

SIXTH EDITION

MEDICAL



MARY P. HARWARD, MD, FACP

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MEDICAL

SECRETS

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Sixth Edition

MARY P. HARWARD, MD, FACP

Internal Medicine and Geriatrics
Orange, California

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*To our patients who have shared with us the secrets of
their health and illness.*

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CONTRIBUTORS

William L. Allen, M. Div, JD

Associate Professor
Department of Community Health and Family Medicine
Program in Bioethics, Law, and Medical
Professionalism
University of Florida College of Medicine
Gainesville, Florida

Katherine Vogel Anderson, PharmD, BCACP

Associate Professor
University of Florida College of Pharmacy and Medicine
Gainesville, Florida

Rhonda A. Cole, MD, FACC

Associate Section Chief
Department of Gastroenterology
Associate Professor
Department of Internal Medicine
Baylor College of Medicine
Houston, Texas

Kathryn H. Dao, MD, FACP, FACR

Associate Director of Clinical Rheumatology
Baylor Research Institute
Dallas, Texas

Nathan A. Gray, MD

Assistant Professor of Medicine
Division of General Internal Medicine
Duke University School of Medicine
Durham, North Carolina

Gabriel Habib, Sr., MS, MD, FACC, FCCP, FAHA

Professor of Medicine and Cardiology
Baylor College of Medicine
Director of Education and Associate Chief
Section of Cardiology
Michael E. DeBakey VA Medical Center
Houston, Texas

Eloise M. Harman, MD

Staff Physician and MICU Director
Malcom Randall VA Medical Center
Professor Emeritus of Medicine
University of Florida College of Medicine
Gainesville, Florida

Mary P. Harward, MD, FACP

Internal Medicine and Geriatrics
Orange, California

Timothy R.S. Harward, MD, FACS

Vascular and Interventional Specialists of Orange
County
Orange, California

Teresa G. Hayes, MD, PhD

Associate Professor
Department of Internal Medicine
Hematology-Oncology Section
Baylor College of Medicine
Chief
Hematology-Oncology Section
Michael E. DeBakey VA Medical Center
Houston, Texas

Nisreen Husain, MD

Director
GI Motility
Department of Gastroenterology
Baylor College of Medicine
Houston, Texas

Ankita Kadakia, MD

Assistant Professor of Clinical Medicine
Division of Infectious Diseases
University of California San Diego Medical
Center – Owen Clinic
San Diego, California

Henrique Elias Kallas, MD, CMD

Assistant Professor
Departments of Medicine and Aging
University of Florida College of Medicine
Gainesville, Florida

Alexander S. Kim, MD

Assistant Professor of Medicine
Associate Program Director
Allergy/Immunology Fellowship Program
University of California, San Diego
San Diego, California

Roger Kornu, MD, FACR

Affiliated Physician
University of California, Irvine
Irvine, California

R. Anjali Kumbha, MD

Department of Hematology/Oncology
The Southeast Permanente Medical Group
Athens, Georgia

Daniel Lee, MD

Clinical Professor of Medicine
Division of Infectious Diseases
University of California San Diego Medical
Center—Owen Clinic
San Diego, California

Harrinarine Madhosingh, MD, FACP, FIDSA
 Attending Physician
 Infectious Disease
 Central Florida Infectious Disease Specialists
 Assistant Professor
 Department of Medicine
 University of Central Florida
 Orlando, Florida

Ara Metjian, MD
 Assistant Professor
 Division of Hematology
 Department of Medicine
 Duke University School of Medicine
 Durham, North Carolina

John Meuleman, MD
 Geriatric Research, Education, and Clinical
 Center
 University of Florida College of Medicine
 Gainesville, Florida

Jeffrey M. Miller, MD
 Chief
 Division of Hematology/Oncology
 Program Director
 Hematology/Oncology Fellowship
 Olive View—UCLA Medical Center
 Cedars Sinai Medical Center
 Kaiser Sunset
 Associate Clinical Professor of Medicine
 David Geffen School of Medicine at UCLA
 Olive View UCLA Medical Center
 Los Angeles, California

Yamini Natarajan, MD
 Assistant Professor
 Department of Gastroenterology
 Baylor College of Medicine
 Michael E. DeBakey VA Medical Center
 Houston, Texas

Catalina Orozco, MD
 Rheumatology Associates
 Dallas Texas

Rahul K. Patel, MD, FACP, FACR
 Medical Director
 PRA Health Sciences
 Dallas, Texas

Sharma S. Prabhakar, MD, MBA, FACP, FASN
 Professor and Chief
 Division of Nephrology
 Vice-Chair
 Department of Medicine
 Texas Tech University Health Sciences Center
 Lubbock, Texas

