

Family Medicine Clerkship

Curriculum Resources



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Diabetes

OVERVIEW

Diabetes is one of the most commonly seen chronic conditions in primary care. The CDC recently noted the 61% increase in incidence of adult onset diabetes from 1991 to 2000. Treatment focuses on partnering with the patient and family to stabilize the disease and prevent complications. Teamwork and patient education are essential components of diabetes management. Most students should have abundant opportunities to care for patients with diabetes and to develop needed competencies.

LEARNING GOALS AND OBJECTIVES (Organized by ACGME Competencies)

Patient Care

GOAL: Students will accurately assess signs and symptoms of diabetes.

OBJECTIVES: Students will be able to:

- Perform appropriate examination of the eyes and feet.
- Interpret laboratory data related to diabetic control and end organ damage.

GOAL: Students will appropriately discuss diabetes with patients.

OBJECTIVES: Students will be able to:

- Explain indicators of control and complications of diabetes to their patients.
- Describe to patients the risks of diabetes and goals of management.

GOAL: Students will incorporate individual and cultural differences in the development of treatment plans.

OBJECTIVES: Students will be able to:

- Discuss with patients and families the importance of lifestyle changes, such as diet and exercise, in the management of diabetes.
- Develop treatment plans in the context of each patient's life, environment, and culture.
- Teach and motivate patients to monitor blood glucose at home.

GOAL: Students will recommend appropriate prevention and health maintenance plans for patients with diabetes.

OBJECTIVES: Students will be able to:

- Ensure that patients with diabetes receive appropriate immunizations (e.g., pneumococcal and influenza vaccination).
- Screen patients for cardiovascular disease.

Medical Knowledge

GOAL: Students will understand the impact of diabetes on the U.S. population.

OBJECTIVES: Students will be able to:

- Discuss the epidemiology of diabetes, including ethnic and socioeconomic differences.
- Compare and contrast ADA and USPSTF recommendations for screening for diabetes.

GOAL: Students will understand the pathophysiology of diabetes.

OBJECTIVES: Students will be able to:

- Describe the end organ complications of untreated or incompletely treated diabetes mellitus.
- Describe how to make the diagnosis of diabetes, and differentiate Type I from Type II.
- Discuss and defend the initial evaluation and ongoing management of a patient with a new diagnosis of diabetes.
- Describe the management of patients with comorbid conditions, such as hypertension and hyperlipidemia.

GOAL: Students will understand the rationale for treatment plans of diabetes.

OBJECTIVES: Students will be able to:

- Describe the use of oral agents and insulin for diabetes.
- Discuss the evidence for the role of lifestyle changes: diet, exercise, and weight loss.
- Discuss the side effects and costs of commonly used medications.

Practice-Based Learning and Improvement

GOAL: Students will understand the role of monitoring diabetic patients in practice settings.

OBJECTIVES: Students will be able to:

- Describe how care of patients with diabetes is monitored in the assigned clerkship site.
- Consider the impact of environment and neighborhood on adherence to treatment plans and lifestyle changes.
- Describe the patient education protocols and programs for diabetes mellitus at their assigned clerkship sites.

GOAL: Students will understand the role of practice-based improvement.

OBJECTIVES: Students will be able to:

- Recognize the importance of practice analysis for a population with diabetes.

- Design an intervention to improve the practice's care of its population of patients with diabetes.

GOAL: Students will bring up to date evidence to the point of clinical care.

OBJECTIVES: Students will be able to:

- Identify gaps in their own knowledge and frame appropriate clinical questions in regard to diabetes.
- Use best evidence to answer clinical questions.

Interpersonal and Communication Skills

GOAL: Students will understand the importance of effective communication with patients and families in the management of this progressive, often asymptomatic, chronic illness.

OBJECTIVES: Students will be able to:

- Describe the long-term treatment plan for diabetes.
- Include patients and families, as appropriate, in the development of treatment plans.
- Demonstrate effective listening skills and empathy to improve patient adherence to diet, exercise, and medications.

GOAL: Students will understand the importance of effective, culturally sensitive communication with patients and their families.

OBJECTIVES: Students will be able to:

- Discuss with patients and their families what the diagnosis of diabetes means, including the necessary lifestyle changes.
- Collaborate effectively with other members of the health care team, such as a nutritionist, nurse, or health educator.

Professionalism

GOAL: Students will demonstrate the ability to care for patients from diverse patient backgrounds and at different points in their illness.

