DISEASE MANAGEMENT *for* NURSE PRACTITIONERS

NP

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FOREWORD

Disease management is a complex and challenging undertaking. Not only are new pathologies and treatments constantly being discovered but effective disease management requires the recognition and understanding of complex clinical presentations, knowledge of multiple differential diagnoses, familiarity with laboratory and diagnostic evaluations, and the ability to critically analyze findings to determine an appropriate course of action. These challenges must be accomplished in a health care setting that's increasingly fraught with time demands, cost concerns, and disease complexity—all without losing sight of your patients and their unique concerns.

Nurse practitioners (NPs) are particularly well poised to accomplish this undertaking. Recognized as exceptional clinicians, NPs are also known for providing patient-focused care. This care includes focusing on your patients within the context of their lifestyles and circumstances, educating them to maximize their wellness, and assisting them in regaining control of their health.

Disease Management for Nurse Practitioners provides an excellent clinical resource to aid you in providing state-of-the-art, patient-focused care. It includes nearly 300 diseases frequently encountered in ambulatory, subacute, and acute clinical settings—far more than found in other disease references for primary care clinicians. Chapters are organized according to a specific body system or disease category. Each chapter begins with a description of the appropriate physical examination for the body system or disease category involved, including information for interpreting abnormal findings.

For your convenience, a consistent format for each entry includes essential facts about the disease process and management strategies. First, the text presents a succinct definition of the problem and a description of the causes and pathophysiology of the disease. Next, each entry provides the clinical presentation of the disease, including signs and symptoms and possible clinical examination findings, and a list of potential differential diagnoses to consider. Specific guidelines are then discussed for establishing the diagnosis, including appropriate diagnostic testing and interpretation of results. The management section includes pharmacologic and nonpharmacologic treatments as well as surgical intervention, follow-up, and referral guidelines.

The final sections of each entry provide useful and clinically relevant information to assist you with individualizing management strategies for your patients. Patient teaching includes recommendations for advising patients about self-care techniques, dietary and activity alter-

ations, treatment information and options, and when to seek reevaluation. A comprehensive list of complications alerts you to problems patients may encounter. Finally, special considerations offer solutions to monitoring and managing treatment-related problems and special patient situations. These sections cover useful approaches for counseling your patients and their families.

Disease Management for Nurse Practitioners also includes hundreds of quick-reference charts and illustrations offering vital information that further clarifies pathophysiology and treatment options. Helpful logos are also featured, such as *Healthy Living* (covers lifestyle and health behaviors, including stress management, social support, nutrition, exercise, safety, and environment), *Age Alert* (addresses physiologic and psychosocial considerations specific to certain age-groups with certain disorders, and treatments), and *Clinical Caution* (alerts the NP to crucial considerations to prevent severe complications).

Today's health care market requires rapid, accurate, and cost-effective provision of services. *Disease Management for Nurse Practitioners* provides an essential tool to assist you in meeting this demand. This valuable resource can aid you in making rapid and accurate diagnoses and determining appropriate clinical management plans for your patients.

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CONTENTS

1

Psychosocial disorders

Providing care for psychiatric patients requires that you develop a practical, orderly method for dealing with problems as diverse and complex as humanity itself. Your responsibilities include not only planning, implementing, and evaluating care but also establishing a meaningful therapeutic relationship with the patient. When you encounter intractable psychiatric problems, you also need to be keenly aware of your own attitudes and feelings to prevent frustration from hobbling your efforts.

Make sure you're familiar with the revised fourth edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. (See *Understanding the DSM-IV*, page 2.)

ASSESSMENT

Psychiatric assessment refers to the scientific process of identifying a patient's psychosocial problems, strengths, concerns, and treatment goals and evaluating therapeutic interventions. Recognizing psychosocial problems and how they affect health is important in any clinical setting.

Mental status examination

The mental status examination (MSE) is a tool for assessing psychological dysfunction and for identifying the causes of psychopathology. Your responsibilities may include conducting all or a portion of the MSE. The MSE examines the patient's level of consciousness (LOC), general appearance, behavior, speech, mood and affect, intellectual performance, judgment, insight, perception, and thought content.

Level of consciousness

Begin by assessing the patient's LOC, a basic brain function. Identify the intensity of stimulation needed to arouse the patient.

Describe the patient's response to stimulation, including the degree and quality of movement, the content and coherence of speech, and the level of eye opening and eye contact. Finally, describe the patient's actions after the stimulus is removed.