Nila S. Radhakrishnan, MD
 Assistant Professor and Chief
 Division of Hospital Medicine
 Department of Medicine
 University of Florida College of Medicine
 Gainesville, Florida

Eric I. Rosenberg, MD, MSPH, FACP
 Associate Professor and Chief
 Division of General Internal Medicine
 Department of Medicine
 University of Florida College of Medicine
 Associate Chief Medical Officer
 University of Florida Health Shands Hospitals
 Gainesville, Florida

Abbas Shahmohammadi, MD
 Assistant Professor
 Division of Pulmonary and Critical Care Medicine
 Department of Medicine
 University of Florida College of Medicine
 Gainesville, Florida

Damian Silbermins, MD
 Huntington Internal Medicine Group
 Huntington, West Virginia

Amy M. Sitapati, MD
 Clinical Professor of Medicine
 Chief Medical Information Officer of Population Health
 University of California San Diego Health
 San Diego, California

David B. Sommer, MD, MPH
 Neurology, Movement Disorders
 Reliant Medical Group
 Worcester, Massachusetts

Susan E. Spratt, MD
 Associate Professor
 Division of Endocrinology
 Department of Medicine
 Duke University School of Medicine
 Durham, North Carolina

Adriano R. Tonelli, MD
 Assistant Professor
 Division of Pulmonary, Allergy, and
 Critical Care Medicine
 Case Western Reserve University School of Medicine
 Cleveland, Ohio

Whitney W. Woodmansee, MD
 Endocrinology
 Mayo Clinic—Jacksonville
 Jacksonville, Florida

Jason A. Webb, MD, FAPA
 Director of Education
 Duke Center for Palliative Care
 Assistant Professor
 Department of Medicine
 Department of Psychiatry and Behavioral Sciences
 Duke University School of Medicine
 Durham, North Carolina

PREFACE

Most of my post-training professional life has been concurrent with the six editions of this book, and I have seen astounding scientific and therapeutic changes with each new update of *Medical Secrets*. The chapters in the sixth edition reflect the many major changes in medical science, prevention, and therapy that have occurred since the book was first published in 1991. For instance, in the first edition the mortality rate from Acquired Immunodeficiency Syndrome (AIDS) was cited as 75% at 3 years, and treatment of AIDS as a chronic disease was not discussed. The sixth edition now notes the 36.9 million people *living* with Human Immunodeficiency Virus (HIV) and AIDS and includes questions on preventive treatments. Elsewhere, the Gastroenterology chapter contrasts the lack of even screening tests for hepatitis C in 1991 with questions on contemporary effective methods for hepatitis C treatment in 2018. Similar contrasts can be found in all the chapters. Also noteworthy are the chapters added to later editions on Medical Ethics and Palliative Medicine, acknowledging the increased presence of these disciplines in everyday medical practice.

The contributor list has also significantly changed since the first edition with new contributors to this edition adding their fresh perspectives. In addition, Drs. Cole, Habib, and Prabhaker deserve special recognition for faithfully updating their chapters from the first through the sixth editions.

I hope the students using this book will appreciate and acknowledge the perspectives in the previous editions, yet sense how quickly medicine adapts to new discoveries. Many of the quotes at the beginning of the chapters reflect the historical context of the disciplines and hopefully may prompt the reader to investigate the original sources. Perhaps some of the students reading the text today will be future contributors and remember how medicine was practiced “back during the time of the sixth edition.”

Mary P. Harward, MD, FACP
Orange, California

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TOP 100 SECRETS

These secrets are 100 of the top board alerts. They summarize the most important concepts, principles, and salient details of internal medicine.

