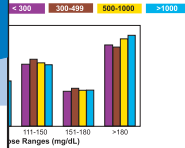


# MDN-NBI™

## National Benchmarking Initiative

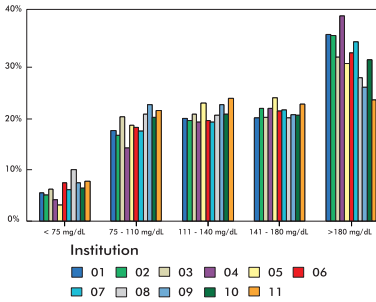
**MDN-NBI™**  
National Benchmarking Initiative

Non-ICU Blood Glucose  
Ranges by Number of Beds

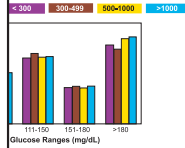


**MDN-NBI™**  
National Benchmarking Initiative

Point-of-Care Glucose Values at  
Leading Institutions Across the United States



**MDN**  
Medical Decisions Network



**MDN**  
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[www.medicaldecisionsnetwork.net](http://www.medicaldecisionsnetwork.net)

# MDN-NBI™

## National Benchmarking Initiative

How does your institution measure up with others across the country with regard to blood glucose control?

MDN's national benchmarking initiative enables hospitals to compare their ability to manage blood glucose in hospitalized patients. This service is available through data collected by our affiliate company, Medical Automation Systems (MAS), the leading provider of point-of-care testing data management/connectivity solutions. It can also be used with third-party solutions – contact MDN for more information.

With over 1,000 installed RALS-Plus systems throughout the U.S., MAS has access to over 30 million test results each month. Data from various defined POC blood glucose devices from all participating institutions will be remotely accessed, then analyzed via proprietary statistical and reporting tools to determine meaningful indices related to glycemic control. Metrics from an institution can be compared to the aggregate data, or to similar institutions nationwide. Hospital demographics will be included to provide a true national benchmark.

This national benchmarking initiative provides caregivers and hospital administrators the ability to view how successful the hospital is in implementing their tight glycemic control protocols to improve patient outcomes. MDN-NBI is the first comprehensive national benchmark of actual patient blood glucose data and will be a valuable resource for organizations enrolled in Pay-for-Performance (P4P) initiatives.

### Profiles Used in Data Collection - 27 Hospital Pilot Study

Total Blood Glucose Measurements Per Quarter

Quarter	Total	ICU Total	Non-ICU Total
April – June 2004	1,091,301	219,223	872,078
April – June 2005	1,422,442	326,745	1,095,697



# Three Report Tiers

## **Tier I.....4,5**

Tier I consists of 12 reports, 4 of which are represented on pages 4 and 5 and indicate one center compared to the aggregate or national average of hospitals in the pilot study. The reports display the mean blood glucose (all measurements) and percent of measurements in each of five blood glucose ranges (all measurements, ICU and non-ICU). Selected ranges are <70 mg/dL, 70 - 110 mg/dL, 111 - 150 mg/dL, 151 - 180 mg/dL, and >180 mg/dL.

## **Tier II.....6,7**

Tier II consists of Tier I Reports, plus more than 80 additional reports. Two of these reports are represented on pages 6 and 7 and indicate how hospitals (by number of beds) conform with the American College of Endocrinology (ACE) guidelines. Each one can be compared as a peer group and to the aggregate (national average).

