



Elevate Your Hospital's Diabetes Care Program with Glycare

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GlyCare[®]

by Diabetes Management Partners

ELEVATE YOUR HOSPITAL'S DIABETES CARE PROGRAM

Inpatient Glycemic and Diabetes Management Service

Webinar: May 7, 2024



Accelerate sustainable systemwide care improvements through
GlyCare-Facility Partnership

PARTNERS ADVISORY COMMITTEE MEMBER SPOTLIGHT

LEARN FROM INDUSTRY EXPERTS

ENDOCRINOLOGY ORIENTED CARE

Literature and ADA evidence based, protocol driven



David R. Sutton Jr., MD, FACE
Co-founder

Board certified in Endocrinology,
Diabetes, and Metabolism



J. Gary Evans, MD, FACE
Co-founder

Board certified in Endocrinology,
Diabetes, and Metabolism

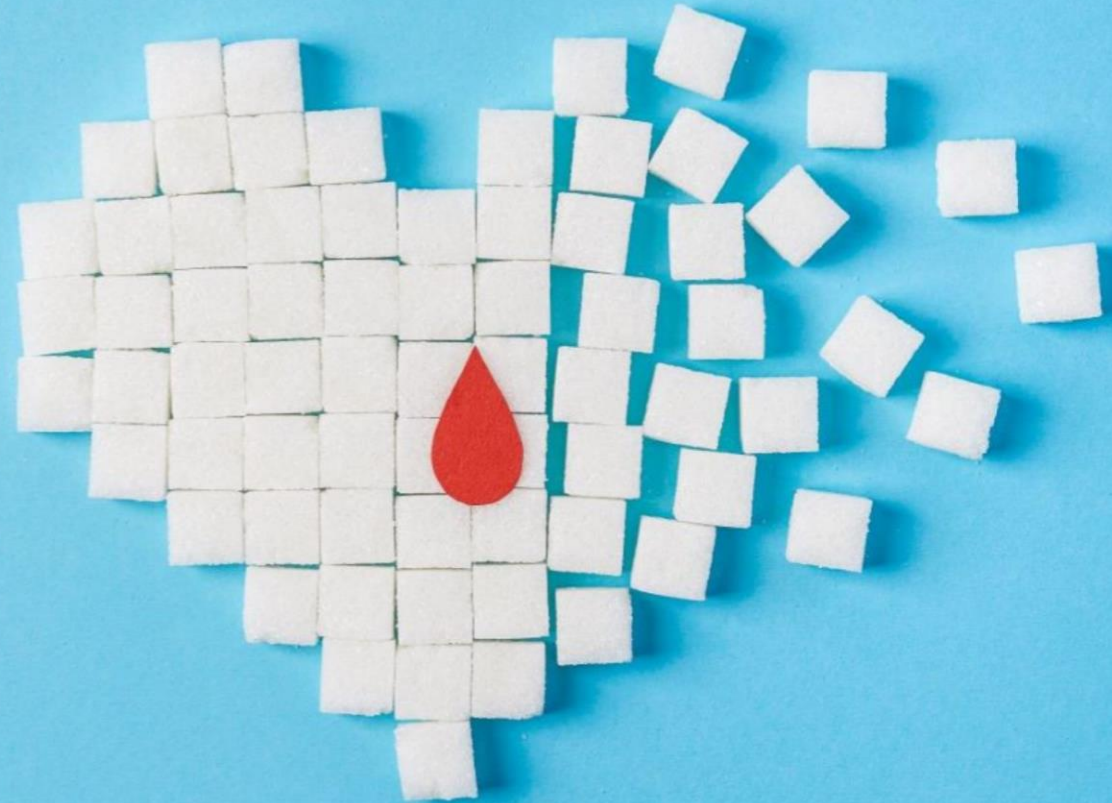


Guillermo Umpierrez, MD
Medical Advisory Board Member

Board certified in Endocrinology,
Diabetes, and Metabolism
2022 President, American Diabetes Association