1. Informed consent is not merely a signature on a form but a process by which the patient and physician discuss and deliberate the indications, risks, and benefits of a test, therapy, or procedure and the patient's outcome goals.
2. Patients should participate in informed consent, even if they have impaired memory or communication skills, whenever they have sufficient decision-making capacity.
3. Decision-making capacity is determined by assessing the patient's ability to (1) comprehend the indications, risks, and benefits of the intervention; (2) understand the significance of the underlying medical condition; (3) deliberate the provided information; and (4) communicate a decision.
4. Many states now have specific physician-signed order forms to indicate a patient's end-of-life preferences for resuscitation and intensity of care.
5. All adults need one dose of tetanus, diphtheria, pertussis (Tdap) vaccine in place of one booster dose of tetanus-diphtheria (Td) vaccine to improve adult immunity to pertussis (whooping cough).
6. Zoster vaccine is indicated for adults ≥ 60 years old even if they have had an episode of herpes zoster infection.
7. Adolescent girls and boys should begin human papillomavirus (HPV) vaccine at age 11–12 to prevent HPV infection and reduce cervical cancer risk. Those who start at a later age can "catch up" through age 21 (men) or age 26 (women).
8. High-risk patients and those 65 years and older should receive two types of pneumococcal vaccine: pneumococcal conjugate vaccine (PCV13) and pneumococcal polysaccharide vaccine (PCV23) at least 12 months apart.
9. Antibiotic prophylaxis before dental procedures is recommended only for patients with (1) significant congenital heart disease; (2) previous history of endocarditis; (3) cardiac transplantation; and (4) prosthetic valve.
10. "Routine" preoperative testing is not helpful to reduce surgical risk. Laboratory and procedural tests should be ordered to address the acuity or stability of a medical problem or to investigate an abnormal symptom or physical sign identified during the consultation.
11. Preoperative consultation should include identification of risk factors for postoperative venous thromboembolism and appropriate treatment.
12. Patients undergoing major surgery who are at risk of adrenal suppression may need glucocorticoid therapy in the perioperative period. Some patients, though, may just need close monitoring postoperatively for signs of adrenal insufficiency.
13. "Tight" control of diabetes with target blood sugar of 80–110 mg/dL may not be beneficial postoperatively.
14. Metformin should be held and renal function closely monitored for patients undergoing surgery or imaging procedures involving contrast agents.
15. Asking the patient about personal and family history of bleeding episodes associated with minor procedures or injury is as effective in identifying bleeding diatheses as measuring coagulation studies.
16. Noninvasive stress testing has the best predictive value for detecting coronary artery disease (CAD) in patients with an intermediate (30–80%) pretest likelihood of CAD and is of limited value in patients with very low (<30%) or very high (>80%) likelihood of CAD.
17. Routine use of daily low-dose aspirin (81–325 mg) can reduce the likelihood of cardiovascular disease in high-risk patients with known CAD, diabetes, stroke, or peripheral or carotid vascular disease.
18. Routine daily low-dose aspirin use is associated with an increased risk of gastrointestinal bleeding, which can be reduced through the use of proton pump inhibitors.
19. Right ventricular infarction should also be considered in any patient with signs and symptoms of inferior wall myocardial infarction.

20. Diabetes is considered an equivalent of known CAD, and treatment and prevention guidelines for diabetic patients are similar to those for patients with CAD.
21. Patients with congestive heart failure (CHF) and left ventricular ejection fraction (LVEF) < 35% with class II or III New York Heart Association (NYHA) symptoms should be considered for implantable cardiac defibrillator.
22. Consider aortic dissection in the differential diagnosis of all patients presenting with acute chest or upper back pain.
23. Increasing size of an abdominal aortic aneurysm (AAA) increases the risk of rupture. Patients with AAA greater than 5 cm or aneurysmal symptoms should have endovascular or surgical repair. Smaller aneurysms should be followed closely every 6 to 12 months by computed tomography (CT) scan.
24. Patients presenting with pulselessness, pallor, pain, paralysis, and paresthesia of a limb likely have acute limb ischemia due to an embolus and require emergent evaluation for thrombolytic therapy or revascularization.
25. Patients with symptoms of transient ischemic attack are at high risk of stroke and require urgent evaluation for carotid artery disease and treatment that may include antiplatelet agents, carotid endarterectomy, statin drugs, antihypertensive agents, and anticoagulation.
26. All patients with peripheral arterial disease and cerebrovascular disease should stop smoking.
27. Asthma, chronic obstructive pulmonary disease (COPD), CHF, vocal cord dysfunction, and upper airway cough syndrome (UACS) can all cause wheezing.
28. Inhaled corticosteroid therapy should be considered for asthmatic patients with symptoms that occur with more than intermittent frequency.
29. Pulmonary embolism cannot be diagnosed by history, physical examination, and chest radiograph alone. Additional testing such as D-dimer level, spiral chest CT scan, angiography, or a combination of these tests will be needed to effectively rule in or rule out the disease.
30. Sarcoidosis is a multisystem disorder that frequently presents with pulmonary findings of abnormal chest radiograph, cough, dyspnea, or chest pain.
31. Hepatitis C virus infection can lead to cirrhosis, hepatocellular carcinoma, and severe liver disease requiring liver transplantation. Routine screening for infection is helpful for certain high-risk groups including those born in the United States between 1945 and 1965.
32. Travelers to areas with endemic hepatitis A infection should receive hepatitis A vaccine.
33. Celiac sprue should be considered in patients with unexplained iron-deficiency anemia or osteoporosis.
34. In the United States, gallstones are common among American Indians and Mexican Americans.
35. Esophageal manometry may be needed to complete the evaluation of patients with noncardiac chest pain that may be due to esophageal motility disorders.
36. The estimated glomerular filtration rate (eGFR) is now routinely reported when chemistry panels are ordered and can provide a useful estimate of renal function.
37. Angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) use should be evaluated for all diabetics, even those with normotension, for their renoprotective effects.
38. Diabetes is the most common cause of chronic kidney disease (CKD) in the United States, followed by hypertension.
39. When erythrocyte-stimulating agents are used for the treatment of anemia associated with CKD and end-stage renal disease, the hemoglobin level should *not* be normalized but maintained at 11–12 g/dL.
40. Almost 80% of patients with nephrolithiasis have calcium-containing stones.
41. Hyponatremia can commonly occur after transurethral resection of the prostate.
42. Thrombocytosis, leukocytosis, and specimen hemolysis can falsely elevate serum potassium levels.
43. Intravenous calcium should be given immediately for patients with acute hyperkalemia and electrocardiographic changes.
44. Hypoalbuminemia lowers the serum total calcium level but does not affect the ionized calcium.
45. Hypokalemia, hypophosphatemia, and hypomagnesemia are common findings in alcoholics who require hospitalization.
46. Lupus mortality rate is bimodal in distribution. It peaks in patients who die early from the disease or infection and again in patients who die later in life from cardiovascular diseases.
47. Inflammatory arthritis is characterized by morning stiffness, improvement with exercise, and involvement of small joints (although large joints may also be involved).