Understanding the DSM-IV

The revised fourth edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* defines a mental disorder as a clinically significant behavioral or psychological syndrome or pattern that's associated with current distress (a painful symptom) or disability (impairment in one or more important areas of functioning) or with a significantly greater risk of suffering, death, pain, disability, or an important loss of freedom. This syndrome or pattern isn't merely an expected, culturally sanctioned response such as grief over the death of a loved one. Whatever its original cause, it must currently be considered a sign of behavioral, psychological, or biological dysfunction.

To add diagnostic detail, the *DSM-IV* uses a multiaxial approach. This flexible approach specifies that every patient must be evaluated on each of five axes.

AXIS I
Clinical disorders — the diagnosis (or diagnoses) that best describes the presenting complaint

AXIS II
Personality disorders; mental retardation

AXIS III
General medical conditions — a description of any concurrent medical conditions or disorders

AXIS IV
Psychosocial and environmental problems that may affect the diagnosis, treatment, and prognosis of the mental disorder

AXIS V
Global assessment of functioning, which is based on a scale of 1 to 100 that allows evaluation of the patient's overall psychological, social, and occupational function

A patient's diagnosis after being evaluated on these five axes may look like this:
Axis I: adjustment disorder with anxiety
Axis II: obsessive-compulsive personality disorder
Axis III: Crohn's disease, acute bleeding episode
Axis IV: death of a father and homelessness
Axis V: GAF — 53 (current).

Impaired LOC may indicate the presence of a medical disorder. If you discover an alteration in consciousness, refer the patient for a more complete medical examination.

General appearance

Appearance helps to indicate the patient's overall mental status. Answer these questions:

- Is the patient's appearance appropriate to his age, sex, and situation?
- Are his skin, hair, nails, and teeth clean?
- Is his manner of dress appropriate?
- If the patient wears cosmetics, are they applied appropriately?
- Does the patient maintain direct eye contact?

Behavior

Describe the patient's demeanor and way of relating to others. Does the patient appear sad, joyful, or expressionless? Does he use appropriate gestures? Does he keep an appropriate distance between himself and others? Does he have distinctive mannerisms, such as tics or tremors?

Indicate the patient's interactions with others. Is he cooperative, mistrustful, embarrassed, hostile, or overly revealing about his personal life? Describe the patient's level of activity. Is he tense, rigid, restless, or calm?

Note extraordinary behavior. Disconnected gestures may indicate that the patient is hallucinating. Pressured, rapid speech or a heightened level of activity may indicate that the patient is in the manic phase of a bipolar disorder.

Speech

Observe the content and quality of the patient's speech. Note an illogical choice of topics, irrelevant or illogical replies to questions, speech defects such as stuttering, excessively fast or slow speech, sudden interruptions, excessive volume, and barely audible speech. Also watch for slurred speech, use of an excessive number of words, or minimal, monosyllabic responses.

Mood and affect

Mood refers to a person's pervading feeling or state of mind. Usually, a patient projects a prevailing mood, though this mood may change throughout the course of a day. *Affect* refers to a person's expression of his mood. Variations in affect are referred to as range of emotion.

To assess mood and affect, begin by asking the patient about his current feelings. Also look for indications of mood in facial expressions and posture.

Does the patient seem able to keep mood changes under control? Mood swings may indicate a physiologic disorder. Medications, recreational drug or alcohol use, stress, dehydration, electrolyte imbalance, or disease may induce mood changes. After childbirth and during menopause, many women experience profound depression.

Other signs of mood disorders include:

- lability of affect — rapid, dramatic changes in the range of emotion
- flat affect — unresponsive range of emotion
- inappropriate affect — inconsistency between expression (affect) and mood.

Intellectual performance

To develop a picture of the patient's intellectual abilities, test the patient's orientation, immediate and delayed recall, recent and remote memory, attention level, comprehension, concept formation, and general knowledge.

Judgment

Assess the patient's ability to evaluate choices and draw appropriate conclusions. Defects in judgment may also become apparent while the patient tells his history. Pay attention to how the patient handles interpersonal relationships and occupational and economic responsibilities.

Insight

To assess insight, ask "What do you think has caused your anxiety?" or "Have you noticed a recent change in yourself?" Expect patients to show varying degrees of insight. Severe lack of insight may indicate a psychotic state.

Perception

Perception refers to interpretation of reality as well as use of the senses. Proponents of the cognitive theory of depres-

sion have suggested that depression arises from distorted perception.

