Mild Alzheimer’s Disease. The loss of intellectual ability is insidious. The person with mild Alzheimer’s disease loses energy, drive, and initiative and has difficulty learning new things. Because personality and social behavior remain intact, others tend to minimize and underestimate the loss of the individual’s abilities. The individual may still continue to work, but the extent of the dementia becomes evident in new or demanding situations. Depression may occur early in the disease but usually lessens as the disease progresses. Activities such as doing the marketing or managing finances are noticeably impaired during this phase.

Mr. Collins, 56 years of age, is a lineman for a telephone company. He feels that he is getting old. He keeps forgetting things and writes notes to himself on scraps of paper. One day on the job, he forgets momentarily which wires to connect and connects all the wrong ones, causing mass confusion for a few hours. At home, Mr. Collins flies off the handle when his wife suggests that they invite the new neighbors for dinner. It is hard for him to admit that anything new confuses him, and he often forgets names (aphasia) and sometimes loses the thread of conversations. Once, he even forgot his address when his car broke down on the highway. He is moody and depressed and becomes indignant when his wife finds 3 months’ worth of unpaid bills stashed in his sock drawer. Mrs. Collins is bewildered, upset, and fearful that something is terribly wrong.

The rate of progression varies from person to person. Some individuals in stage 1 Alzheimer’s disease decline quickly and may die within 3 years. Others, although their condition worsens, may still function in the community with support. Still others may remain at this level for 3 years or more. The duration of the disease from onset of symptoms to death averages 8 to 10 years but can range from 3 to 20 years (APA, 2000).

Stage 2: Moderate Alzheimer’s Disease. Deterioration becomes evident during the moderate phase. Often, the person with moderate Alzheimer’s disease cannot remember his or her address or the date. There are memory gaps in the person’s history that may fluctuate from one moment to the next. Hygiene suffers, and the ability to dress appropriately is markedly affected. The person may put on clothes backward, button the buttons incorrectly, or not fasten zippers (apraxia). Often, the person has to be coaxed to bathe.

Mood becomes labile, and the individual may have bursts of paranoia, anger, jealousy, and apathy. Activities such as driving are hazardous; families are faced with the difficulty of taking away the car keys from their loved one. Care and supervision become a full-time job for family members. Denial mercifully takes over and protects people from the realization that they are losing control, not only of their minds but also of their live. Along with denial, people begin to withdraw from activities and from others, because they often feel overwhelmed and frustrated when they try to do things that once were easy. They may also have moments of becoming tearful and sad.

As important as it is to recognize all of the deficits of stage 2 disease, it is helpful for caretakers to realize that the client still retains abilities that influence care.
Box 21-4 describes the abilities of clients in the second stage of Alzheimer’s disease.

**BOX 21-4**

**Abilities of the Client in Stage 2 Alzheimer’s Disease**

- Able to initiate familiar activity if supplies are available and within reach
- Able to perform steps of self-care with verbal and tactile cues
- Able to tell stories from past
- Able to read words slowly out loud
- Able to follow simple instructions
- Able to speak in short sentences or phrases; able to make needs known
- Able to sort, stack objects, count
- Able to ambulate if no physical disability is present
- Able to feel and name objects

**VIGNETTE**

For a short period, Mr. Collins is transferred to a less complicated work position after his inability to function is recognized. His wife drives him to work and picks him up. Mr. Collins often forgets what he is doing and stares blankly. He accuses the supervisor of spying on him. Sometimes, he disappears at lunch and is unable to find his way back to work. The transfer lasts only a few months, and Mr. Collins is forced to take an early retirement. At home, Mr. Collins sleeps in his clothes. He loses interest in reading and watching sports on television and often breaks into angry outbursts, seemingly over nothing. Often, he becomes extremely restless and irritable and wanders around the house aimlessly.
Stage 3: Moderate to Severe Alzheimer’s Disease. At the moderate to severe stage, the person is often unable to identify familiar objects or people, even a spouse (severe agnosia). The person needs repeated instructions and directions to perform the simplest tasks (advanced apraxia): “Here is the face cloth, pick up the soap. Now, put water on the face cloth and rub the face cloth with soap.” Often, the individual cannot remember where the toilet is and becomes incontinent. Total care is necessary at this point, and the burden on the family can be emotionally, financially, and physically devastating. The world is very frightening to the person with Alzheimer’s disease because nothing makes sense any longer. Agitation, violence, paranoia, and delusions are commonly seen. Another problem that is frightening to family members and caregivers is wandering behavior. An estimated 60% of people with Alzheimer’s disease wander and are at risk for becoming lost (ADRDA, 2004).

Institutionalization may be the most appropriate recourse at this time, because the level of care is so demanding, and violent outbursts and incontinence may be burdens that the family can no longer handle. The following are some criteria that indicate the need for placement in a skilled nursing facility:

- The person wanders.
- The person is a danger to self and others.
- The person is incontinent.
- The person’s behavior affects the sleep and general health of others.
- The person is totally dependent on others for physical care.

VIGNETTE

Mr. Collins is terrified. Memories come and then slip away. People come and go, but they are strangers. Someone is masquerading as his wife, and it is hard to tell what is real. Things never stay in the same place. Sometimes, people hide the bathroom where he cannot find it. He in turn hides things to keep them safe, but he forgets where he hides them. Buttons and belts are confusing, and he does not know what they are doing there, anyway. Sometimes, he tries to walk away from the terrifying feelings and the strangers. He tries to find something he has lost long ago... if he could only remember what it is.

Stage 4: Late Alzheimer’s Disease. Late in Alzheimer’s disease the following symptoms may occur: agraphia (inability to read or write), hyperorality (the need to taste, chew, and put everything in one’s mouth), blunting of emotions, visual agnosia (loss of ability to recognize familiar objects), and hypermetamorphosis (manifested by touching of everything in sight).

At this stage, the ability to talk, and eventually the ability to walk, is lost. The end stage of Alzheimer’s disease is characterized by stupor and coma. Death frequently is secondary to infection or choking.

VIGNETTE

Mrs. Collins and the children keep Mr. Collins at home until his outbursts become frightening. Once, he is lost for 2 days after he somehow unlocks the front door. Finally, Mrs. Collins has her husband placed in a Veterans Administration (VA) hospital. When his wife comes to visit, Mr. Collins sometimes cries. He never talks and is always tied into his chair when she comes to see him. The staff explain to her that, although Mr. Collins can still walk, he keeps getting into other people’s beds and scaring them. They explain that perhaps he wants comfort and misses human touch. They encourage her visits, even though Mr. Collins does not seem to recognize her. He does respond to music. His wife brings a radio, and when she plays the country and western music he has always loved, Mr. Collins nods and claps his hands.

Mrs. Collins is torn between guilt and love, anger and despair. She is confused and depressed. She is going through the painful process of mourning the loss of the man she has loved and shared a life with for 34 years.

Three months after his admission to the VA hospital, and 8 years after the incident of the crossed wires at the telephone company, Mr. Collins chokes on some food, develops pneumonia, and dies.

Self-Assessment

Nurses working in any setting with cognitively impaired clients are aware of the tremendous responsibility placed on the caregivers. The behavioral problems that these clients display can cause tremendous stress for professional and family caregivers. Taking care of clients who are unable to communicate and who have lost the ability to relate and respond to others is extremely difficult, especially for student nurses or nurses who do not understand dementia or Alzheimer’s disease.

Nurses working in facilities for clients who are cognitively impaired (e.g., nursing homes and extended care facilities) need special education and skills. Education must include information about the process of the disease and effective interventions, as well as knowledge regarding antipsychotic drugs. Support and educational opportunities should be readily available, not just to nurses but also to nurse’s aides, who are often directly responsible for administering basic care.

Because stress is a common occurrence when working with persons with cognitive impairments, staff need to be proactive in minimizing its effects; this can be facilitated by:

- Having a realistic understanding of the disease so that expectations for the client are realistic.
- Establishing realistic outcomes for the client and recognizing when they are achieved. These out-
comes may be as minor as client feeds self with spoon, yet it must be remembered that even the smallest achievement can be a significant accomplishment for the impaired individual.