48. Patients with autoimmune disorders who smoke should be counseled to quit because tobacco has recently been linked to precipitation of symptoms and poorer prognosis.
49. Most rheumatologic diseases are diagnosed via clinical criteria based on thorough history, physical examination, and selective laboratory testing and imaging.
50. Early diagnosis of an inflammatory arthritis leads to intervention and improved clinical outcomes because there are many disease-modifying therapies available.
51. The most common immunoglobulin (Ig) deficiency is IgA deficiency, which can cause a false-positive pregnancy test.
52. Intranasal steroids are the single most effective drug for treatment of allergic rhinitis. Decongestion with topical adrenergic agents may be needed initially to allow corticosteroids access to the deeper nasal mucosa.
53. ACE inhibitors can cause dry cough and angioedema.
54. Beta blockers should be avoided whenever possible in patients with asthma because they may accentuate the severity of anaphylaxis, prolong its cardiovascular and pulmonary manifestations, and greatly decrease the effectiveness of epinephrine and albuterol in reversing the life-threatening manifestations of anaphylaxis.
55. Patients with persistent fever of unknown origin should first be evaluated for infections, malignancies, and autoimmune diseases.
56. Viruses are the most common causes of acute sinusitis; therefore, antibiotics are ineffective, unless symptoms are persistent (>10 days) or relapse after improvement.
57. Rocky Mountain spotted fever (RMSF) occurs through North and Central America with concentration in the southeastern and south central U.S. states with increasing incidence in Arizona (on Indian reservations). Empiric therapy for RMSF should be considered within 5 days of symptom onset for patients with febrile illnesses and a history of a tick bite who have been in these regions in the spring or summer (May to September).
58. Asplenic patients (either anatomic or functional) are susceptible to infections with encapsulated organisms (*Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Neisseria meningitidis*) and should receive appropriate vaccinations for these organisms in addition to up-to-date childhood vaccinations. Needed vaccinations should be administered 14 days before elective splenectomy, if possible.
59. Allergic bronchopulmonary aspergillosis (ABPA) occurs in asthmatics and is evident by recurrent wheezing, eosinophilia, transient infiltrates on chest radiograph, and positive serum antibodies to *Aspergillus*.
60. Chagas disease, caused by *Trypanosoma cruzi*, can cause cardiomyopathy, cardiac arrhythmias, and thromboembolism.
61. Human immunodeficiency virus (HIV) infection is preventable and treatable but not curable.
62. Routine HIV testing should be considered for all patients aged 13–65 years.
63. A fourth-generation Ag/Ab combination enzyme immunoassay (EIA) is needed for diagnosis of acute primary HIV infection.
64. HIV-infected patients with undetectable viral loads can still transmit HIV.
65. HIV-infected patients with tuberculosis are more likely to have atypical symptoms and present with extrapulmonary disease.
66. All patients with HIV infection should be tested for syphilis, and all patients diagnosed with syphilis (and any other sexually transmitted disease) should be tested for HIV.
67. The presence of thrush (oropharyngeal candidiasis) indicates significant immunosuppression in an HIV-infected patient.
68. Transferrin saturation and ferritin are effective screening tests for hemochromatosis.
69. Methylmalonic acid can be helpful in the diagnosis of vitamin B₁₂ deficiency in patients with low normal vitamin B₁₂ levels.
70. Patients with chronic hemolysis should receive folate replacement (1 mg/day).
71. Chronic lymphocytic leukemia is the most common leukemia in adults and is often found in those older than 70 years.
72. Patients with antiphospholipid syndrome have an antiphospholipid antibody and the clinical occurrence of arterial or venous thromboses or both, recurrent pregnancy losses, or thrombocytopenia.
73. Solid tumor staging often uses American Joint Commission on Cancer (AJCC) TNM staging (T = tumor size and areas of invasion; N = regional nodal status; and M = distant metastases).
74. Each type of cancer is driven by different mutations and abnormal checkpoints for which many new, targeted immunotherapeutics have been developed.