If the patient has a sensory perception disorder, he may experience hallucinations, in which he perceives nonexistent external stimuli, or illusions, in which he misinterprets external stimuli. Tactile, olfactory, and gustatory hallucinations usually indicate organic disorders.

Not all visual and auditory hallucinations are associated with psychological disorders. Patients may also experience mild and transitory hallucinations. Constant visual and auditory hallucinations may, however, give rise to strange or bizarre behavior. Disorders associated with hallucinations include schizophrenia and acute organic brain syndrome after withdrawal from alcohol or barbiturate addiction.

Thought content

Assess the patient's thought patterns. Are the patient's thoughts well connected to reality? Are the patient's ideas clear, and do they progress in a logical sequence? Observe for indications of morbid thoughts and preoccupations or abnormal beliefs.

Delusions, which are usually associated with schizophrenia, are grandiose or persecutory false beliefs. Delusions may be obvious or may have a slight basis in reality.

Obsessions are intense preoccupations from which some patients suffer; they may interfere with daily living. For example, patients may constantly think about hygiene. Compulsions are also preoccupations that patients act out, such as constantly washing their hands.

Observe patients for suicidal, self-destructive, violent, or superstitious thoughts; recurring dreams; distorted perceptions of reality; and feelings of worthlessness.

Additional psychological assessment

Sexual drive

Changes in sexual drive provide valuable information in psychological assessment. Prepare yourself for patients who are uncomfortable discussing their sexuality. Avoid language that implies a heterosexual orientation. Introduce the subject tactfully but directly.

Follow-up questions might include:

- Are you currently sexually active?
- Have you noticed recent changes in your interest in sex?
- Do you have the same pleasure from sex now as before?

Competence

Can the patient understand reality and the consequences of his actions? Does the patient understand the implications of his illness, its treatment, and the consequences of avoiding treatment? Use extreme caution when assessing changes in competence. Unless behavior strongly indicates otherwise, assume that the patient is competent. Remember that legally, only a judge has the power or right to declare a person incompetent.

Assessing self-destructive behavior

Suicide — intentional, self-inflicted death — may be carried out with guns, drugs, poisons, rope, automobiles, or razor blades or by drowning, jumping, or refusing food, fluid, or medications. In a subintentional suicide, a person has no conscious intention of dying but nevertheless engages in self-destructive acts.

Not all self-destructive behavior is suicidal in intent. A patient who has lost touch with reality may cut or mutilate body parts to focus on physical pain. Such behavior may indicate a borderline personality disorder.

Assess depressed patients for suicidal tendencies. A higher percentage of depressed patients commit suicide than pa-

Recognizing and responding to suicidal patients

Be alert for these warning signs of impending suicide:

- withdrawal
- social isolation
- signs of depression (constipation, crying, fatigue, helplessness, hopelessness, poor concentration, reduced interest in sex and other activities, sadness, and weight loss)
- farewells to friends and family
- putting affairs in order
- giving away prized possessions
- expression of covert suicide messages and death wishes
- obvious suicide messages, (such as "I'd be better off dead").

ANSWERING A THREAT

If a patient shows signs of impending suicide, assess the seriousness of the intent and the immediacy of the risk. A patient with a chosen method who plans to commit suicide in the next 48 to 72 hours is considered a high risk.

Tell the patient that you're concerned. Then urge the patient to avoid self-destructive behavior until the staff has an opportunity to help him. You may specify a time for the patient to seek help.

Next, consult with the treatment team about arranging for psychiatric hospitalization or a safe equivalent such as having someone watch the patient at home. Initiate safety precautions for those at high suicide risk:

- Provide a safe environment. Check and correct conditions that could be dangerous for the patient. Look for exposed pipes, windows without safety glass, and access to the roof or open balconies.
- Remove dangerous objects, such as belts, razors, suspenders, light cords, glass, knives, nail files, and clippers.
- Make the patient's specific restrictions clear to staff members, plan for observation of the patient, and clarify day- and night-staff responsibilities.

A patient may ask you to keep his suicidal thoughts confidential. Remember that such a request is ambivalent; a suicidal patient wants to escape the pain of life, but he also wants to live. A part of him wants you to tell other staff members so he can be kept alive. Tell the patient that you can't keep a secret that endangers his life or conflicts with his treatment. You have a duty to keep him safe and to ensure the best care.

In addition to observing the patient, maintain personal contact with him. Encourage continuity of care and consistency of primary nurses. Helping the patient build emotional ties to others is the best technique for preventing suicide.

tients with other diagnoses. Chemical dependence and a history of schizophrenia are also risk factors for suicide.

