

The Management of Diabetes and Hyperglycemia in the Hospital Setting: A Practical Guide

INTRODUCTION

As the number of patients with diabetes, both diagnosed and as yet undiagnosed, increases annually, it is not surprising that the number of patients with diabetes who are admitted to the hospital also increases. The prevalence of overt diabetes is estimated to exceed 30% among individuals who are 60 years of age and older. Because individuals in this age-group account for a large number of hospital admissions for a variety of medical and surgical conditions, even conservative estimates suggest that ~25 to 30% of all hospitalized patients on any given day in any given hospital in the U.S. have diabetes. The percentage of hospitalized patients outside the U.S. who have diabetes is likely to show the same trend.

Even though patients with diabetes may be admitted to the hospital with acute or chronic complications of diabetes, most frequently they are hospitalized for other medical and surgical problems and their diabetes becomes a significant comorbidity that may affect the outcome of their hospitalization. Moreover, patients with prediabetes or undiagnosed diabetes are frequently hyperglycemic either on admission to the hospital or in the course of their hospital stay, adding to the complexity of their medical or surgical problems. The treatment of diabetes and hyperglycemia in these situations requires the utmost attention and specialized knowledge.

Once in the hospital, patients with diabetes or hyperglycemia may be admitted to the intensive care unit, require urgent or elective surgery, enteral or parenteral nutrition, intravenous insulin infusion, and therapies that have a significant impact on glycemic control (e.g., steroids). Because many clinical outcomes are profoundly influenced by the degree of glycemic control, knowledge of the best practice in inpatient diabetes management assumes paramount importance.

In the twenty-first century, in most U.S. community hospitals, hospitalist physicians provide medical care to these patients. In some hospitals, particularly academic and other tertiary care hospitals, hospitalists share this task with endocrinologists. A small number of hospitals have established specialized glycemic (diabetes) management teams led by either a physician or a mid-level provider, such as a nurse practitioner or a physician assistant, to help control blood glucose levels in hospitalized patients. These teams prove to be of great importance not only for successful management of patients with diabetes, but also for diabetes education of patients, nursing staff, and house staff.

The field of inpatient management of diabetes and hyperglycemia has grown substantially in the last several years, accumulating and disseminating important clinical knowledge. This body of knowledge is summarized in this book, so it can reach the audience of hospitalists and endocrinologists, both in practice and in training—the very physicians who take care of hospitalized patients with diabetes and hyperglycemia.