- Maintaining good self-care. Nurses need to protect themselves from the negative effects of stress by obtaining adequate sleep and rest, eating a nutritious diet, exercising, engaging in relaxing activities, and addressing their own spiritual needs.

### Assessment Guidelines - Dementia

1. Assess to help identify the underlying cause.
2. Explore how well the family is prepared for and informed about the progress of the client’s dementia (e.g., the phases and course of Alzheimer’s disease, vascular dementia, AIDS-related dementia, or dementia associated with multiple sclerosis, lupus erythematosus, or brain injury).
3. Review the medications (herbs, complementary agents) the client is currently taking.
4. Evaluate the client’s current level of cognitive functioning.
5. Discuss with the family members how they are coping with the client and their main issues at this time.
6. Review the resources available to the family. Ask the family members to describe the help they receive from other family members, friends, and community resources. Determine if caregivers are aware of community support groups and resources.
7. Determine the appropriate safety measures needed by the client and arrange for them to be implemented.
8. Evaluate the safety of the client’s home environment (e.g., with regard to wandering, eating inedible objects, falling, engaging in provocative behaviors toward others).
9. Identify the needs of the family for teaching and guidance (e.g., how to manage catastrophic reactions; lability of mood; aggressive behaviors; and nocturnal delirium and increased confusion and agitation at night, or sundowning).

### Nursing Diagnosis

Caring for a client with dementia requires a great deal of patience, creativity, and maturity. The needs of such a client can be enormous for nursing staff and for families who care for their loved ones in the home. As the disease progresses, so do the needs of the client and the demands on the caregivers, staff, and family.

One of the most important areas of concern identified by both staff and families is the client’s safety. Many people with Alzheimer’s disease wander and may be lost for hours or days. Wandering, along with behaviors such as rummaging, may be perceived as purposeful to the person with Alzheimer’s disease. Wandering may result from changes in the physical environment, fear caused by hallucinations or delusions, or lack of exercise. Refer to the Evidence-Based Practice box for protocol for responding to wandering behaviors.

Seizures are common in the later stages of this disease. Injuries from falls and accidents can occur during any stage as confusion and disorientation progress. The potential for burns exists if the client is a smoker or is unattended when using the stove. Prescription drugs can be taken incorrectly, or bottles of noxious fluids can be mistakenly ingested, which results in a medical crisis. Therefore, risk for injury is always present.

As the person’s ability to recognize or name objects is decreased, impaired verbal communication becomes a problem. As memory diminishes and disorientation increases, impaired environmental interpretation syndrome, impaired memory, and confusion occur.

During the course of the disease, people show personality changes, increased vulnerability, and often inappropriate behaviors. Common behaviors include hoarding, regression, and being overly demanding. Therefore, nurses and family members often intervene in behaviors that signal ineffective coping. Family caregivers may experience compromised or even disabling family coping.

Additional family issues may emerge. Perhaps some of the most crucial aspects of the client’s care are support, education, and referrals for the family. The family loses an integral part of its unit. Family members lose the love, the function, the support, the companionship, and the warmth that this person once provided. Caregiver role strain is always present, and planning with the family and offering community support is an integral part of appropriate care. Anticipatory grieving is also an important phenomenon to assess and may be an important target for intervention. Helping the family grieve can make the task ahead somewhat clearer and, at times, less painful. Refer back to Table 21-2 for potential nursing diagnoses for confused and demented clients.

### Outcome Criteria

Families who have a member with dementia are faced with an exhaustive list of issues that need addressing. Table 21-6 provides a checklist that may help the nurse and families identify areas for intervention. Self-care needs, impaired environmental interpretation, chronic confusion, ineffective individual coping, and caregiver role strain are just a few of the areas nurses and other health care members will need to target. See Box 21-5 for some suggestions.
Wandering

Background
Clinically, the causes of wandering behavior in individuals with Alzheimer’s disease remain unidentified, and the behavior poses considerable management problems for both professional and lay caregivers.

Study
This review examined available research that met the study criteria, which included the following: the study had to be written in English or have available English transcripts; wandering had to be operationally defined as a physical activity versus a cognitive distraction; the studies had to be either qualitative or quantitative in data generation. A sample of 31 articles was selected from 278 articles. Articles were reviewed for the following:
- Goal or purpose of the study
- Use of a theoretical framework
- Definition and operationalization of wandering
- Specific research questions or hypotheses
- Sample size and type
- Findings or outcomes

Results of Study
From this review, the researchers were able to define a protocol for responding to wandering behaviors. This protocol specifies the following:
- Assessment criteria, which should incorporate evaluation for cognitive decline and for depression, anxiety, and agitation; determination of the frequency with which behavior problems including wandering occur; identification of what environmental strategies are currently used by formal and informal caregivers; identification of wandering pattern; and assessment of premorbid lifestyle to identify individuals likely to wander.
- Environmental modifications such as providing a safe place to wander; enhancing the visual appeal of the environment; placing grid lines in front of doors to decrease exit seeking; making exits less accessible by covering panic bar with cloth and allowing walking where doors are not in the path; installing safety locks; using less accessible door latches; decreasing clutter; and providing environmental stimulation.
- Technology and safety devices, including such additions as a verbal alarm system and the use of mobile locator devices for quickly locating wanderers.
- Physical and psychological interventions such as assessing and treating depression; increasing structured activities; using music sessions; allowing walking in safe places; and providing regular exercise.
- Caregiving support and education to assist caregivers in their ability to care for the wanderer.

Implications for Nursing Practice
This protocol identifies specific assessment and intervention strategies for nurses involved in the care of the Alzheimer’s client regardless of where the nurse-client encounter occurs. The nurse may encounter this client in an inpatient medical unit, a geriatric psychiatric unit, a skilled nursing facility, an assisted living facility, an adult day treatment program, or the client’s home.

TABLE 21-6

Problems That May Affect Dementia Sufferers and Their Families

<table>
<thead>
<tr>
<th>Problem</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory impairment</td>
<td>Forgets appointments, visits, etc.</td>
</tr>
<tr>
<td></td>
<td>Forgets to change clothes, wash, go to the toilet</td>
</tr>
<tr>
<td></td>
<td>Forgets to eat, take medications</td>
</tr>
<tr>
<td></td>
<td>Loses things</td>
</tr>
<tr>
<td>Disorientation</td>
<td>Time: mixes night and day, mixes days of appointments, wears summer clothes in winter, forgets age</td>
</tr>
<tr>
<td></td>
<td>Place: loses way around house</td>
</tr>
<tr>
<td></td>
<td>Person: has difficulty recognizing visitors, family, spouse</td>
</tr>
<tr>
<td>Need for physical help</td>
<td>Dressing</td>
</tr>
<tr>
<td></td>
<td>Washing, bathing</td>
</tr>
<tr>
<td></td>
<td>Toileting</td>
</tr>
<tr>
<td></td>
<td>Eating</td>
</tr>
<tr>
<td></td>
<td>Performing housework</td>
</tr>
<tr>
<td></td>
<td>Maintaining mobility</td>
</tr>
<tr>
<td>Risks in the home</td>
<td>Falls</td>
</tr>
<tr>
<td></td>
<td>Fire from cigarettes, cooking, heating</td>
</tr>
<tr>
<td></td>
<td>Flooding</td>
</tr>
<tr>
<td></td>
<td>Admission of strangers to home</td>
</tr>
<tr>
<td></td>
<td>Wandering out</td>
</tr>
</tbody>
</table>
TABLE 21-6

