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2009

### Impetus of Diabetic Crisis to Improve Self Management

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## 5.19. Impetus of Diabetic Crisis to Improve Self Management

Emma Kontzamanis, RN, MA

CR is a 38-year-old African-American, divorced, male whose chief complaint when he was hospitalized three days ago was dry mouth, urinary frequency, polydipsia, and weight loss. Prior to that time, CR had enjoyed good health. At the time he experienced these symptoms, he was clearing asbestos from a building for his job. Because he was dressed in an air-supplied protective suit, at first, he assumed his symptoms were from dehydration and overheating. When the project ended and his symptoms persisted, he also noticed a 20-pound weight loss. He had blurred vision and mild cramping in both lower extremities. He attributed these experiences to overwork and fatigue. When he mentioned these symptoms to his sister, however, she reminded him that their grandmother developed diabetes in her 50s. His sister encouraged him to make an appointment with a primary care provider.

CR's physician referred him immediately to the ED. In the ED, his vital signs were BP 139/90, HR 90, T 99.4°F, and oxygen saturation by pulse oximetry of 92%. His height is 5 feet 8 inches and his weight is 230 pounds, with a BMI of 35. His laboratory results were blood glucose 917 mg/dl, glycosylated hemoglobin (HbA1c) 12.5%, total cholesterol 283 mg/dl, C-reactive protein (CRP) 2.4 mg/dl, urine glucose +++++, urine protein negative, ketones trace. An IV was started and 1 liter of NS with 5 units of regular insulin was infused over one hour. CR's glucose decreased to the 300 mg/dl range, and he was admitted to a medical unit. He was diagnosed with diabetes, type 2, and diabetic ketoacidosis.

CR told the admitting nurse that he was afraid of "ending up like my grandmother." She was almost blind, had several toes amputated, received hemodialysis three times a week, and died when she was 65. The nurse asked if CR would like to discuss his condition with a nurse who specialized in the care of people with diabetes. CR said he would



do anything that would keep him healthy and intact. The certified diabetic educator (CDE) visited CR that same day and discussed his usual diet and exercise pattern.

CR said he ate mostly fast foods, sometimes salads, and usually was too tired after work to do anything other than watch television and get ready for the next day. His two teenage children spent time with him every other weekend. He said they really do not like to come to his house, but it is part of his divorce agreement and he misses his children. On the alternate weekend, he spent time with friends, usually eating out and drinking several beers.



**STOP. THINK.** Which diagnoses, outcomes, and interventions would you select?

### Submitter's Analysis and Use of NANDA-I, NOC, and NIC

CR's BMI of 35 indicates that he is obese (National Heart, Lung, and Blood Institute, n.d.). Since the mid 1970s, the prevalence of obesity has increased sharply for adults and children (Centers for Disease Control [CDC], 2008). Data from two National Health and Nutrition Examination Surveys (NHANES) show that, among adults aged 20 to 74 years, the prevalence of obesity increased from 15% (in the 1976–1980 survey) to 32.9% (in the 2003–2004 survey). The primary contributing factors are physical inactivity and unhealthy eating. People who are obese are at increased risk for several chronic diseases, including diabetes. A diabetes epidemic in the U.S. has affected 20.8 million people (CDC, 2005).

Based on CR's clinical status, the preliminary assessment of CR's diet and exercise pattern, and the current information about the causes and control of diabetes, the CDE decided the most appropriate nursing diagnosis for CR was *imbalanced nutrition: more than body requirements*. The diagnosis of *deficient knowledge* about diabetes was considered, but was not appropriate since CR realized how his lifestyle and his obesity contributed to his condition. His willingness to change his behaviors was an essential factor in identifying the nursing diagnosis. He was eager and ready to eliminate the factors that predisposed him to diabetes.

#### NOC Outcomes

In order to remedy CR's condition and prevent the long term effects of diabetes, the nurse and CR selected the NOC outcomes of *diabetes self management* and *blood glucose level*. Because diabetes was a new diagnosis for CR, his baseline score on *diabetes self management* was 1 (never demonstrated) and the goal score was 5 (consistently demonstrated).



His *blood glucose level* was 2 (substantial deviation from normal range) and the goal score was 5 (no deviation from normal range). His goals for the indicators were set as maintaining blood glucose levels between 60 and 110 mg/dl, adherence to a 2,000 calorie American Diabetic Association diet, and an exercise program of 20 minutes of brisk walking at least five days a week. Their discussions centered on how CR could change his eating and exercise habits to accomplish these outcomes. The possibility of eliminating insulin through these lifestyle changes was emphasized by the CDE. CR voiced his hope that this would happen and was confident that eliminating his obesity was the key to a healthy life.

### *NIC Interventions*

The nursing interventions selected to help CR achieve his goals of weight reduction and elimination of his diabetes symptoms were *hyperglycemia management, medication administration: subcutaneous, weight reduction assistance, nutritional counseling, nutritional monitoring, and teaching: disease process*. For nurses to help people effectively manage their diabetes, it is important to understand behavioral change and appropriate interventions. Focusing on maintaining the quality of the person's life and working to prevent complications are important factors in teaching and coaching patients with diabetes (Seley and Weinger, 2007).

The CDE taught CR how to check his blood glucose with a glucometer and administer his insulin based on his blood glucose level. While in the hospital, his diet consisted of three balanced meals and a nighttime snack. The CDE explained how carbohydrates influenced his blood glucose and the importance of protein in eliminating the highs and lows of blood glucose. Each day, he was able to verbalize sample menus and calculate caloric intake. CR agreed to plan weekly menus for all meals and a nighttime snack before he did his weekly grocery shopping.

The importance of exercise in weight loss and its effect on blood glucose were also explained. The CDE and CR discussed how he would be able to fit 20 minutes of brisk walking into his life each day. CR decided he would leave for work 20 minutes earlier and get off the train several stops before his destination and walk to his work location. On the weekends, he planned to walk for 20 minutes in the park near his home.

Because CR lived alone, the importance of a support network to accomplish his goals was explored. The CDE asked whether his sister or a friend could serve as a support system and whether he would consider going to Overeaters Anonymous (OA). OA is a program that deals with the physical, emotional, and spiritual aspects of eating compulsively. Members share their experiences, strengths, and hopes of



recovering from food addiction (Overeaters Anonymous, 2008). CR agreed to investigate an OA meeting in his local church. At the CDE's suggestion, CR also agreed to let his children know about his condition and the plan he had for eliminating his obesity and need for insulin.

### *Evaluation*

Before discharge, CR's blood glucose was consistently between 80 and 100 mg/dl with insulin administration. He adhered to the diet provided by the CDE and used the treadmill in the Physical Therapy Department for 20 minutes a day. The NOC outcomes of *diabetes self management* and *blood glucose level* were rated as 5. The challenges of continuing this success after hospital discharge were the focus of discussions between CR and the CDE. CR agreed to weekly visits at the Diabetic Clinic where the CDE would be able to monitor and support his progress.

After three months of regular meetings with the nurse CDE, CR demonstrated success in achieving his goals of losing weight and consistently keeping his blood glucose levels within a normal range. He lost 45 pounds and, with his blood glucose consistently normal, the need for insulin injections was eliminated. His energy level increased and he was able to spend time with his children in activities such as bike riding that he was not able to do when he weighed 230 pounds.

The need for weekly visits to the CDE in the Diabetic Clinic was tapered to monthly. CR found that attending weekly OA meetings and talking to others with similar issues had helped him to stay on his diet and exercise plan. He began to enjoy life in a way that he did not think was possible when he was obese and required insulin.

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