

## An Internet Service Supporting Quality Assessment of Inpatient Glycemic Control

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### Abstract

#### **Background:**

Several studies have linked the maintenance of normoglycemia in acutely ill inpatients with improved clinical outcomes. We previously proposed a few standard definitions for monitoring inpatient glycemic control, or “glucometrics.” In clinical practice, limited data management resources for developing and refining measurement protocols can slow quality improvement efforts. With regard to glucometrics, there are few baseline data regarding the quality of hospital glycemic management. Furthermore, there are no reliable methods for hospitals to gauge the progress of their quality improvement efforts.

#### **Methods:**

We built a novel Web application that calculates glucometrics on anonymized blood glucose data files uploaded by registered users. This Web site also collects many key characteristics of the users and institutions utilizing the service. This application will allow us to pool data from several institutions to calculate aggregate glucometrics, providing baseline data for quality improvement efforts and ongoing metrics for institutions to gauge their progress.

#### **Results:**

The application, accessible at <http://metrics.med.yale.edu>, has already drawn visitors from several countries. A number of users have registered formally, and some have begun to upload institutional glucose data. The application delivers detailed glucometrics reports to registered users, complete with visual displays. Quality improvement staff from large health systems have been the predominant users.

#### **Conclusions:**

We have created an open access Web application to facilitate quality monitoring and improvement efforts—as well as clinical research—regarding inpatient glycemic management. If employed widely, this application could help establish national performance standards for glycemic control.

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**Abbreviations:** (HbA1c) hemoglobin A1c, (PDF) portable document format

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