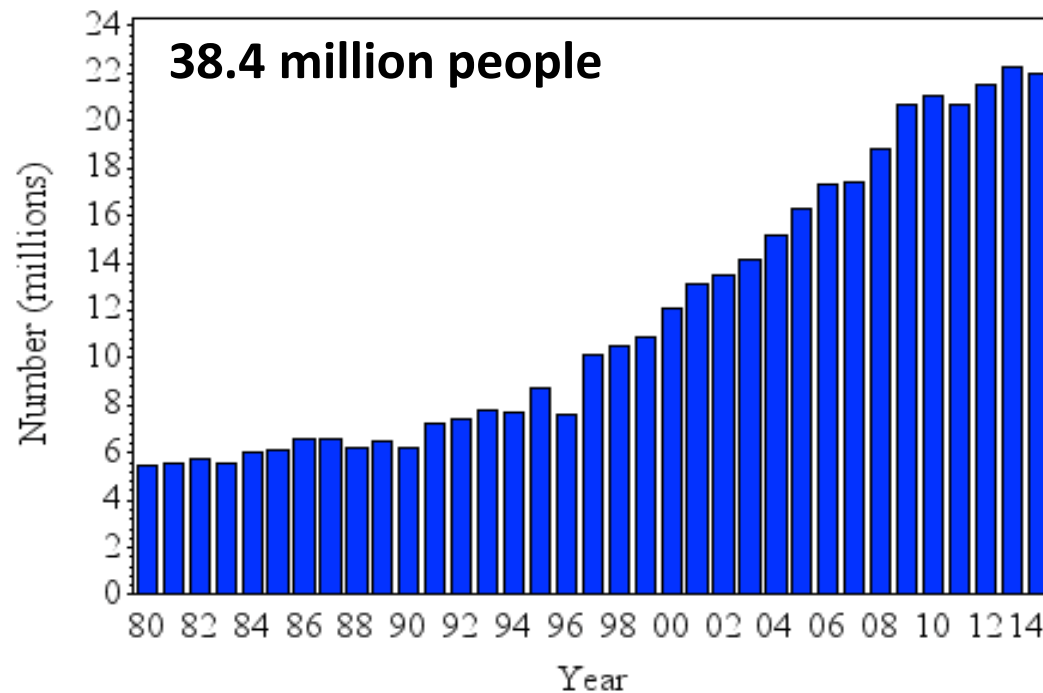
AGENDA

- 1 The State of Diabetes Care In The Hospital
- 2 Economic Impact On Healthcare Systems
- 3 Learn How GlyCare Supports Healthcare Facilities In Enhancing Their Diabetes Care Programs
- 4 GlyCare's Clinical Outcomes



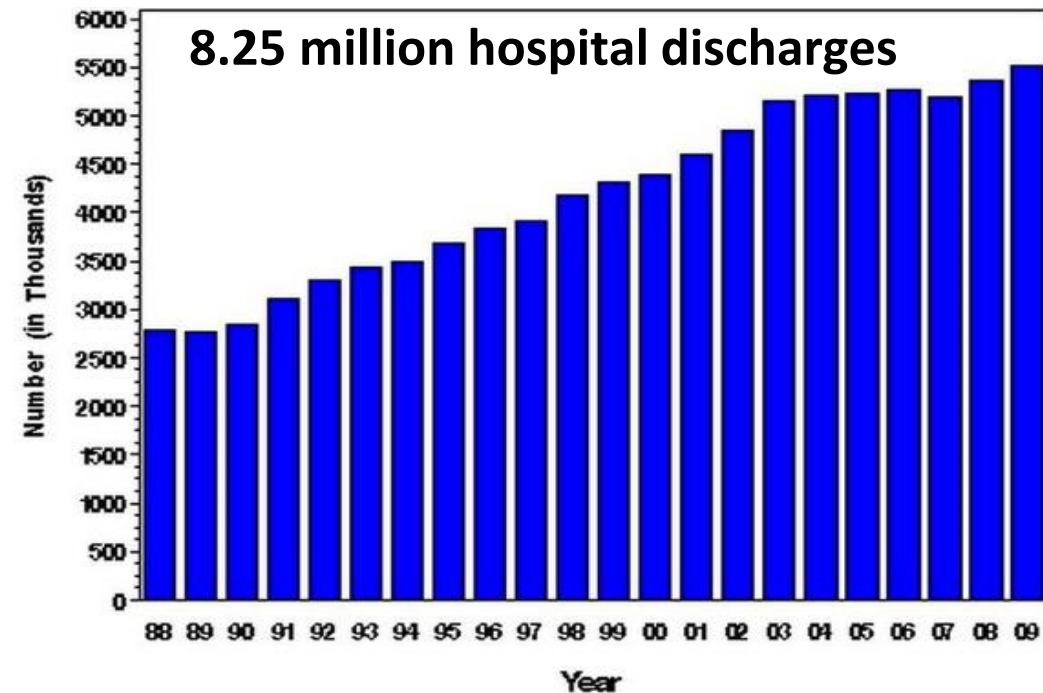
DIABETES EPIDEMIC IN THE UNITED STATES

US Population



- 14.7% of US adults population
- 1.5 million new cases of diabetes each year.
- Expected prevalence: ~55 million in 2030

