

Use of Continuous Subcutaneous Insulin Infusion (Insulin Pump) Therapy in the Hospital: A Review of One Institution's Experience

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Abstract

Background:

This article reviews the performance of our hospital's inpatient insulin pump policy.

Methods:

Twenty-five hospital admissions of 21 unique patients receiving outpatient insulin pump therapy were reviewed.

Results:

Between November 1, 2005, and November 30, 2006, there were 25 hospital admissions involving 21 patients receiving outpatient insulin pump therapy. The average age and duration of diabetes among these 21 patients was 50 and 29 years, respectively; 67% were women, 90% had type 1 diabetes, and all were white. The mean length of hospital stay was 4 days, and the average reported length of insulin pump therapy was 4 years. Patients in 16 of the admissions were identified as candidates for continued use of the insulin pump during the hospital stay. Over 90% of patients remaining on the insulin pump had documentation by nursing of the presence of the pump at the time of admission; 100% of the patients had an admission glucose recorded; 88% had a record of signed patient consent; 81% had evidence of completed preprinted insulin pump orders; 75% received a required endocrine consultation; and 75% of cases had documentation of completed bedside flow sheet. A high frequency of both hypoglycemic and hyperglycemic events occurred in the patients; however, no adverse events were related directly to the insulin pump.

Conclusions:

Insulin pump therapy can be safely continued in the hospital setting. While staff compliance with required procedures was high, there was still room for improvement. More data are needed, however, on whether this method of insulin delivery is effective for controlling hyperglycemia in hospitalized patients.

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Abbreviations: (CPOE) computerized physician order entry, (CSII) continuous subcutaneous insulin infusion, (BedGluc_{avg}) bedside glucose average

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