Suicidal schizophrenics may be agitated instead of depressed. Voices may tell them to kill themselves. Alarmingly, some schizophrenics provide only vague behavioral clues before taking their lives.

If you perceive signals of hopelessness, perform a direct suicide assessment. (See *Recognizing and responding to suicidal patients*.) Protect patients from self-harm during a suicidal crisis. After treatment, the patient should think more clearly and find reasons for living.

Physical examination

Because psychiatric problems may stem from organic causes or medical treatment, a physical examination should be completed for psychiatric patients. Observe for key signs and symptoms and examine the patient by using inspection, palpation, percussion, and auscultation.

ALCOHOL DEPENDENCE AND ABUSE

Alcohol dependence is a progressive, chronic disorder characterized by tolerance and withdrawal symptoms. Impairment in one or more of the following areas of life with continued use indicates alcohol abuse: social and family relationships, occupational responsibilities, physical or mental health, educational pursuits, or legal issues. Alcoholism cuts across all social and economic groups, involves both sexes, and occurs at all stages of the life cycle, beginning as early as elementary school. About two-thirds of the adult population in the United States consumes alcohol regularly. Of these, more than 10% have a problem with alcohol use. Males are two to five times more likely to abuse alcohol than females. According to some statistics, alcohol abuse is a factor in 60% of all automobile accidents.

AGE ALERT Drinking is most prevalent between the ages of 21 and 34, but current statistics show that up to 19% of 12- to 17-year-olds have serious drinking problems.

Causes

Numerous biological, psychological, and sociocultural factors appear to be involved in alcohol dependence. An offspring of one parent with alcohol dependence is seven to eight times more likely to become alcohol-dependent than a peer without such a parent. Biological factors may include genetic or biochemical abnormalities, nutritional deficiencies, endocrine imbalances, and allergic responses.

Psychological factors may include the urge to drink alcohol to reduce anxiety or symptoms of mental illness; the desire to avoid responsibility in familial, social, and work relationships; the need to bolster self-esteem; and the inability to cope with stress in everyday life.

Sociocultural factors include the availability of alcoholic beverages, group or peer pressure, an excessively stressful lifestyle, and social attitudes that approve of frequent drinking.

Clinical presentation

Because people with alcohol dependence may hide or deny their addiction and may temporarily manage to maintain a functional life, assessing for alcoholism can be difficult. Note physical and psychosocial symptoms that suggest alcoholism such as:

- need for daily or episodic alcohol use to maintain adequate functioning
- inability to discontinue or reduce alcohol intake
- episodes of anesthesia or amnesia (blackouts) during intoxication
- episodes of violence during intoxication
- interference with social and familial relationships and occupational responsibilities.

Complaints may be alcohol-related, such as:

- malaise
- dyspepsia
- mood swings
- depression
- increased incidence of infection.

Observe the patient for poor personal hygiene and untreated injuries, such as:
- cigarette burns
- fractures
- bruises.

Additional signs include:
- unusually high tolerance for sedatives and narcotics
- secretive or manipulative behavior
- use of inordinate amounts of aftershave or mouthwash.

When confronted, the patient may deny or rationalize the problem. Alternatively, he may be guarded or hostile in his response and may even sign himself out of the health care facility against medical advice. He also may project his anger or feelings of guilt or inadequacy onto others to avoid confronting his illness.

Chronic alcohol abuse brings with it an array of physical complications, including:
- malnutrition
- cirrhosis of the liver
- peripheral neuropathy
- brain damage
- cardiomyopathy.

Assess for these complications in a patient with an alcohol-related disorder. (See *Complications of alcohol use*, page 8.) Also assess for alcohol dependence and abuse when these medical conditions are present.

After abstinence or reduction of alcohol intake, signs and symptoms of withdrawal may begin as early as 12 hours after drinking has stopped and last up to 7 days. The patient may experience:
- anorexia
- nausea
- anxiety
- fever
- insomnia
- diaphoresis
- tremor
- severe tremulousness
- agitation
- hallucinations
- violent behavior
- major motor seizures (known as "rum fits"). (See *Signs and symptoms of alcohol withdrawal*, page 9.)

Remember to consider the possibility of alcohol abuse when evaluating older patients. Research suggests that alcoholism affects 2% to 10% of adults over age 60. More than half of all geriatric hospital admissions are due to alcohol-related problems.