## **Tier III.....8,9**

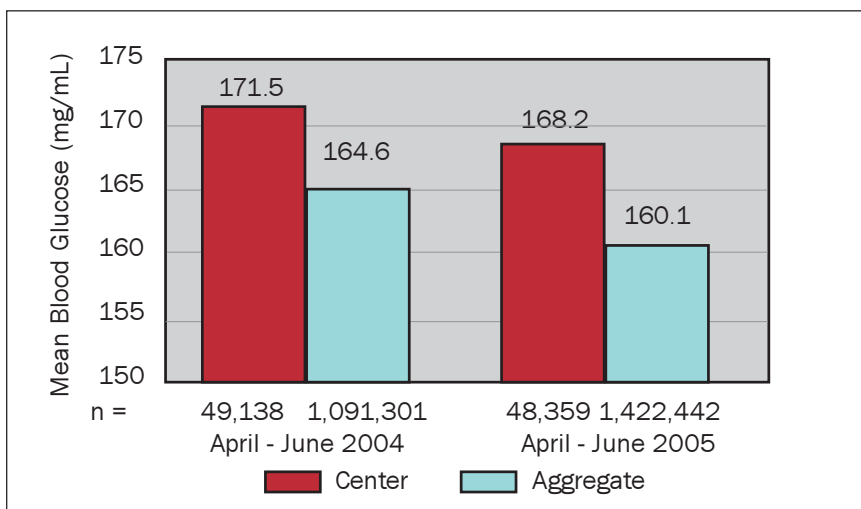
Tier III consists of Tier I and Tier II Reports, plus more than 50 additional reports, including customization upon request. Two of these reports are represented on pages 8 and 9 and indicate Glycemic Control Index (GCI) and Hyperglycemic Index (HGI). Glycemic control index (GCI), also known as the Area Under the Curve, examines blood glucose values as a dynamic process over time, as opposed to a static set of unrelated measurements. It can be considered as the “true” average blood glucose. It takes into account the length of time that individual blood glucose values are maintained. The hyperglycemic index (HGI) report shows the calculated average value of the blood glucose when hyperglycemic (>110 mg/dL) minus 110, multiplied by the percent of time that the value of blood glucose is hyperglycemic (>110 mg/dL).

## **Notes.....10,11**

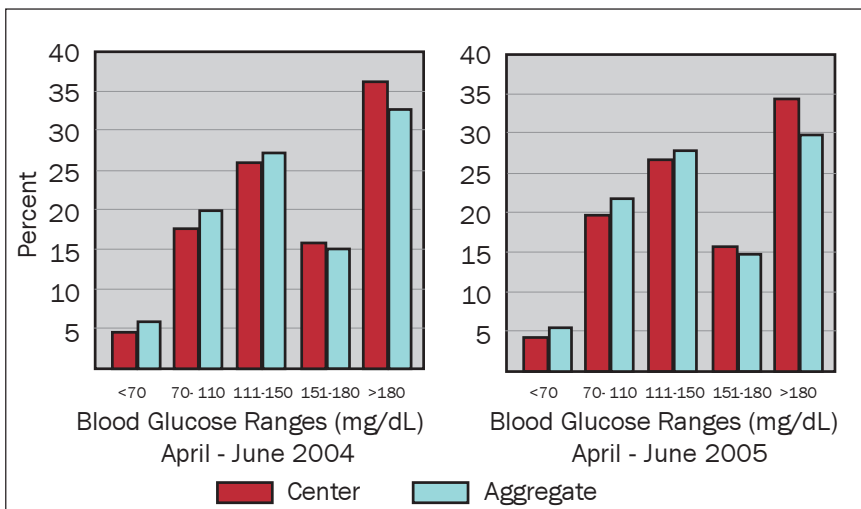
# Tier I Reports

Tier I consists of 12 reports. Four of these reports are represented below. They compare one center with all participating hospitals (the national aggregate) according to mean blood glucose and percentage of measurements within specified ranges.