Problems That May Affect Dementia Sufferers and Their Families—cont’d

<table>
<thead>
<tr>
<th>Problem</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks outside the home</td>
<td>Competence, judgment, and risks at work</td>
</tr>
<tr>
<td></td>
<td>Driving, road sense</td>
</tr>
<tr>
<td></td>
<td>Getting lost</td>
</tr>
<tr>
<td>Apathy</td>
<td>Little conversation</td>
</tr>
<tr>
<td></td>
<td>Lack of interest</td>
</tr>
<tr>
<td></td>
<td>Poor self-care</td>
</tr>
<tr>
<td>Poor communication</td>
<td>Dysphasia</td>
</tr>
<tr>
<td>Repetitiveness</td>
<td>Repetition of questions or stories</td>
</tr>
<tr>
<td></td>
<td>Repetition of actions</td>
</tr>
<tr>
<td>Uncontrolled emotion</td>
<td>Distress</td>
</tr>
<tr>
<td></td>
<td>Anger or aggression</td>
</tr>
<tr>
<td></td>
<td>Demands for attention</td>
</tr>
<tr>
<td>Uncontrolled behavior</td>
<td>Restlessness day or night</td>
</tr>
<tr>
<td></td>
<td>Vulgar table or toilet habits</td>
</tr>
<tr>
<td></td>
<td>Undressing</td>
</tr>
<tr>
<td></td>
<td>Sexual disinhibition</td>
</tr>
<tr>
<td></td>
<td>Shoplifting</td>
</tr>
<tr>
<td>Incontinence</td>
<td>Urine</td>
</tr>
<tr>
<td></td>
<td>Feces</td>
</tr>
<tr>
<td></td>
<td>Urination or defecation in the wrong place</td>
</tr>
<tr>
<td>Emotional reactions</td>
<td>Depression</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
</tr>
<tr>
<td></td>
<td>Frustration and anger</td>
</tr>
<tr>
<td></td>
<td>Embarrassment and withdrawal</td>
</tr>
<tr>
<td>Other reactions</td>
<td>Suspiciousness</td>
</tr>
<tr>
<td></td>
<td>Hoarding and hiding</td>
</tr>
<tr>
<td>Mistaken beliefs</td>
<td>Still at work</td>
</tr>
<tr>
<td></td>
<td>Parents or spouse still alive</td>
</tr>
<tr>
<td></td>
<td>Hallucinations</td>
</tr>
<tr>
<td>Decision making</td>
<td>Indecisive</td>
</tr>
<tr>
<td></td>
<td>Easily influenced</td>
</tr>
<tr>
<td></td>
<td>Refuses help</td>
</tr>
<tr>
<td></td>
<td>Makes unwise decisions</td>
</tr>
<tr>
<td>Burden on family</td>
<td>Disruption of social life</td>
</tr>
<tr>
<td></td>
<td>Distress, guilt, rejection</td>
</tr>
<tr>
<td></td>
<td>Family discord</td>
</tr>
</tbody>
</table>

**PLANNING**

The planning of care for a client with dementia is geared toward the client’s immediate needs. Refer to Table 21-6 for help in identifying areas of care needed. See Figure 21-3 for the Functional Dementia Scale, which can be used by nurses and families to plan strategies for addressing immediate needs and to track progression of the dementia.

Identifying level of functioning and assessing caregivers’ needs help the nurse identify appropriate community resources. Does the client or family need the following?
- Transportation services
- Supervision and care when primary caregiver is out of the home
- Referrals to day care centers
- Information on support groups within the community
- Meals on Wheels
- Information on respite and residential services
- Telephone numbers for help lines
- Home health aides
- Home health services
- Additional psychopharmaceuticals to manage distressing or harmful behaviors

**INTERVENTION**

The nurse’s attitude of unconditional positive regard is the single most effective tool in caring for demented clients. It induces clients to cooperate with care, reduces catastrophic outbreaks, and increases
**Suggested Outcome Criteria for Dementia**

**Injury**
- Client will remain safe in the hospital or at home.
- With the aid of an identification bracelet and neighborhood or hospital alert, client will be returned within 1 hour of wandering.
- Client will remain free of danger during seizures.
- With the aid of interventions, client will remain burn free.
- With the aid of guidance and environmental manipulation, client will not hurt himself or herself if a fall occurs.
- Client will wear prescribed glasses or hearing aid each day.

**Communication**
- Client will communicate needs.
- Client will answer yes or no appropriately to questions.
- Client will state needs in alternative modes when he or she is aphasic (e.g., will signal correct word on hearing it or will refer to picture or label).
- Client will wear prescribed glasses or hearing aid each day.

**Caregiver Role Strain**
- Family members will have the opportunity to express “unacceptable” feelings in a supportive environment.
- Family members will have access to professional counseling.
- Family members will name two organizations within their geographical area that can offer support.

**Impaired Environmental Interpretation: Chronic Confusion**
- Client will acknowledge the reality of an object or a sound that was misinterpreted (illusion), after it is pointed out.
- Client will state that he or she feels safe after experiencing delusions or illusions.
- Client will remain nonaggressive when experiencing paranoid ideation.

**Self-Care Needs**
- Client will participate in self-care at optimal level.
- Client will be able to follow step-by-step instructions for dressing, bathing, and grooming.
- Client will put on own clothes appropriately, with aid of fastening tape (Velcro) and nursing supervision.
- Client’s skin will remain intact and free from signs of pressure.

---

**FUNCTIONAL DEMENTIA SCALE**

Circle one rating for each item:
1. None or little of the time  
2. Some of the time  
3. Good part of the time  
4. Most or all of the time

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1. Has difficulty in completing simple tasks on own (e.g., dressing, bathing, doing arithmetic).</td>
</tr>
<tr>
<td>2</td>
<td></td>
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<td></td>
<td>2. Spends time either sitting or in apparently purposeless activity.</td>
</tr>
<tr>
<td>3</td>
<td></td>
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<td></td>
<td>3. Wanders at night or needs to be restrained to prevent wandering.</td>
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<tr>
<td>4</td>
<td></td>
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<td></td>
<td>4. Hears things that are not there.</td>
</tr>
<tr>
<td>5</td>
<td></td>
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<td></td>
<td>5. Requires supervision or assistance in eating.</td>
</tr>
<tr>
<td>7</td>
<td></td>
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<td></td>
<td>7. Appearance is disorderly if left to own devices.</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>8. Moans.</td>
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<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td>9. Cannot control bowel function.</td>
</tr>
<tr>
<td>10</td>
<td></td>
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<td></td>
<td>10. Threatens to harm others.</td>
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<tr>
<td>12</td>
<td></td>
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<td></td>
<td>12. Needs to be watched so doesn’t injure self (e.g., by careless smoking, leaving the stove on, falling).</td>
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<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td>13. Destroys materials around him/her (e.g., breaks furniture, throws food trays, tears up magazines).</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td>14. Shouts or yells.</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>15. Accuses others of doing bodily harm or stealing his or her possessions — when you are sure the accusations are not true.</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td>16. Is unaware of limitations imposed by illness.</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td>17. Becomes confused and does not know where he or she is.</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>18. Has trouble remembering.</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td>19. Has sudden changes of mood (e.g., gets upset, angered, or cries easily).</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>20. If left alone, wanders aimlessly during the day or needs to be restrained to prevent wandering.</td>
</tr>
</tbody>
</table>

*Based on the Nursing Outcomes Classification; not an exhaustive list.*
family members’ satisfaction with care. Refer to Box 21-6 for NIC interventions related to the management of dementia.

A considerable number of individuals with dementia have secondary behavioral disturbances, including depression, hallucinations and delusions, agitation, insomnia, and wandering. Because these symptoms impair the person’s ability to function, increase the need for supervision, and influence the need for institutionalization, the control of these symptoms is a priority in managing Alzheimer’s disease. Helping the individual achieve the highest possible level of independence and function is the foundation of care.

Intervention with family members is critical. The effects of losing a family member to dementia—that is, watching the deterioration of a person who has had an important role within the family unit and who is loved and is a vital part of his or her family’s history—can be devastating. The interventions discussed subsequently are useful.

