

ENRH 172 Course Description: Diabetes Self-Management Education Elective

Course Directors: Dr. Anne Brancaccio, MD; Dr. Nora Gimpel, MD; Jorena Lim, MS2; Maishara Muquith, MS2

Department: Department of Family Medicine and Internal Medicine

Student Liaison: Mauricio Valdez, MS3; Fatima Zuberi, MS4

Requirements:

- Attend 5 out of 6 sessions
- Minimum number of students per course – 8
- Maximum number of students per course – None

Rationale:

Over 34 million people in the United States have diabetes while another 88 million have prediabetes. Diabetes increases the risk of heart disease, stroke, and many other serious complications. According to the Parkland Needs Assessment (2020), diabetes is one of the leading causes of death and one of the main contributors of inpatient hospitalizations in Dallas. One of the key interventions proposed in the Parkland Assessment is to increase community education and awareness regarding diabetes. Medical students will inevitably come across patients with diabetes during their education. It is vital that we prepare pre-clerkship students regarding this topic since many encounter diabetic patients during this time through free clinic volunteering and other community service activities.

Multiple prior studies show that medical students and new doctors feel unprepared to manage patients with diabetes², which is problematic. One avenue to improve confidence is through pre-clerkship enrichment electives as this provides a foundation on important topics and early exposure. In 2015, 3 medical students at UACOM-T initiated a diabetes enrichment elective focusing on the diabetes care and education through a multidisciplinary approach.³ The study suggests that the diabetes-specific elective was effective in supplementing medical student knowledge of diabetes.

This elective is being proposed as a mechanism for preparing medical students to provide expertise in diabetes education and self-care counseling as part of a multidisciplinary team. As the prevalence of diabetes in Texas continues to increase (7.8% of adults in Dallas County had diagnosed diabetes in 2017), knowledge of diabetes self-care education will be important for all medical students.

References:

1. <https://www.parklandhospital.com/Uploads/public/documents/PDFs/Health-Dashboard/CHNA%202019.pdf>

2. Lansang MC, Harrell H. Knowledge on inpatient diabetes among fourth-year medical students. *Diabetes Care*. 2007;30(5):1088-1091. doi:10.2337/dc06-2174
3. Fazel MT, Fazel M, Bedrossian NL, Picazo F, Pendergrass ML. A student-implemented elective to improve medical student confidence in providing diabetes self-management support. *Adv Med Educ Pract*. 2016;7:567-570. Published 2016 Oct 5. doi:10.2147/AMEP.S113553

Objectives:

1. Prepare medical students for providing diabetes self-management education to assist future patients with diabetes.
2. After taking this elective, students should be able to work in a community setting such as the free clinics to empower patients with diabetes to take charge of their own health.
3. This elective will present evidence-based knowledge and training in the following topics:

Overview of diabetes/diabetes prevention
Healthy Coping and Self-Efficacy
Healthy Eating and Physical Activity
Blood glucose (BG) self-monitoring and insulin injection technique
Reducing risks of complications and problem solving
Case-based learning and practical applications

Format: Virtual or in-person depending on COVID guidelines

Student Evaluation:

Grades will be pass/fail. Attendance is required to receive credit for the course.

Course Evaluation:

Grading will be pass/fail. To receive transcript acknowledgment, students must:

- Attend 10 of 12 participant hours
- Complete the online REDCap course evaluation form

Schedule: Tuesdays 5-7 PM

Date	Time	Session	Location
September 7	5 PM	Introduction to prediabetes/diabetes prevention	D1.200
September 14	5 PM	Healthy coping and self-efficacy	D1.200
October 5	5 PM	Healthy eating and physical activity	D1.200
October 19	5 PM	Blood glucose self-monitoring and insulin injection technique	TBD

November 2	5 PM	Reducing risks of complications and problem solving	D1.200
November 16	5 PM	Case-based learning and practical application	D1.200

Session 1: Introduction to prediabetes and diabetes prevention

Faculty Speaker: Dr. Marconi Abreu, MD, Medical Director of the Parkland General Endocrinology Clinic

Objective 1: Provide an overview of Type 1, Type 2, and gestational diabetes

Objective 2: Discuss the importance of diabetes self-management and how it affects patient outcomes

Objective 3: Engage with a patient living with diabetes and hear about their experiences

Session 2: Healthy coping and self-efficacy

Faculty Speaker: Dr. Uma Gunasekaran, MD, Lead Physician at Parkland Outpatient Diabetes Clinic

Objective 1: Learn healthy ways patients can deal with stress and change how they think and feel about diabetes

Objective 2: Discuss behavioral, personal, and environmental factors that affect self-efficacy as well as the role of self-efficacy in diabetes self-management

Objective 3: Identify different management interventions to help increase self-efficacy

Session 3: Healthy eating and physical activity

Faculty Speaker: Susan Rodder, MS, Associate Professor of Clinical Nutrition

Objective 1: Recognize the importance of healthy dietary choices and their impact on blood sugar

Objective 2: Practice meal planning with carbohydrate counting

Objective 3: Understand the steps taken prior to exercising and how to develop an exercise program

Session 4: Blood glucose (BG) self-monitoring and insulin injection technique

Faculty Speaker: TBD

Objective 1: Understand the role of blood glucose and HbA1c in self-monitoring diabetes

Objective 2: Learn proper insulin injection techniques

Objective 3: Gain broad overview of common diabetes medication

Objective 3: Learn to carry out glucose testing and interpret its results to guide lifestyle choices and improve outcomes

Session 5: Reducing risks of complications and problem solving

Faculty Speaker: Dr. Amy Vora, MD, Assistant Professor in the Department of Endocrinology

Objective 1: Understand the various health complications of diabetes including renal, cardiovascular, ocular problems

Objective 2: Understand the various barriers to reducing risks of complications including financial, socio-cultural, access, and environmental

Objective 3: Learn how to conduct effective foot and eye exams

Objective 4: Explore avenues to reduce barriers in small group settings

Session 6: Case-based learning and practical applications

Faculty Speaker: Dr. Anne Brancaccio, MD, Associate Professor in the Department of Internal Medicine

Objective 1: Incorporate all the concepts learned in the course to help diabetic patients self-manage their condition through interactive case studies

Objective 2: Understand and explore the need for diabetes education and awareness in Dallas communities

Objective 3: Practice SMART goal setting in small groups