## Mean Blood Glucose - All Measurements

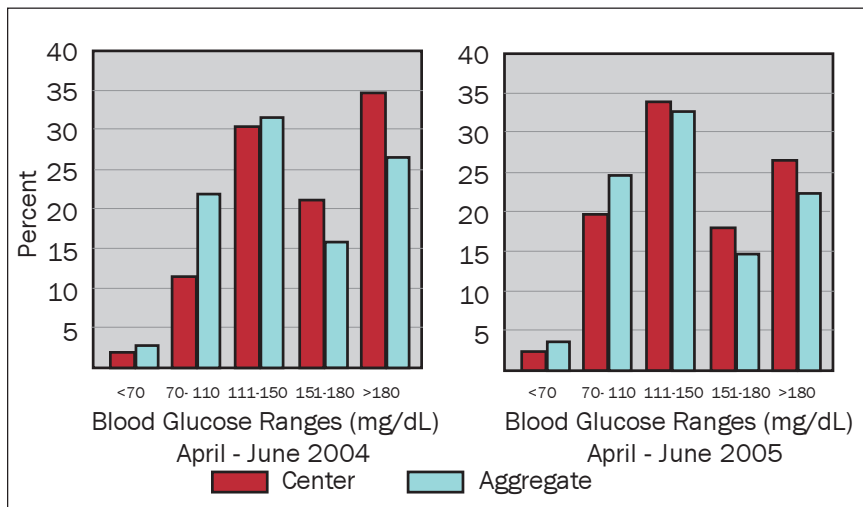


## Blood Glucose Ranges - All Measurements

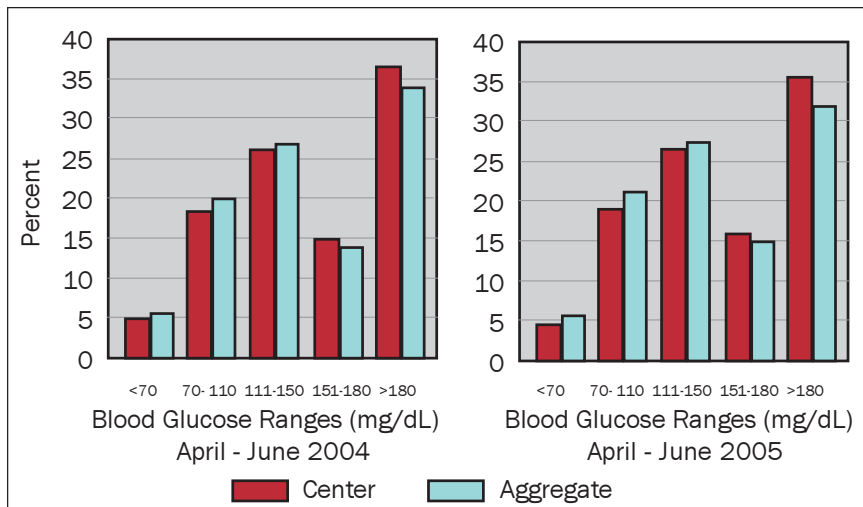


# Tier I Reports

## Blood Glucose Ranges - ICU Measurements



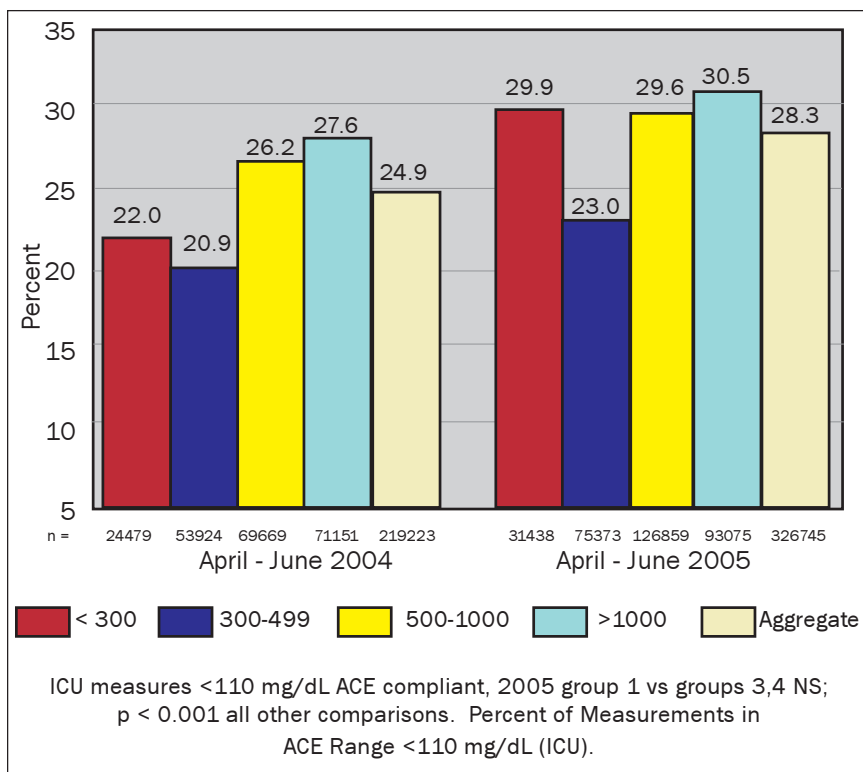
## Blood Glucose Ranges - Non-ICU Measurements