**BOX 21-6**

**Dementia Management (NIC)**

**Definition:** Provision of a modified environment for the patient who is experiencing a chronic confusional state.

**Activities:**
- Include family members in planning, providing, and evaluating care, to the extent desired.
- Identify usual patterns of behavior for such activities as sleep, medication use, elimination, food intake, and self-care.
- Determine physical, social, and psychological history of patient, usual habits, and routines.
- Determine type and extent of cognitive deficit(s), using standardized assessment tool.
- Monitor cognitive functioning, using standardized assessment tool.
- Determine behavioral expectations appropriate for patient’s cognitive status.
- Provide a low-stimulation environment (e.g., quiet, soothing music; nonvivid and simple, familiar patterns in décor; performance expectations that do not exceed cognitive processing ability; and dining in small groups).
- Provide adequate but nonirritating lighting.
- Identify and remove potential dangers in environment for patient.
- Place identification bracelet on patient.
- Provide a consistent physical environment and daily routine.
- Prepare for interaction with eye contact and touch, as appropriate.
- Introduce self when initiating contact.
- Address patient distinctly by name when initiating interaction and speak slowly.
- Give one simple direction at a time.
- Speak in a clear, low, warm, respectful tone of voice.
- Use distraction, rather than confrontation, to manage behavior.
- Provide unconditional positive regard.
- Avoid touch and proximity, if this causes stress or anxiety.
- Provide caregivers that are familiar to the patient (e.g., avoid frequent rotations of staff assignments).
- Avoid unfamiliar situations, when possible (e.g., room changes and appointments without familiar people present).
- Provide rest periods to prevent fatigue and reduce stress.
- Monitor nutrition and weight.
- Provide space for safe pacing and wandering.
- Avoid frustrating patient by quizzesing with orientation questions that cannot be answered.
- Provide cues—such as current events, seasons, location, and names—to assist orientation.
- Seat patient at small table in groups of three to five for meals, as appropriate.
- Allow patient to eat alone, if appropriate.
- Provide finger foods to maintain nutrition for patient who will not sit and eat.
- Provide patient a general orientation to the season of the year by using appropriate cues (e.g., holiday decorations, seasonal decorations and activities, and access to contained, out-of-doors area).
- Decrease noise levels by avoiding paging systems and call lights that ring or buzz.
- Select television or radio programs based on cognitive processing abilities and interests.
- Select one-to-one and group activities geared to patient’s cognitive abilities and interests.
- Label familiar photos with names of the individuals in the photos.
- Select artwork for patient’s rooms featuring landscapes, scenery, or other familiar images.
- Ask family members and friends to see patient one or two at a time, if needed, to reduce stimulation.
- Discuss with family members and friends how best to interact with patient.
- Assist family to understand that it may be impossible for patient to learn new material.
- Limit number of choices patient has to make, so as not to cause anxiety.
- Provide boundaries, such as red or yellow tape on the floor, when low-stimulus units are not available.
- Place patient’s name in large block letters in room and on clothing, as needed.
- Use symbols, rather than written signs, to assist patient in locating room, bathroom, or other area.
- Monitor carefully for physiological causes of increased confusion that may be acute and reversible.
- Remove or cover mirrors, if patient is frightened or agitated by them.
- Discuss home safety issues and interventions.

Counseling: Communication Guidelines

How nurses choose to communicate with clients with dementia affects the client’s maintenance of self-esteem and ability to participate in care. People with dementia often find it difficult to express themselves. They

- Have difficulty finding the right words.
- Use familiar words repeatedly.
- Invent new words to describe things.
- Frequently lose their train of thought.
- Rely on nonverbal gestures.

Table 21-7 provides special guidelines for nurses and family members to use in communicating with a cognitively impaired person.

**TABLE 21-7**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chronic Confusion</strong></td>
<td></td>
</tr>
<tr>
<td>1. Always identify yourself and call the person by name at each meeting.</td>
<td>1. Client’s short term memory is impaired—requires frequent orientation to time and environment.</td>
</tr>
<tr>
<td>2. Speak slowly.</td>
<td>2. Client needs time to process information.</td>
</tr>
<tr>
<td>3. Use short, simple words and phrases.</td>
<td>3. Client may not be able to understand complex statements or abstract ideas.</td>
</tr>
<tr>
<td>4. Maintain face-to-face contact.</td>
<td>4. Verbal and nonverbal clues are maximized.</td>
</tr>
<tr>
<td>5. Be near client when talking, one or two arm-lengths away.</td>
<td>5. This distance can help client focus on speaker as well as maintain personal space.</td>
</tr>
<tr>
<td>6. Focus on one piece of information at a time.</td>
<td>6. Attention span of client is poor and client is easily distracted—helps client focus. Too much data can be overwhelming and can increase anxiety.</td>
</tr>
<tr>
<td>7. Talk with client about familiar and meaningful things.</td>
<td>7. Self-expression is promoted and reality is reinforced.</td>
</tr>
<tr>
<td>8. Encourage reminiscing about happy times in life.</td>
<td>8. Remembering accomplishments and shared joys helps distract client from deficit and gives meaning to existence.</td>
</tr>
<tr>
<td>9. When client is delusional, acknowledge client’s feelings and reinforce reality. Do not argue or refute delusions.</td>
<td>9. Acknowledging feelings helps client feel understood. Pointing out realities may help client focus on realities. Arguing can enhance adherence to false beliefs.</td>
</tr>
<tr>
<td>10. If a client gets into an argument with another client, stop the argument and get individuals out of each other’s way. After a short while (5 minutes), explain to each client matter-of-factly why you had to intervene.</td>
<td>10. Escalation to physical acting out is prevented. Client’s right to know is respected. Explaining in an adult manner helps maintain self-esteem.</td>
</tr>
<tr>
<td>11. When client becomes verbally aggressive, acknowledge client’s feelings and shift topic to more familiar ground (e.g., “I know this is upsetting for you, because you always cared for others. Tell me about your children.”)</td>
<td>11. Confusion and disorientation easily increase anxiety. Acknowledging feelings makes client feel more understood and less alone. Topics client has mastery over can remind him or her of areas of competent functioning and can increase self-esteem.</td>
</tr>
<tr>
<td>12. Have client wear prescription eyeglasses or hearing aid.</td>
<td>12. Environmental awareness, orientation, and comprehension are increased, which in turn increases awareness of personal needs and the presence of others.</td>
</tr>
<tr>
<td>14. Have clocks, calendars, and personal items (e.g., family pictures or Bible) in clear view of client while he or she is in bed.</td>
<td>14. These objects assist in maintaining personal identity.</td>
</tr>
<tr>
<td>15. Reinforce client’s pictures, nonverbal gestures, Xs on calendars, and other methods used to anchor client in reality.</td>
<td>15. When aphasia starts to hinder communication, alternate methods of communication need to be instituted.</td>
</tr>
</tbody>
</table>

*Based on the Nursing Interventions Classification.*

Health Teaching

Educating families who have a cognitively impaired member is one of the most important areas for nurses. Families who are caring for a member in the home need to know about strategies for communicating and for structuring self-care activities (Table 21-8). Visit the Evolve website for additional family teaching tools regarding the management of challenging behaviors.

Most important, families need to know where to get help. Help includes professional counseling and education regarding the process and the progression of the disease. Families especially need to know about, and be referred to, community-based groups that can help shoulder this tremendous burden (e.g., day care cen-
TABLE 21-8