75. Differential diagnosis when evaluating possible malignancy should always ensure an accurate treatment plan and may require multiple biopsies and other procedures prior to diagnosis.
76. Tobacco and alcohol use are significant risk factors for head and neck cancers.
77. The treatment plan for a malignancy is often chemotherapy but may include surgical oncology, radiation oncology, and palliative medicine.
78. The best initial screening test for evaluation of thyroid status in most patients is the thyroid-stimulating hormone (TSH). The exceptions are patients with pituitary and hypothalamic dysfunction.
79. Patients with type 1 and type 2 diabetes mellitus (DM) should be screened at regular intervals for the microvascular complications of retinopathy, neuropathy, and nephropathy.
80. Closely examine the feet of diabetic patients regularly, looking for ulcerations, significant callous formation, injury, and joint deformities that could lead to ulceration. Check dorsalis pedis and posterior tibial pulses to detect reduced blood flow and sensation with a monofilament.
81. Erectile dysfunction and decreased libido in men and amenorrhea and infertility in women are the most common symptoms of hypogonadism.
82. Hyperparathyroidism is the most common cause of hypercalcemia.
83. Ataxia can be localized to the cerebellum.
84. Gait dysfunction, urinary dysfunction, and memory impairment are symptoms of normal-pressure hydrocephalus.
85. In the appropriate setting, thrombolysis can markedly improve the outcome of stroke. Prompt initiation of thrombolytic therapy is essential.
86. The sudden onset of a severe headache may indicate an intracranial hemorrhage.
87. Optic neuritis can be an early sign of multiple sclerosis.
88. Cognitive behavioral therapy for insomnia (CBT-I) is the recommended treatment for insomnia, particularly for older adults.
89. Older adults are particularly susceptible to the anticholinergic effects of multiple medications, including over-the-counter antihistamines.
90. Anemia is not a normal part of aging, and hemoglobin abnormalities should be investigated.
91. Decisions regarding screening for malignancies in the elderly should be based not on the age alone but on the patient's life expectancy, functional status, and personal goals.
92. Systolic murmurs in the elderly may be due to aortic stenosis or aortic sclerosis.
93. Delirium in hospitalized patients is associated with an increased mortality risk.
94. When delirium occurs, the underlying cause should be thoroughly evaluated and treated.
95. Pneumonia is the most common infectious cause of death in the elderly.
96. Patients with life-limiting or serious illness can be referred for palliative care at any point in their illness process, regardless of prognosis.
97. A stimulant laxative should always be prescribed whenever opiates are prescribed for chronic pain management to manage opiate-induced constipation.
98. Patients can discontinue hospice care if their symptoms improve or their end-of-life goals change.
99. Opiates are the first line treatment for severe dyspnea at the end of life.
100. Opioid analgesics are available in many forms including tablets to swallow or for buccal application, oral solutions, lozenges for transmucosal absorption, transdermal patches, rectal suppositories, and subcutaneous, intravenous, or intramuscular injection administration.

MEDICAL ETHICS

William L. Allen, M Div, JD

I will use treatment to help the sick according to my ability and judgment, but I will never use it to injure or wrong them.

Attributed to Hippocrates
4th-Century Greek Physician

ETHICAL PRINCIPLES AND CONCEPTS

1. Define the following terms in relation to the patient and physician-patient relationship: *beneficence, nonmaleficence, autonomy, and justice.*

- **Beneficence:** The concept that the physician will contribute to the welfare of the patient through the recommended medical interventions
- **Nonmaleficence:** An obligation for the physician not to inflict harm upon the patient
- **Autonomy:** The obligation of the physician to honor the patient's right to accept or refuse a recommended treatment, based on respect for persons
- **Justice:** The obligation of the physician to avoid treating patients differently by providing better care or privileges to favored patients or by discriminating against less favored patients, especially on grounds of race, ethnicity, sex, sexual orientation, religion, creed, socioeconomic status, or disability

2. What is fiduciary duty?

An obligation of trust imposed upon physicians requiring them to place their patients' best interests ahead of their own interests and, as the patient's advocate, to protect patients from exploitation or neglect of others in the health care system.