# Tier II Reports

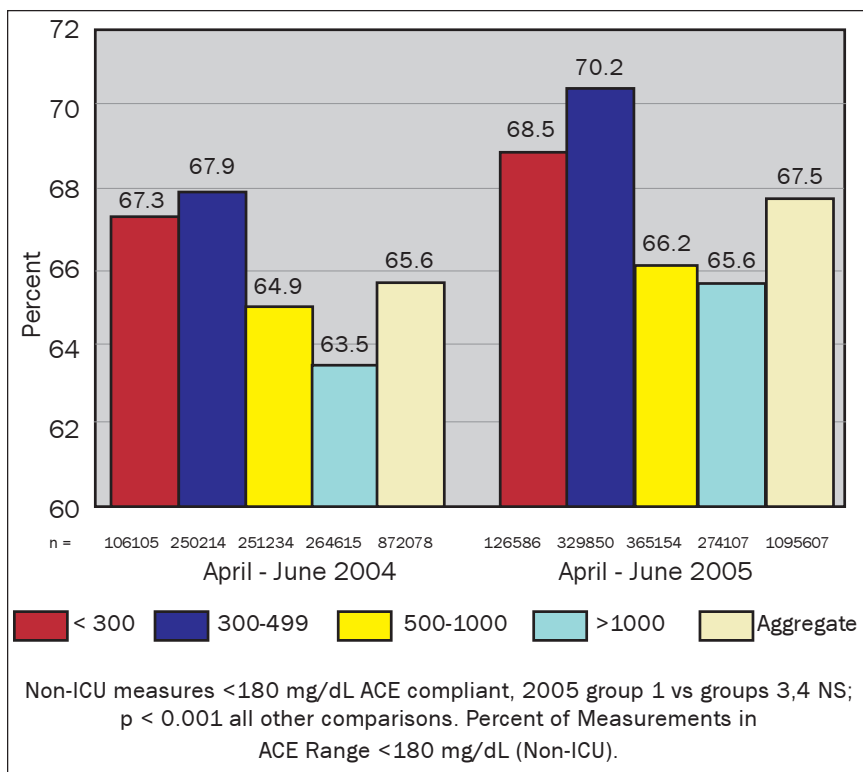
Tier II consists of the Tier I reports, plus more than 80 additional reports. Two of these reports are represented below. They indicate how hospitals (by number of beds) conform with the ACE guidelines.