Family and Health Care Guidelines for Client Self-Care

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dressing and Bathing</strong></td>
<td></td>
</tr>
<tr>
<td>1. Always have client perform all tasks within his or her present capacity.</td>
<td>1. Maintains client’s self-esteem and uses muscle groups; impedes staff burnout; minimizes further regression.</td>
</tr>
<tr>
<td>2. Always have client wear own clothes, even if in the hospital.</td>
<td>2. Helps maintain client’s identity and dignity.</td>
</tr>
<tr>
<td>3. Use clothing with elastic, and substitute fastening tape (Velcro) for buttons and zippers.</td>
<td>3. Minimizes client’s confusion and eases independence of functioning.</td>
</tr>
<tr>
<td>4. Label clothing items with client’s name and name of item.</td>
<td>4. Helps identify client if he or she wanders and gives client additional clues when aphasia or agnosia occurs.</td>
</tr>
<tr>
<td>5. Give step-by-step instructions whenever necessary (e.g., “Take this blouse. . . . Put in one arm . . . now the next arm. . . . Pull it together in the front. . . . Now . . .”)</td>
<td>5. Client can focus on small pieces of information more easily; allows client to perform at optimal level.</td>
</tr>
<tr>
<td>6. Make sure that water in faucets is not too hot.</td>
<td>6. Judgment is lacking in client; client is unaware of many safety hazards.</td>
</tr>
<tr>
<td>7. If client is resistant to performing self-care, come back later and ask again.</td>
<td>7. Moods may be labile, and client may forget but often complies after short interval.</td>
</tr>
<tr>
<td><strong>Nutrition</strong></td>
<td></td>
</tr>
<tr>
<td>1. Monitor food and fluid intake.</td>
<td>1. Client may have anorexia or be too confused to eat.</td>
</tr>
<tr>
<td>2. Offer finger food that client can take away from the dinner table.</td>
<td>2. Increases input throughout the day; client may eat only small amounts at meals.</td>
</tr>
<tr>
<td>4. During periods of hyperorality, watch that client does not eat nonfood items (e.g., ceramic fruit or food-shaped soaps).</td>
<td>4. Client puts everything into mouth; may be unable to differentiate inedible objects made in the shape and color of food.</td>
</tr>
<tr>
<td><strong>Bowel and Bladder Function</strong></td>
<td></td>
</tr>
<tr>
<td>1. Begin bowel and bladder program early; start with bladder control.</td>
<td>1. Establishing same time of day for bowel movements and toileting—in early morning, after meals and snacks, and before bedtime—can help prevent incontinence.</td>
</tr>
<tr>
<td>2. Evaluate use of disposable diapers.</td>
<td>2. Prevents embarrassment.</td>
</tr>
<tr>
<td>3. Label bathroom door as well as doors to other rooms.</td>
<td>3. Additional environmental clues can maximize independent toileting.</td>
</tr>
<tr>
<td><strong>Sleep</strong></td>
<td></td>
</tr>
<tr>
<td>1. Because client may awaken, be frightened, or cry out at night, keep area well lighted.</td>
<td>1. Reinforces orientation, minimizes possible illusions.</td>
</tr>
<tr>
<td>2. Maintain a calm atmosphere during the day.</td>
<td>2. Encourages a calming night’s sleep.</td>
</tr>
<tr>
<td>3. Order nonbarbiturates (e.g., chloral hydrate) if necessary.</td>
<td>3. Barbiturates can have a paradoxical reaction, causing agitation.</td>
</tr>
<tr>
<td>4. If medications are indicated, consider neuroleptics with sedative properties, which may be the most helpful (e.g., haloperidol [Haldol]).</td>
<td>4. Helps clear thinking and sedates.</td>
</tr>
<tr>
<td>5. Avoid the use of restraints.</td>
<td>5. Can cause client to become more terrified and fight against restraints until exhausted to a dangerous degree.</td>
</tr>
</tbody>
</table>

Support

The Alzheimer’s Disease and Related Disorders Association (ADRSA), or simply Alzheimer’s Association, is a national umbrella agency that provides various forms of assistance to persons with the disease and their families. The Alzheimer’s Association has launched Safe Return, the first nationwide program to help locate and return missing people with Alzheimer’s disease and other memory impairments. Wandering is a common behavior during the second and third stages of Alzheimer’s disease, and the Safe Return program offers peace of mind to families. Information regarding housekeeping, home health aides, and companions is also available through this organization. Such outside resources can help prevent
the total emotional and physical fatigue of family members. Family members can call 800-272-3900 to locate the Alzheimer’s Association chapter nearest them. Types of resources that might be available in some communities are found in Table 21-9.

Although many families manage the care of their loved one until death, other families eventually find that they can no longer deal with their loved ones’ labile and aggressive behavior, incontinence, wandering, unsafe habits, or disruptive nocturnal activity. Family members need to know where and how to place their loved one for care if this becomes necessary. Families need information, support, and legal and financial guidance at this time. When the nurse is unable to provide the relevant information, proper referrals by the social worker are needed. Information regarding advance directives, durable power of attorney, guardianship, and conservatorship should be included in the communication with the family. Useful guidelines for families in structuring a safe environment and planning appropriate activities are found in Table 21-10.

### Types of Services That May Be Available to People with Dementia

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Services Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family/caregiver</td>
<td>Caregivers have a right to:</td>
</tr>
<tr>
<td>Family/caregiver</td>
<td>- Easy access to services</td>
</tr>
<tr>
<td>Family/caregiver</td>
<td>- Respite care</td>
</tr>
<tr>
<td>Family/caregiver</td>
<td>- Full involvement in decision making</td>
</tr>
<tr>
<td>Family/caregiver</td>
<td>- Assessment of the needs of the caregiver as well as those of the client</td>
</tr>
<tr>
<td>Family/caregiver</td>
<td>- Information and referral</td>
</tr>
<tr>
<td>Family/caregiver</td>
<td>- Case management: coordination of community resources and follow-up</td>
</tr>
<tr>
<td>Community services</td>
<td>- Adult day care: provides activities, socialization, supervision</td>
</tr>
<tr>
<td>Community services</td>
<td>- Physician services</td>
</tr>
<tr>
<td>Community services</td>
<td>- Protective services: prevent, eliminate, and/or remedy effects of abuse or neglect</td>
</tr>
<tr>
<td>Community services</td>
<td>- Recreational services</td>
</tr>
<tr>
<td>Community services</td>
<td>- Transportation</td>
</tr>
<tr>
<td>Community services</td>
<td>- Mental health services</td>
</tr>
<tr>
<td>Community services</td>
<td>- Legal services</td>
</tr>
<tr>
<td>Home care</td>
<td>- Meals on Wheels</td>
</tr>
<tr>
<td>Home care</td>
<td>- Home health aide services</td>
</tr>
<tr>
<td>Home care</td>
<td>- Homemaker services</td>
</tr>
<tr>
<td>Home care</td>
<td>- Hospice services</td>
</tr>
<tr>
<td>Home care</td>
<td>- Occupational therapy</td>
</tr>
<tr>
<td>Home care</td>
<td>- Paid companion or sitter services</td>
</tr>
<tr>
<td>Home care</td>
<td>- Physical therapy</td>
</tr>
<tr>
<td>Home care</td>
<td>- Skilled nursing</td>
</tr>
<tr>
<td>Home care</td>
<td>- Personal care services: assistance in basic self-care activities</td>
</tr>
<tr>
<td>Home care</td>
<td>- Social work services</td>
</tr>
<tr>
<td>Home care</td>
<td>- Telephone reassurance: regular telephone calls to individuals who are isolated and home-bound*</td>
</tr>
<tr>
<td>Home care</td>
<td>- Personal emergency response systems: telephone-based systems to alert others that a person who is alone is in need of emergency assistance*</td>
</tr>
</tbody>
</table>

*Vital for those living alone.

### Psychopharmacology

#### Cognitive Impairment

There is as yet no cure for Alzheimer’s disease. There are, however, five Alzheimer’s disease drugs approved by the Food and Drug Administration (FDA) that demonstrate positive effects not only on cognition but also on behavior and function in activities of daily living. These drugs include tacrine (Cognex), donepezil (Aricept), rivastigmine (Exelon), galantamine (Reminyl), and memantine (Namenda). All these drugs except memantine work to increase the brain’s supply of acetylcholine, a nerve communicator that is deficient in people with Alzheimer’s disease. Memantine blocks overstimulation by glutamate, which contributes to neurodegenerative disease (O’Boyle, 2003; U.S. FDA, 2003).

**Tacrine (THA, Cognex)** was the first cholinesterase inhibitor to be approved by the U.S. FDA for the treatment of mild to moderate symptoms of Alzheimer’s disease. It improves functioning and slows the
progress of the disease, particularly in the areas of cognition and memory, in about 20% to 50% of clients with Alzheimer’s disease. Unfortunately, tacrine is associated with a high frequency of side effects, including elevated liver transaminase levels, gastrointestinal effects, and liver toxicity. The hepatic effects, along with the inconvenience of multiple dosing, have drastically reduced the use of this drug (Keltner, Zielinski, & Hardin, 2001).

**Donepezil (Aricept)** inhibits acetylcholine breakdown and was approved by the FDA in December 1996. It is the most prescribed of the Alzheimer’s drugs, with 1.7 million people currently taking the drug (ADRDA, 2004). It also appears to slow down deterioration in cognitive functions but without the potentially serious liver toxicity attributed to tacrine. In studies of donepezil, some individuals with Alzheimer’s disease did experience diarrhea and nausea when taking the drug. Donepezil has been shown to slow down cognitive deterioration by about 2 years (Alzheimer’s Association, 2004).