3. What is conflict of interest?

A situation in which one or more of a professional's duties to a client or patient potentially conflicts with the professional's self-interests or when a professional's roles or duties to more than one patient or organization are in tension or conflict.

4. How should conflicts of interest be addressed?

- Avoided, if possible
- Disclosed to institutional officials or to patients affected
- Managed by disinterested parties outside the conflicted roles or relationships

5. What is conscientious objection?

Refusal to participate in or perform a procedure, prescription, or test grounded on a person's sincere and deeply held belief that it is morally wrong.

6. What is a conscience clause?

A provision in law or policy that allows providers with conscientious objections to decline participation in activities to which they have moral objections, under certain conditions and limitations. The scope of the allowance should only protect the provider's conscience, not deny a patient legitimate care.

7. Describe futility.

The doctrine that physicians are not required to provide treatment if there will be no medical benefit from it. It has become a very controversial term in recent times, in part because of inconsistency in definition and usage. In the narrowest definition, "futility" may refer to physiologic futility or the inability of a treatment or intervention to support bodily functions such as circulation or respiration or reverse the ultimate decline and cessation of these functions. More often, though, futility refers to the very low likelihood of an intervention succeeding in restoring physiologic function or health.

Patients and physicians may disagree about the level of probability that could be considered futile, though. Most health care institutions will establish policies for guidance in resolving such disagreements.

INFORMED CONSENT

8. How should one request “consent” from a patient?

Consent is not a transitive verb. Sometimes a medical student or resident is instructed to “go consent the patient,” implying that consent is an act that a health professional performs upon a passive recipient who has no role in the action other than passive acceptance. A health professional seeking consent from a patient should be asking the patient for either an affirmative endorsement of an offered intervention or a decision to decline the proposed intervention.

9. What is consent or mere consent?

Consent alone, without a sufficiently robust level of information to justify the adjective “informed.” Although “mere consent” may avoid a finding of battery (which is defined as harmful or offensive physical contact with a person without that person’s consent), it is usually insufficient permission for the physician to proceed with a procedure or treatment.

10. What is informed consent?

Consent from a patient that is preceded by and based on the patient’s understanding of the proposed intervention at a level that enables the patient to make a meaningful decision about endorsement or refusal of the proposed intervention.

11. What are the necessary conditions for valid informed consent?

- Disclosure of relevant medical information by health care providers
- Comprehension of relevant medical information by patient (or authorized representative)
- Voluntariness (absence of coercion by medical personnel or institutional pressure)

12. What topics should always be addressed in the discussion regarding informed consent (or informed refusal)?

- Risks and benefits of the recommended intervention (examination, test, or treatment)
- Reasonable alternatives to the proposed intervention and the risks and benefits of such alternatives
- The option of no intervention and the risks and benefits of no intervention

KEY POINTS: INFORMED CONSENT

1. Informed consent involves more than a signature on a document.
2. Before beginning the informed consent process, the physician should assess the patient’s capacity to understand the information provided.
3. The physician should make the effort to present the information in a way the patient can comprehend and not just assume the patient is “incompetent” because of difficulty in understanding a complex medical issue.
4. The patient’s goals and values are also considered in the informed consent process.

13. What are the different standards for the scope of disclosure in informed consent?

- **Full disclosure:** Disclosure of everything the physician knows. This standard is impractical, if not impossible, and is not legally or ethically required.
- **Reasonable person** (sometimes called “prudent person standard”): Patient-centered standard of disclosure of the information necessary for a reasonable person to make a meaningful decision about whether to accept or to refuse medical testing or treatment. This standard is the legal minimum in some states.
- **Professional practice** (also called “customary practice”): Physician-centered standard of disclosure of the information typically practiced by other practitioners in similar contexts. Sometimes the professional practice standard is the legal minimum in states that do not acknowledge the reasonable person standard.
- **Subjective standard:** Disclosure of information a particular patient may want or need beyond what a reasonable person may want to know. This is not a legally required minimum but is ethically desirable if the physician can determine what additional information the particular patient might find important.

14. What are the exceptions to the obligation of informed consent?

- **Implied consent:** For routine aspects of medical examinations, such as blood pressure, temperature, or stethoscopic examinations, explicit informed consent is not generally required, because presentation for care plausibly implies that the patient expects these measures and consent may be reasonably inferred by the physician. Implied consent does not extend to invasive examinations or physical examination of private or sensitive areas without explicit oral permission and explanation of purpose.
- **Presumed consent:** Presentation in the emergency room does not necessarily mean that emergency interventions are routine or that the patient's consent is implied. The justification for some exception to informed consent is that most persons would agree to necessary emergency interventions; therefore, consent may be presumed, even though this presumption may turn out to be incorrect in some instances for some patients. Such treatment is limited to stabilizing the patient and deferring other decisions until the patient regains capacity or an authorized decision maker has been contacted.