## Percent of ICU Measurements Compliant with ACE Guidelines\* by Number of Beds



# Tier II Reports

## Percent of Non-ICU Measurements Compliant with ACE Guidelines\* by Number of Beds

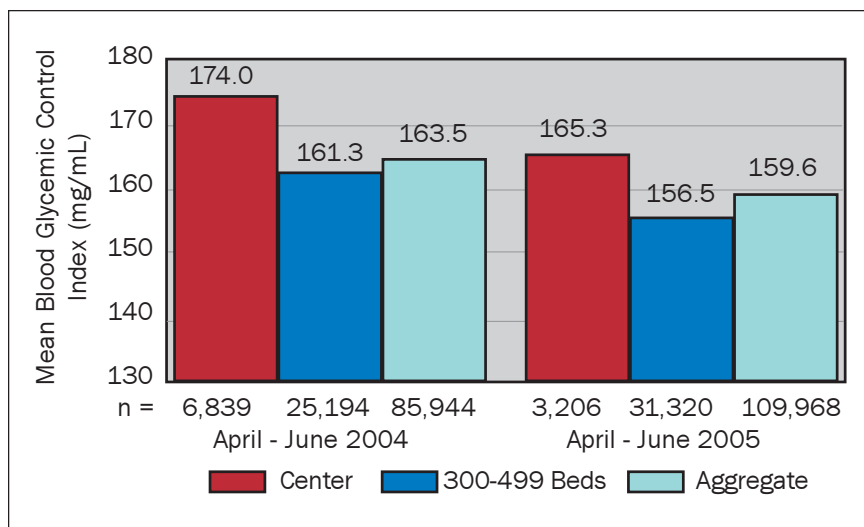


\* American College of Endocrinology Position Statement on Inpatient Diabetes and Metabolic Control, Endocrine Practice, Vol 10, No. 1, January/February 2004, pp. 77-82, has formulated standards for diabetes management in the hospital. Among these standards are the upper limits for glycemic targets, which "are intended to provide clinicians with guidelines for promoting improved outcomes". In particular, the guidelines recommend that patients' blood glucose levels be less than 180 mg/dL in the general hospital units (non-ICU) and less than 110 mg/dL in the ICUs.

# Tier III Reports

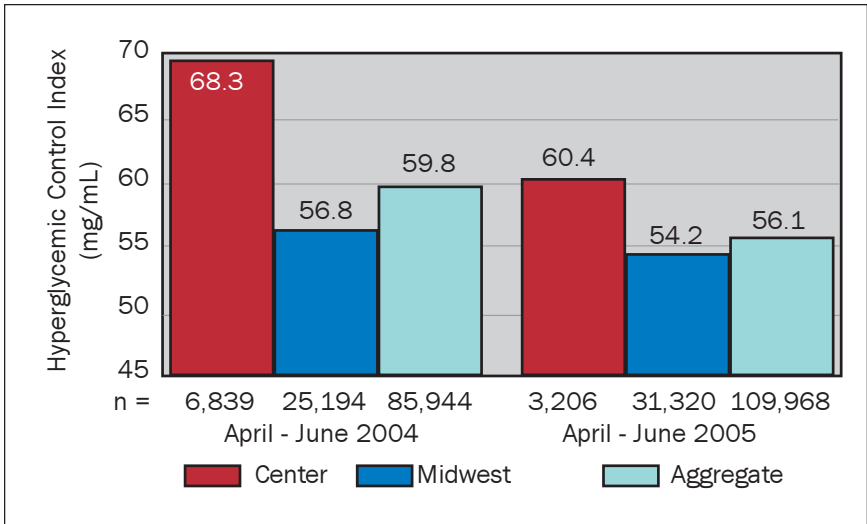
Tier III consists of the Tier I and Tier II Reports, plus more than 50 additional reports, including customization upon request. Two sample reports follow, one for the Glycemic Control Index \*\* (GCI) and one for the Hyperglycemic Index \*\*\* (HGI).

## Glycemic Control Index (GCI) By Number of Beds



# Tier III Reports

## Hyperglycemic Index (HGI) By Region



\*\* Glycemic control index (GCI), also known as the Area Under the Curve, examines blood glucose values as a dynamic process over time, as opposed to a static set of unrelated measurements. It can be considered as the "true" average blood glucose. It takes into account the length of time that individual blood glucose values are maintained.

\*\*\* The hyperglycemic index (HGI) report shows the calculated average value of the blood glucose when hyperglycemic (>110 mg/dL) minus 110, multiplied by the percent of time that the value of blood glucose is hyperglycemic (>110 mg/dL).





# MDN-NBI™

## About MDN

Medical Decisions Network (MDN) is a direct affiliate of Medical Automation Systems (MAS) and TEG Virginia, LLC (Epsilon Group).

MAS, with more than 1000 US hospitals using its RALS® system, is the country's leading provider of browser-based data management systems used at the point-of-care.

TEG is an international healthcare research and consulting firm specializing in formulating evidence-based strategy, identifying market opportunities through research, and translating new knowledge into sales and market share.

MDN combines the technology and scientific capabilities of MAS and The Epsilon Group to provide data management and knowledge service tools for addressing the barriers to evidence-based patient care and outcomes.

## An Integrated Solution for Tight Glycemic Control

With our Circle of Value, MDN is your total solution for tight glycemic control, from program formulation to national benchmarking. For more information on MDN products, visit [www.medicaldecisionsnetwork.net](http://www.medicaldecisionsnetwork.net).

We also invite you to visit [www.glycemiccontrol.net](http://www.glycemiccontrol.net), a web site dedicated to providing resources and information on this rapidly growing treatment initiative.

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