**Rivastigmine (Exelon),** a brain selective acetylcholinesterase inhibitor, was approved in 2000. In clinical trials rivastigmine helped slightly more than half

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**TABLE 21-10**

**Guidelines for Family Care at Home**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safe Environment</strong></td>
<td></td>
</tr>
<tr>
<td>1. Gradually restrict use of the car.</td>
<td>1. As judgment becomes impaired, client may be dangerous to self and others.</td>
</tr>
<tr>
<td>2. Remove throw rugs and other objects in person’s path.</td>
<td>2. Minimizes tripping and falling.</td>
</tr>
<tr>
<td><em>If client is in hospital or living with family:</em></td>
<td></td>
</tr>
<tr>
<td>3. Minimize sensory stimulation.</td>
<td>3. Decreases sensory overload, which can increase anxiety and confusion.</td>
</tr>
<tr>
<td>4. If client becomes verbally upset, listen briefly, give support, then change the topic.</td>
<td>4. Goal is to prevent escalation of anger. When attention span is short, client can be distracted to more productive topics and activities.</td>
</tr>
<tr>
<td>5. Label all rooms and drawers. Label often-used objects (e.g., hairbrushes and toothbrushes).</td>
<td>5. May keep client from wandering into other client’s rooms. Increases environmental clues to familiar objects.</td>
</tr>
<tr>
<td>7. Supervise client when he or she smokes.</td>
<td>7. Danger of burns is always present.</td>
</tr>
<tr>
<td>8. If client has history of seizures, keep padded tongue blades at beside. Educate family on how to deal with seizures.</td>
<td>8. Seizure activity is common in advanced Alzheimer’s disease.</td>
</tr>
<tr>
<td><strong>Wandering</strong></td>
<td></td>
</tr>
<tr>
<td>1. If client wanders during the night, put mattress on the floor.</td>
<td>1. Prevents falls when client is confused.</td>
</tr>
<tr>
<td>2. Have client wear medical alert bracelet that cannot be removed (with name, address, and telephone number). Provide police department with recent pictures.</td>
<td>2. Client can easily be identified by police, neighbors, or hospital personnel.</td>
</tr>
<tr>
<td>3. Alert local police and neighbors about wanderer.</td>
<td>3. May reduce time necessary to return client to home or hospital.</td>
</tr>
<tr>
<td>4. If client is in hospital, have him or her wear brightly colored vest with name, unit, and phone number printed on back.</td>
<td>4. Makes client easily identifiable.</td>
</tr>
<tr>
<td>5. Put complex locks on door.</td>
<td>5. Reduces opportunity to wander.</td>
</tr>
<tr>
<td>6. Place locks at top of door.</td>
<td>6. In moderate and late Alzheimer’s-type dementia, ability to look up and reach upward is lost.</td>
</tr>
<tr>
<td>7. Encourage physical activity during the day.</td>
<td>7. Physical activity may decrease wandering at night.</td>
</tr>
<tr>
<td>8. Explore the feasibility of installing sensor devices.</td>
<td>8. Provides warning if client wanders.</td>
</tr>
<tr>
<td><strong>Useful Activities</strong></td>
<td></td>
</tr>
<tr>
<td>1. Provide picture magazines and children’s books when client’s reading ability diminishes.</td>
<td>1. Allows continuation of usual activities that client can still enjoy; provides focus.</td>
</tr>
<tr>
<td>2. Provide simple activities that allow exercise of large muscles.</td>
<td>2. Exercise groups, dance groups, and walking provide socialization as well as increased circulation and maintenance of muscle tone.</td>
</tr>
<tr>
<td>3. Encourage group activities that are familiar and simple to perform.</td>
<td>3. Activities such as group singing, dancing, reminiscing, and working with clay and paint all help to increase socialization and minimize feelings of alienation.</td>
</tr>
</tbody>
</table>
of the people who took it. The most common side effects are nausea, vomiting, loss of appetite, and weight loss. In most cases these side effects are temporary (ADRDA, 2004).

Galantamine (Reminyl) is a reversible cholinesterase inhibitor approved for use in the United States in February 2001 (CenterWatch, 2001). Galantamine also works to increase the concentration of acetylcholine by blocking the action of acetylcholinesterase, the enzyme that breaks down acetylcholine. Galantamine is prescribed in the first and second stages of Alzheimer’s disease.

Other cholinesterase inhibitors are being developed in other countries and are being studied in clinical trials.

Memantine (Namenda) is a drug that was developed in Germany and marketed there under the name of Axura. It was approved for use in the United States in October 2003 and became available to physicians, patients, and pharmacies in January 2004 (FDA News, 2003). Memantine is the first drug to target symptoms of Alzheimer’s disease during the moderate to severe stages of the disorder. In one study memantine was added to the daily drug regimen of clients already taking donepezil and produced significant additional benefits (O’Boyle, 2003). This drug works by affecting the N-methyl-D-aspartate (NMDA) receptors, another chemical and structural system involved in memory (ADRDA, 2004).

Alzheimer’s Therapy: Future. Perhaps the most exciting development is the start of clinical trials of an amyloid vaccine (AN-1792), which it is hoped will clear the brain of β-amyloid plaques. Scientists have hypothesized that these plaques, found in the brains of people with Alzheimer’s disease, impede nerve cell function and cause nerve cell death (ADRDA, 2004). In a phase I safety study, AN-1792 was administered in multiple dosage regimens to more than 100 clients with mild to moderate Alzheimer’s disease. It appeared to be safe and well tolerated. A phase IIa clinical trial was halted because 15 cases of encephalitis, paralysis, or death occurred in the United States, United Kingdom, and France. Passive immunization is currently being investigated (Sabbagh, 2003).

Additional research is ongoing, with focuses on:

- The development of other cholinesterase inhibitors.
- The use of cholesterol-lowering agents, which is being investigated through multicenter trials.
- The use of antiinflammatory agents as a preventive measure. The Alzheimer’s Disease Anti-Inflammatory Prevention Trial (ADRDA, 2004) is a multicenter trial funded by the National Institutes of Health to determine whether the use of antiinflammatory agents can prevent Alzheimer’s disease in people at risk (70 years of age and older with a first-degree relative with Alzheimer’s disease, senility, dementia, or memory loss).
- The use of neurotrophic agents with the potential to regenerate brain cells.
- The use of diabetic treatments that might decrease blood vessel inflammation in the brain.

Behavioral Symptoms

Other medications are often useful in managing the behavioral symptoms of individuals with dementia, but these need to be used with extreme caution. The rule of thumb for elderly clients is “start low and go slow.” Some of the troubling behaviors exhibited by Alzheimer’s clients with which their caregivers must cope are (1) psychotic symptoms (hallucinations, paranoia), (2) severe mood swings (depression is very common), (3) anxiety (agitation), and (4) verbal or physical aggression (combative). Table 21-11 lists acceptable medications for management of these behavioral symptoms.

Alternative and Complementary Treatments

A number of herbal or all-natural drugs are currently under investigation. However, there is not yet enough scientific evidence concerning their effectiveness or harmfulness. Keep in mind that the designation all-natural or herbal does not mean that a substance is safe. Some alternative treatments being investigated are Ginkgo biloba, dong quai, and vitamins B₆, B₁₂, C, and E (Howes, Perry, & Houghton, 2003) (see the Integrative Therapy box). Refer to the Evolve website as well as the website of the national Alzheimer’s Association (http://www.alz.org) for more on these substances.

EVALUATION

The outcome criteria set for clients with cognitive impairment need to be measurable, be within the capabilities of the client, and be evaluated frequently. As the person’s condition continues to deteriorate, outcomes need to be altered to reflect the person’s diminished functioning. Frequent evaluation and reformulation of outcome criteria and short-term indicators also help diminish staff and family frustration, as well as minimize the client’s anxiety by ensuring that tasks are not more complicated than the person can accomplish. The overall outcomes for treatment are to promote the client’s optimal level of functioning and to retard further regression, whenever possible. Working closely with family members and providing them with the names of available resources and support sources may help increase the quality of life for both the family and the client (see Case Study and Nursing Care Plan 21-1).
KEY POINTS to REMEMBER

- Cognitive disorder is a term that refers to disorders marked by disturbances in orientation, memory, intellect, judgment, and affect resulting from changes in the brain.