15. What should you do when a patient requests the physician to make the decision without providing informed consent?

When a patient seems to be saying in one way or another, "Doctor, just do what you think is best," it is appropriate to make a professional recommendation based on what the physician believes to be in the patient's best medical interests. This does not mean, however, that the patient does not need to understand the risks, benefits, and expected outcomes of the recommended intervention. This type of request is sometimes referred to as requested paternalism or waiver of informed consent. The physician should explain, in terms of risks and benefits of a recommended intervention, the reasons he or she recommends the intervention and why it would seem to be in the patient's best medical interest and then ask the patient to endorse it or to decline it.

16. What is a physician's obligation to veracity (truthful disclosure) to patients?

In order for patients to have an accurate picture of their medical situation and what clinical alternatives may best meet their goals in choosing among various medical tests or treatments or to decline medical intervention, patients must have a truthful description of their medical condition. Such truthful disclosure is also essential for maintaining patient trust in the physician-patient relationship. Truthful disclosure, especially of "bad news," however, does not mean that the bearer of bad news must be brutal or insensitive in the timing and manner of disclosure.

17. Define therapeutic privilege.

A traditional exception to the obligation of truthful disclosure to the patient, in which disclosures that were thought to be harmful to the patient were withheld for the benefit of the patient. In recent decades, this exception has narrowed almost to the vanishing point from the recognition that most patients want to know the truth and make decisions accordingly, even if the truth entails bad news. Nevertheless, some disclosures may justifiably be withheld temporarily, such as when a patient is acutely depressed and at risk of suicide. Ultimately, however, with appropriate medical and social support, the patient whose decisional capacity can be restored should be told the information that had been temporarily withheld for her or his benefit.

CONFIDENTIALITY

18. What is medical confidentiality?

The private maintenance of information relating to a patient's medical and personal data without unauthorized disclosure to others. Maintaining the confidential status of patient medical information is crucial not only to trust in the physician-patient relationship but also to the physician's ability to elicit sensitive information from patients that is crucial to adequate medical management and treatment. The Health Information Portability and Accountability Act (HIPAA, a federal statute) as well as most state statutes provide legal protections for patients' personally identifiable health information (PHI), but the professional ethical obligation of confidentiality may exceed these minimal protections or apply in situations not clearly addressed by HIPAA or state statutes.

19. What are recognized exceptions to patient medical confidentiality?

- **Duty to warn (Tarasoff duty):** A basis for justifying a limited exception to the rule of patient confidentiality when a patient of a psychiatrist makes an explicit, serious threat of grave bodily harm to an identifiable person(s) in the imminent future. The scope of this warning is limited to the potential victim(s) or appropriate law enforcement agency, and the health care provider may divulge only enough information to convey the threat of harm.

- Reporting of communicable disease to public health authorities (but not others).
- Reporting of injuries from violence to law enforcement.
- Reporting of child or elder abuse to protective social service authorities.

20. What is the obligation to veracity to nonpatients?

Physicians are not obligated to lie to persons who inquire about a patient's confidential information, but they may be required simply to decline to address such requests from persons to whom the patient has not granted access.

DECISION-MAKING CAPACITY

21. How do physicians assess decision-making capacity in patients?

Whereas most adult patients should be presumed to have intact decisional capacity, some patients may be totally incapacitated for making their own medical decisions. Totally incapacitated patients will generally be obvious cases, such as unconscious or sedated patients. But decisional capacity is not an all-or-nothing category, so it is not uncommon for patients to have variable capacity depending on the status of their condition and the complexity of the particular decision at hand. Thus, one crucial aspect of assessing decisional capacity is to determine whether the patient can comprehend the elements required for valid informed consent to the particular decision that needs to be made. Patients with mood disorders, such as acute depression, however, may be incapacitated by their mood, even if they comprehend the information.

22. What are common pitfalls in assessing patient decisional capacity or competence?

If one uses the **outcome approach**, the patient's capacity is determined based on the outcome of the patient's acceptance of the physician's recommendation. The physician may incorrectly assume that the refusal of a recommended treatment indicates incapacity. Refusal of a recommended treatment is not adequate grounds to conclude patient incapacity. Nor is patient acceptance of the physician's recommendation an adequate means of assessing patient capacity. An incapacitated patient may acquiesce to recommended treatment, whereas a capacitated patient may refuse the physician's best medical advice. If one uses the **status approach**, patients with a history of a mental illness or memory impairment may be considered incapacitated. Psychiatric conditions or other medical conditions that can result in incapacity may have resolved or may be under control with appropriate therapy that mitigates the condition's impact on patient capacity for decision making. Patients with memory impairment or dementia may also be able to express wishes regarding treatment. Patients who can express a clear preference should have that expression seriously regarded as assent or dissent, even if an authorized decision maker makes the legally sufficient informed consent or refusal.