OBJECTIVES: Students will be able to:

- Demonstrate sensitivity and responsiveness with patients who are not adhering to treatment plans.
- Reflect on personal frustrations when patients are not adherent to plans.
- Explain the relationship of diabetes to culture, age, gender, and disabilities.

Systems -Based Practice

GOAL: Students will understand the impact of health care systems and environment on the management of diabetes.

OBJECTIVES: Students will be able to:

- Describe cost-effective strategies for treatment of diabetes.
- Analyze barriers to effective integrated treatment of diabetes.
- Consider the role of other disciplines (e.g., pharmacy, nursing, social work, and allied health) in the treatment of diabetes.

EDUCATIONAL METHODS AND RESOURCES

Independent Learning

- Nutrition [Toolkit](#) for medical students, University of Washington Nutrition Academic Award

Learning Units

- STFM Group on Nutrition [Physician's Curriculum in Nutrition](#): Primary Care:
- [Nutrition Academic Award Program](#)
NHLBI Nutrition Academic Award Program

Published Material

- Nutrition Topics Essential in a Medical School Curriculum in Priority Order
 - Weinsier RL et al. Priorities for nutrition content in a medical school curriculum: a national consensus of medical educators. Am J Clin Nutr. 1989; 50:707-12
[Abstract](#) at PubMed
 - Hark L, Deen D. Taking a nutrition history: a practical approach for family physicians. Am Fam Phys. 1999, 59:1521-1536.
[Article](#) at AFP
 - Nutrition Screening Initiative (DETERMINE checklist)
<http://www.aafp.org/nsi>

Web Sites

- American Diabetes Association
<http://www.diabetes.org/homepage.jsp>
- National Diabetes Information Clearinghouse
[NIDDK](#)
- Physicians' Committee for Responsible Medicine
[Nutrition Education-Diabetes Unit](#)
- PACE
[Patient Centered Assessment Counseling for Exercise and Nutrition](#)
- Multicultural Diabetes Resources [EthnoMed](#)
- [Diabetes Information in Spanish](#)
- [CDC Diabetes Public Health Resource](#)
- National Diabetes Information Clearinghouse bibliographic searches on diabetes. Titles, abstracts, and availability information for health information and health education resources on specific diabetes topics.

<http://diabetes.niddk.nih.gov/resources/biosearch.htm>

- National Diabetes Education Program (NDEP) NDEP is a partnership of the National Institutes of Health, the Centers for Disease Control and Prevention, and more than 200 public and private organizations
<http://ndep.nih.gov/>
- Making Systems Change for Better Diabetes Care
An easy-to-use, comprehensive website for information and tools to make effective systems changes in the way diabetes is diagnosed, treated, and prevented.
<http://betterdiabetescare.nih.gov/>
- American Association of Diabetes Educators
<http://www.aadenet.org/>
- National Center for Chronic Disease Prevention and Health Promotion
Diabetes Public Health Resource
<http://www.cdc.gov/diabetes/index.htm>
- Juvenile Diabetes Research Foundation International
<http://www.jdf.org/>
- Diabetes dictionary from NIDDK
<http://diabetes.niddk.nih.gov/dm/pubs/dictionary/index.htm>
- Diabetes Camping Association
Lists diabetes camps worldwide
<http://www.diabetescamps.org/>
- "monitoring diabetes happenings everywhere in cyberspace," including links to on-line communities
<http://www.diabetesmonitor.com/index.htm>

Multimedia

- [Palmtop BMI Calculator](#), National Heart, Lung, Blood Institute: NHLBI [Obesity Treatment Guidelines](#)
- University of Pennsylvania School of Medicine [Nutrition Education](#) slides, articles, cases

Contact People

- [STFM Nutrition Education Group](#)

ASSESSMENT STRATEGIES

Standardized Patient Cases

- Nutrition Cases, University of Washington, contact dambrozy@u.washington.edu
- " [Morgan: A Case of Diabetes](#) "-Lisa Rubin and Clyde Freeman Herreid, University at Buffalo, State University of New York on National Center for Case Study Teaching in Science
- " [Andrea: The Death of a Diabetic](#) "- Clyde Freeman Herreid, Department of Biological Sciences, University at Buffalo, State University of New York National Center for Case Study Teaching in Science:

Problem-Based Learning Cases

- Medical University of South Carolina. Contact [Alexander Chessman, MD](#)
- University of California Los Angeles, Dept. of Family Medicine

Web-Based Case

- University of Texas, San Antonio, Dept. of Family Medicine. Contact [Richard Usatine, MD](#)

FACULTY DEVELOPMENT

- [Nutrition for Physicians](#), University of Washington Nutrition Academic Award Program, available online

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