Differential diagnoses

- Depression
- Anxiety disorders
- Bipolar disorder
- Peptic ulcer disease
- Gastroenteritis
- Viral hepatitis
- Pancreatitis
- Cholelithiasis
- Primary seizure disorder

Diagnosis

For characteristic findings in patients with alcoholism, see *Diagnosing substance dependence and related disorders*, page 10.

Clinical findings may help support the diagnosis of alcohol dependence. These laboratory tests may confirm alcohol use or recent alcohol ingestion:
- Blood alcohol level (BAL) ranges from 0.08% to 0.10% weight/volume (200 mg/dl).
- Blood urea nitrogen level is increased in severe hepatic disease.
- Serum glucose level may be increased or decreased.
- Serum ammonia is increased.
- Urine toxicology studies may help to determine other types of drug abuse in patients.
- Liver function studies may reveal increased levels of serum cholesterol, lac-

Complications of alcohol use

Alcohol can damage body tissues by direct irritating effects, changes that take place in the body during its metabolism, aggravation of existing disease, accidents occurring during intoxication, and interactions between the substance and drugs. Such tissue damage can cause numerous complications.

CARDIOPULMONARY COMPLICATIONS
- Cardiac arrhythmias
- Cardiomyopathy
- Chronic obstructive pulmonary disease
- Essential hypertension
- Impaired respiratory diffusion
- Increased incidence of pulmonary infections
- Increased risk of tuberculosis
- Pneumonia

GI COMPLICATIONS
- Chronic diarrhea
- Esophageal cancer
- Esophageal varices
- Esophagitis
- Gastric ulcers
- Gastritis
- GI bleeding
- Malabsorption
- Pancreatitis

HEMATOLOGIC COMPLICATIONS
- Anemia
- Coagulopathy
- Leukopenia
- Reduced number of phagocytes

HEPATIC COMPLICATIONS
- Alcoholic hepatitis
- Cirrhosis
- Fatty liver

MYOPATHIES
- Prostatitis
- Sexual performance difficulty

NEUROLOGIC COMPLICATIONS
- Alcoholic dementia
- Alcoholic hallucinosis
- Alcohol withdrawal delirium
- Korsakoff's syndrome
- Peripheral neuropathy
- Seizure disorders
- Subdural hematoma
- Wernicke's encephalopathy

OTHER COMPLICATIONS
- Beriberi
- Hypoglycemia
- Infertility
- Leg and foot ulcers

PSYCHIATRIC COMPLICATIONS
- Amotivational syndrome
- Depression
- Fetal alcohol syndrome
- Impaired social and occupational functioning
- Multiple substance abuse
- Suicide

tate dehydrogenase, alanine aminotransferase, aspartate aminotransferase, and creatine kinase, which may indicate liver damage

- Serum amylase and lipase levels may be elevated with acute pancreatitis.
- A hematologic workup can identify anemia, thrombocytopenia, increased

Signs and symptoms of alcohol withdrawal

Withdrawal signs and symptoms may vary in degree from mild (morning hangover) to severe (alcohol withdrawal delirium). Formerly known as delirium tremens (or DTs), alcohol withdrawal delirium is marked by acute distress following abrupt withdrawal after prolonged or massive use.

SIGNS AND SYMPTOMS	MILD	MODERATE	SEVERE
Motor impairment	Hand tremor	Visible tremors	Gross, uncontrollable bodily shaking
Anxiety	Mild restlessness	Obvious motor restlessness and anxiety	Extreme restlessness and agitation with intense fearfulness
Sleep disturbance	Restless sleep or insomnia	Marked insomnia and nightmares	Total wakefulness
Appetite	Impaired appetite	Marked anorexia	Rejection of all food and fluid except alcohol
GI symptoms	Nausea	Nausea and vomiting	Dry heaves and vomiting
Confusion	None	Variable	Marked confusion and disorientation
Hallucinations	None	Vague, transient visual and auditory hallucinations and illusions (commonly nocturnal)	Visual and occasionally auditory hallucinations, usually of fearful or threatening content; misidentification of people and frightening delusions related to hallucinatory experiences
Pulse rate	Tachycardia	Pulse rate of 100 to 120 beats/minute	Pulse rate of 120 to 140 beats/minute
Blood pressure	Normal or slightly elevated systolic	Usually elevated systolic	Elevated systolic and diastolic
Sweating	Slight	Obvious	Marked hyperhidrosis
Seizures	None	Possible	Common

prothrombin time, and increased partial thromboplastin time. Coagulopathy is indicative of advanced disease.

Other diagnostic findings:

- A computed tomography scan or magnetic resonance imaging of the brain may reveal cortical atrophy or structural lesions.