23. What is the best approach to assessing patient capacity?

The **functional approach**, which determines the patient's ability to function in a particular context to make decisions that are authentic expressions of the patient's own values and goals. Determining whether a patient is capacitated for a particular medical decision entails assessing whether the patient is able to:

- Comprehend the risks and benefits of the recommended intervention, risks and benefits of reasonable alternative intervention, and the risks and benefits of no intervention.
- Manifest appreciation of the significance of his or her medical condition.
- Reason about the consequences of available treatment options (including no treatment).
- Communicate a stable choice in light of his or her personal values.

Appelbaum PS. Clinical practice. Assessment of patients' competence to consent to treatment. *N Engl J Med.* 2007;357:1834–1840.

24. What is involuntary commitment?

Assignment of a person to an inpatient psychiatric facility without patient consent when the appropriate criteria are met. These patients must be unable to provide informed consent owing to a mental illness *and*, owing to the same mental illness, pose a danger to themselves or to others. Similarly, patients who are seriously impaired by substance abuse may be involuntarily admitted to detoxification units or to longer term rehabilitation facilities.

25. What are assent and dissent?

Assent is the obligation prospectively to explain medical interventions in language and concepts the patient can comprehend even if the patient is deemed to be not capable of full informed consent, such as children or mentally impaired adults. The patient's agreement is elicited, even though the final decision requires parental, guardian, or other legally authorized decision maker's permission.

Conversely, dissent is the obligation to take seriously the refusal of children or mentally impaired adults when they are opposed to medical interventions or placements, unless the recommendations are so crucial to the patient's well-being that their dissent must be overridden to avert serious deterioration or harm to their interests.

ADVANCE DIRECTIVES

26. What is an advance directive?

A generic term for any of several types of patient instructions, oral or written, for providing guidance and direction in advance of a person's potential incapacity. The instructions and authorization in an advance directive do not take effect until the person loses decisional capacity and the advance directive ceases to be in effect if or when the patient regains capacity.

27. What are the types of advance directives?

Designation by a capacitated patient of the person the patient chooses to make medical decisions during any period when the patient is incapacitated, whether during surgery, temporary unconsciousness, or mental condition, as well as irreversible condition of lost decisional capacity. The decisions the designated person can make include withholding or withdrawal of treatment in life-limiting circumstances. This type may variously be called a "durable power of attorney for health care," a "surrogate health care decision maker," or a "proxy health care decision maker."

A **living will** is a formal expression of a patient's choices about end-of-life care and specifications or limitations of treatment, either with or without the naming of a person to reinforce, interpret, or apply what is expressed to the patient's current circumstances.

28. Who are statutorily authorized next-of-kin decision makers?

If a patient has not made a living will or designated a person to make decisions during periods of patient incapacity, state statutes determine the order of priority for persons related to or close to the patient to assume the role of making medical decisions on the patient's behalf. These are typically called "surrogates" or "proxies," but they differ from decision makers designated by the patient in the way they are selected, and, in many cases, they bear a greater burden of demonstrating that they know what the patient would want.

29. What are the standards of decision making for those chosen either by the patient or by statute to make decisions for the incapacitated patient?

- **Substituted judgment:** The decision the patient would have made if she or he had not been incapacitated. In some cases, this will not be the same as what others may think is in the patient's best interest.
- **Best interest:** Choosing what is considered most appropriate for the patient. If there is substantial uncertainty about what the patient would have chosen for herself or himself, then the traditional best interest standard is the appropriate basis for decision making.

END-OF-LIFE ISSUES

30. What are end-of-life care physician orders?

Orders that give direction regarding interventions at the time of death or cardiopulmonary arrest. Patient-directed measures such as advance directives or statutory next-of-kin decisions should be the basis for underlying medical decisions that entail informed consent or refusal issues at the end of life.

KEY POINTS: END-OF-LIFE ISSUES

1. Patients should be encouraged to discuss their wishes for end-of-life care with family members or close friends and physicians while still able to clearly express these wishes.
2. Forms such as Preferences of Life-Sustaining Treatment can designate the patient's specific requests to accept or decline therapies at the end of life.
3. Patients are frequently unaware of the numerous, complex therapies related to end-of-life care and may not be able to write down what is wanted. Designation of a surrogate decision maker with whom the patient discusses her or his values and goals related to end-of-life care can also ensure the patient's choices will be respected.