

# Potential Short-Term Economic Benefits of Improved Glycemic Control

## A managed care perspective

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**OBJECTIVE**— There are limited data relating glycemic control to medical costs among patients with diabetes. The goal of this study was to examine the potential impact of improved glycemic control on selected short-term complications of diabetes and associated costs in a managed care setting.

**RESEARCH DESIGN AND METHODS**— Using a retrospective cohort design and automated databases from 1 January 1994 to 30 June 1998, adult members of the Fallon Clinic who were diagnosed with diabetes were identified and assigned to one of three study groups based on each patient's mean HbA1c level: good control (<8%), fair control (8–10%), and poor control (>10%) groups. Inpatient (hospital or skilled nursing facility) admissions for selected acute (short-term) complications, represented by selected infections, hyperglycemia, hypoglycemia, and electrolyte disturbances, and the associated medical charges were evaluated across the three HbA1c groups. Multivariate analyses were used to control for differences in several potential confounding factors among the study groups. All findings were expressed on a 3-year basis.

**RESULTS**— Of 2,394 patients with diabetes, ~10% (251) had at least one inpatient stay for a short-term complication, accounting for 447 admissions. Over 3 years, the adjusted rate of inpatient treatment ranged from 13 per 100 patients with good glycemic control to 16 per 100 patients with fair glycemic control and 31 per 100 patients with poor glycemic control ( $P < 0.05$ ). The corresponding mean adjusted charges were approximately \$970, \$1,380, and \$3,040, respectively. Among the 30% of the study population with long-term diabetic complications, the results were more marked; the adjusted admissions per 100 patients (mean charges) were estimated to be 30 (\$2,610), 38 (\$3,810), and 74 (\$8,320) over 3 years for patients with an HbA1c of <8, 8–10, and >10%, respectively.

**CONCLUSIONS**— In typical practice, better glycemic control is associated with a reduced rate of admission for selected short-term complications and, therefore, reduced medical charges for these complications over a 3-year period. The potential short-term economic benefits are important to consider when making decisions regarding the adoption and use of new interventions for the management of diabetes.

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