- Delirium and dementia are discussed in this chapter because they are the cognitive disorders most frequently seen by health care workers.

- Delirium is marked by acute onset, disturbance in consciousness, and symptoms of disorientation and confusion that fluctuate by the minute, hour, or time of day.

- Delirium is always secondary to an underlying condition; therefore, it is temporary, transient, and may last from hours to days once the underlying cause is treated. If the cause is not treated, permanent damage to neurons can result.

- Dementia usually has a more insidious onset than delirium. Global deterioration of cognitive functioning (e.g., memory, judgment, ability to think abstractly, and orientation) is often progressive and irreversible, depending on the underlying cause.
During the past 4 years, Mr. Ludwik has demonstrated rapidly progressive memory impairment, disorientation, and deterioration in his ability to function, related to Alzheimer's disease. He is a 67-year-old man who retired at age 62 to spend some of his remaining "youth" with his wife and to travel, garden, visit family, and finally implement the plans they made over the previous 40 years. He was diagnosed with Alzheimer's disease at age 63.

Mr. Ludwik has been taken care of at home by his wife and his daughter Daisy. Daisy is divorced and has returned home with her two young daughters. The family members find themselves progressively closer to physical and mental exhaustion. Mr. Ludwik has become increasingly incontinent when he cannot find the bathroom. He wanders away from home constantly, despite close supervision. The police and neighbors bring him back home an average of four times a week. Once, he was lost for 5 days after he had somehow boarded a bus for Pittsburgh, 1000 miles from home. He was robbed and beaten before being found by the police and returned home.

He frequently wanders into his granddaughters' rooms at night while they are sleeping and tries to get into bed with them. Too young to understand that their grandfather is lonely and confused, they fear that he is going to hurt them. Four times in the past 2 weeks, he has fallen while getting out of bed at night, thinking he is in a sleeping bag camping out in the mountains. After a conflicted and painful 2 months, the family places him in a special hospital for people with Alzheimer's disease.

Mrs. Ludwik tells the admitting nurse, Mr. Jackson, that her husband wanders almost all the time. He has difficulty finding the right words for things (aphasia) and becomes frustrated and angry when that happens. Sometimes, he does not seem to recognize the family (agnosia). Once, he thought that Daisy was a thief breaking into the house and attacked her with a broom handle. Telling this story causes Daisy to break down into heavy sobs: "What's happened to my father? He was so kind and gentle. Oh, God... I've lost my father."

Mr. Jackson then focuses his attention on Mrs. Ludwik and her experience. He states, "This a difficult decision for you." He says that he supports their decision to move Mr. Ludwik to the Alzheimer's unit. However, he is also aware that families usually have conflicting and intense emotional reactions of guilt, depression, loss, anger, and other painful feelings. Mr. Jackson suggests that Mrs. Ludwik talk to other families with a cognitively impaired member. "It might help you to know that you are not alone, and having contact with others to share your grief can be healing." One of the groups he suggests is the Alzheimer's Association, a well-known self-help group.

Self-Assessment
Mr. Jackson has worked on his particular unit for 4 years. It is a unit especially designed for cognitively impaired individuals, which makes nursing care easier than on a regular unit. However, Mr. Jackson would be the first to admit that he has come a long way during the time he has worked on the unit.

Four years ago, he found himself getting constantly frustrated and angry. He had entered this special unit enthusiastically and had worked hard setting goals and trying to implement them. However, he thought that no one, especially the clients, cared about what he was doing for them. When the nursing coordinator asked him what made him come to that conclusion, he burst out, "Nothing I do seems to make any difference. . . . No one listens to me."

Mr. Jackson had a lot to learn about Alzheimer's disease, and he found that the more he learned, the more he understood why change took so long or, in some cases, could not take place. He, like everyone before him, learned to become more realistic in formulating goals, which lessened his frustration.

From his co-workers, he also learned many nursing care strategies that increased competent care and decreased frustration. For example, he learned that he could distract certain clients from inappropriate behaviors (e.g., arguing with others or taking things out of other people's rooms) by engaging them in another, enjoyable activity, such as talking about something they were interested in. This reduced Mr. Jackson's initial response of scolding the client, which had usually resulted in escalating the client's anxiety, confusion, and sometimes aggression, and left Mr. Jackson annoyed and upset.

As time progressed, Mr. Jackson found that he was well suited to this kind of nursing. He has an enthusiastic manner, and his patience, wit, and genuine liking of his clients make him an ideal role model for staff new to the unit. He does a lot of teaching on the unit, both formal and informal. He is compiling a workbook for caregivers of the cognitively impaired.
**ASSESSMENT**

**Objective Data**
- Wanders away from home about four times a week
- Was lost for 5 days and was robbed and beaten
- Often incontinent when he cannot find the bathroom
- Has difficulty finding words
- Has difficulty identifying members of the family at times
- Falls out of bed at night
- Has memory impairment
- Is disoriented much of the time
- Gets into bed with granddaughters at night when wandering
- Family undergoing intense feelings of loss and guilt

**Subjective Data**
- “I can’t bear to part with him.”
- “I feel as if I’ve betrayed him.”
- “I’ve lost my father.”

**NURSING DIAGNOSIS (NANDA)**

1. **Risk for injury** related to confusion, as evidenced by wandering
   - Wanders away from home about four times a week
   - Wanders despite supervision
   - Falls out of bed at night
   - Gets into other people's beds
   - Wanders at night

2. **Functional urinary incontinence** related to disturbed cognition, as evidenced by inability to find the toilet
   - Incontinent when he cannot find the bathroom

3. **Self-care deficit** (self-dressing deficits) related to impaired cognitive functioning, as evidenced by impaired ability to put on and take off clothing
   - Sometimes is able to dress with help of wife
   - At other times is too confused to dress self at all

4. **Anticipatory grieving** related to loss and deterioration of family member
   - “I can’t bear to part with him.”
   - “I feel as if I’ve betrayed him.”
   - “I’ve lost my father.”
   - Family undergoing intense feelings of loss and guilt

**PLANNING**

Mr. Jackson plans care to ensure Mr. Ludwik’s safety, to provide for the maintenance of his hygiene needs and incontinence, and to assist Mrs. Ludwik as she deals with her husband’s deterioration.

**OUTCOME CRITERIA (NOC)**

Although Mr. Ludwik has many unmet needs that require nursing interventions, Mr. Jackson decides to focus on the four initial nursing diagnoses. As other problems arise, they will be addressed.
### Nursing Diagnosis

<table>
<thead>
<tr>
<th>Nursing Diagnosis</th>
<th>Long-Term Goals</th>
<th>Short-Term Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Risk for injury related to confusion, as evidenced by wandering</td>
<td>1. Client will remain safe in nursing home.</td>
<td>1a. Throughout nursing home stay, client will not fall out of bed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1b. Throughout nursing home stay, client will wander only in protected area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1c. Client will be returned within 2 hours if he succeeds in escaping from the unit.</td>
</tr>
<tr>
<td>2. Functional urinary incontinence related to disturbed cognition, as evidenced by inability to find the toilet</td>
<td>2. Client will experience less incontinence (fewer episodes) by fourth week of hospitalization.</td>
<td>2a. By the end of 4 weeks, client will participate in toilet training.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2b. By the end of 4 weeks, client will find the toilet most of the time.</td>
</tr>
<tr>
<td>3. Self-care deficit (self-dressing) related to impaired cognitive functioning, as evidenced by impaired ability to put on and take off clothes</td>
<td>3. Client will participate in dressing himself 80% of the time.</td>
<td>3a. By the end of 4 weeks, client will follow step-by-step instructions for dressing most of the time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3b. By the end of 4 weeks, client will dress in own clothes with aid of fastening tape.</td>
</tr>
<tr>
<td>4. Anticipatory grieving related to loss and deterioration of family member</td>
<td>4. All family members will state, in 3 months’ time, that they feel they have more support and are able to talk about their grieving.</td>
<td>4a. After 3 months, family members will state that they have opportunity to express “unacceptable” feelings in supportive environment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4b. After 3 months, family members will state that they have found support from others who have a family member with Alzheimer’s disease.</td>
</tr>
</tbody>
</table>

#### INTERVENTION (NIC)

**Nursing diagnosis:** Risk for injury related to confusion, as evidenced by wandering

**Supporting Data**
- Wanders away from home about four times a week
- Wanders despite supervision
- Falls out of bed at night
- Gets into other people's beds
- Wanders at night

**Outcome criteria:** Client will remain safe in nursing home.
<table>
<thead>
<tr>
<th>Short-Term Goal</th>
<th>Intervention</th>
<th>Rationale</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Throughout nursing home stay, client will not fall out of bed.</td>
<td>1a. Spend time with client on admission.</td>
<td>1a. Lowers anxiety, provides orientation to time and place. Client’s confusion is increased by change.</td>
<td>GOAL MET Mattress on floor prevents falls out of bed.</td>
</tr>
<tr>
<td></td>
<td>1b. Label client’s room in big, colorful letters.</td>
<td>1b. Offers clues in new surroundings.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1c. Remove mattress from bed and place on floor.</td>
<td>1c. Prevents falling out of bed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1d. Keep room well lit at all times.</td>
<td>1d. Provides important environmental clues; helps lower possibility of illusions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1e. Show client clock and calendar in room.</td>
<td>1e. Fosters orientation to time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1f. Keep window shade up.</td>
<td>1f. Allows day-night variations.</td>
<td></td>
</tr>
<tr>
<td>2. Throughout nursing home stay, client will wander only in protected area.</td>
<td>2a. At night, take client to large, protected, well-lit room.</td>
<td>2a. Client is able to wander safely in protected environment.</td>
<td>GOAL MET Client continues to wander at night; with supervision, keeps out of other clients’ rooms most of the time. By fourth week, client starts to nap on couch in large room after snacks during the night.</td>
</tr>
<tr>
<td></td>
<td>2b. Alert physician to check client for cardiac decompensation.</td>
<td>2b. Addresses possible underlying cause of nocturnal wakefulness and wandering.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2c. Offer snacks when client is up—milk, decaffeinated tea, sandwich.</td>
<td>2c. Helps replace fluid and caloric expenditure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2d. Allow soft music on radio.</td>
<td>2d. Helps induce relaxation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2e. Spend short, frequent intervals with client.</td>
<td>2e. Decreases client’s feelings of isolation and increases orientation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2f. Take client to bathroom after snacks.</td>
<td>2f. Helps prevent incontinence.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2g. During day, offer activities that include use of large muscle groups.</td>
<td>2g. For some clients, helps decrease wandering.</td>
<td></td>
</tr>
<tr>
<td>3. Client will be returned within 2 hours if he succeeds in escaping from the unit.</td>
<td>3a. Order medical alert bracelet for client (with name, unit, or hospital, phone number).</td>
<td>3a. If client gets out of hospital, he can be identified.</td>
<td>GOAL MET By fourth week, client wanders off unit only once; is found in lobby and returned by security guard within 45 minutes.</td>
</tr>
<tr>
<td></td>
<td>3b. Place brightly colored vest on client with name, unit, and phone number taped on back.</td>
<td>3b. If client wanders in hospital, he can be identified and returned.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3c. Check client’s whereabouts periodically during the day and especially at night.</td>
<td>3c. Helps monitor client’s activities.</td>
<td></td>
</tr>
</tbody>
</table>

**EVALUATION**

Although Mr. Ludwik continues to display wandering behaviors, his wandering is contained to safe areas of the unit except for one instance when he wanders to the lobby. He is stopped by security and safely returned to the unit within 45 minutes. He has not fallen out of bed. Nursing interventions such as placing his mattress on the floor as well as ensuring adequate lighting increase his safety while at the same time acknowledging that he continues to exhibit wandering behaviors.

Visit the Evolve website at [http://evolve.elsevier.com/Varcarolis](http://evolve.elsevier.com/Varcarolis) for a full case study for this client and more case studies and nursing care plans.
KEY POINTS to REMEMBER—cont’d

- Dementia may be primary (e.g., Alzheimer’s disease, vascular dementia, Pick’s disease, Lewy body disease). In this case, the disease is irreversible.
- Alzheimer’s disease accounts for up to 70% of all cases of dementia, and vascular dementia accounts for about 20%.
- There are various theories regarding the cause of Alzheimer’s disease; none is definitive.
- Signs and symptoms change according to the four stages of Alzheimer’s disease: stage 1 (mild), stage 2 (moderate), stage 3 (moderate to severe), and stage 4 (late).
- The behavioral manifestations of Alzheimer’s disease include confabulation, perseveration, aphasia, apraxia, agnosia, and hyperorality.
- No known cause or cure exists for Alzheimer’s disease, although a number of drugs that increase the brain’s supply of acetylcholine (a nerve communication chemical) are helpful in slowing the progress of the disease.
- People with Alzheimer’s disease have many unmet needs and present many management challenges to their families as well as to health care workers.
- Specific nursing interventions for cognitively impaired individuals can increase communication, safety, and self-care and are described in the chapter. The need for family teaching and support is strong.

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CRITICAL THINKING

1. Mrs. Kendel is an 82-year-old woman who has progressive Alzheimer’s disease. She lives with her husband, who has been trying to care for her in their home. Mrs. Kendel often wears evening gowns in the morning, puts her blouse on backwards, and sometimes puts her bra on backwards outside her blouse. She often forgets where things are. She makes an effort to cook but often confuses frying pans and pots and sometimes has trouble turning on the stove. Once in a while, she cannot find the bathroom in time, often mistaking it for a broom closet. She becomes frightened of noises and is terrified when the telephone or doorbell rings. At times, she cries because she is aware that she is losing her sense of her place in the world. She and her husband have always been close, loving companions, and he wants to keep her at home as long as possible.

A. Help Mr. Kendel by writing out a list of suggestions that he can try at home that might help facilitate (a) communication, (b) activities of daily living, and (c) maintenance of a safe home environment.

B. Identify at least seven interventions that are appropriate to this situation for each of the areas cited above.

C. Identify possible types of resources available for maintaining Mrs. Kendel in her home for as long as possible. Provide the name of one self-help group that you would urge Mr. Kendel to join.

D. Share with your clinical group the name and function of at least three community agencies in your area that could be an appropriate referral for a family in your neighborhood with a member with dementia. (For one, you can call the Alzheimer’s Association at 800-272-3900 to find a local chapter that might help you with this information. Another resource is the ADEAR Center at 800-438-4380; website: http://www.alzheimers.org.)

CHAPTER REVIEW

1. The nurse assessing a client with suspected delirium will expect to find that the client’s symptoms developed
   1. over a period of hours to days.
   2. over a period of weeks to months.
   3. with no relationship to another condition.
   4. during the years of life after middle age.

2. An outcome that would be appropriate for a client with cognitive impairment related to delirium would be
   1. Client will participate fully in self-care from admission on.
   2. Client will have stable vital signs 6 hours after admission.
   3. Client will participate in simple activities that bring enjoyment.
   4. Client will return to the premorbid level of functioning.

3. The nursing diagnosis of highest priority for clients with late Alzheimer’s disease is
   1. risk for injury.
   2. self-care deficit.
   3. chronic low self-esteem.
   4. impaired verbal communication.
Critical Thinking and Chapter Review—cont’d


4. Strategies to help staff caring for cognitively impaired clients avoid developing burnout include
   1. setting realistic client goals.
   2. insulating self from emotional involvement with clients.
   3. sedating clients to promote rest and minimize catastrophic episodes.
   4. encouraging the family to permit the use of restraint to promote client safety.

5. Psychobiological agents showing promise for the treatment of cognitive impairment associated with Alzheimer’s disease include
   1. cholinesterase inhibitors.
   2. herbals, including Ginkgo biloba.
   3. selective serotonin reuptake inhibitors and trazodone.
   4. benzodiazepines and buspirone.

REFERENCES