Hospital Diabetes



- 2000 to 2018, the proportion of hospitalizations in adults increased from 17.1% to 27.3% (2.5% per year)
 - 17 million ED visits/year
- Cost: \$327 billion in 2017- (30% of the total cost)

THE STATE OF DIABETES CARE IN HOSPITALS

25% to 30% of adult ward and critical care unit patients **have diabetes**.¹

Hyperglycemia during hospitalization or diabetes diagnosis **linked to more complications, mortality, and higher costs**.¹

Patients with **poor glycemic control before surgery** are likely to **remain hyperglycemic** during and after surgery as well.²

Diabetic individuals face a **10- to 15-fold higher risk of lower-extremity amputations** compared to nondiabetic individuals.³

Patients with diabetes who **had hypoglycemia** or near-normal glucose levels **on the last day** of their hospital stay had **increased rates of readmission** within 30 days and **post-discharge mortality**.⁴

¹ Sidhaye, Aniket R. ; Mathioudakis, Nestoras ; Bashura, Holly et al. / Building a business case for inpatient diabetes management teams : Lessons from our center. In: Endocrine Practice. 2019 ; Vol. 25, No. 6. pp. 612-615.

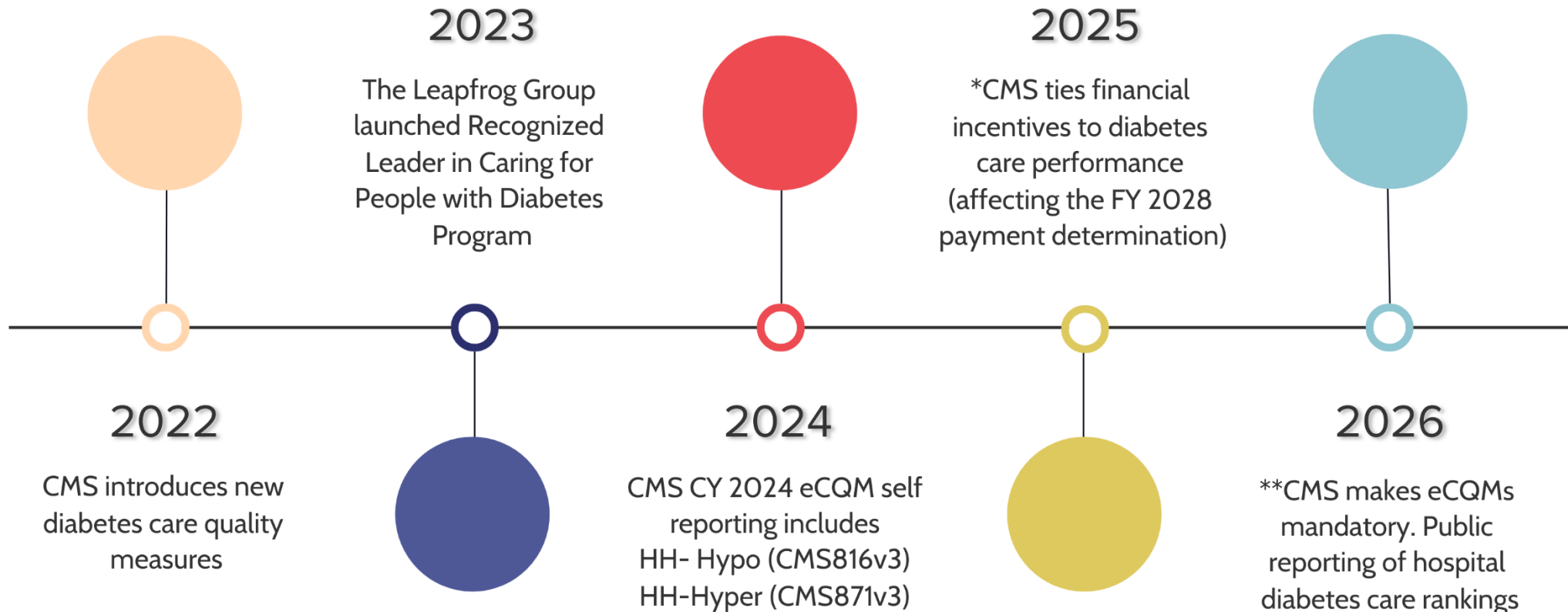
² Duncan AE. Hyperglycemia and perioperative glucose management. Curr Pharm Des. 2012;18(38):6195-6203. doi:10.2174/138161212803832236

³ Jessie A. Young, Charles Maynard, Gayle Reiber, Edward J. Boyko; Effects of Ethnicity and Nephropathy on Lower-Extremity Amputation Risk Among Diabetic Veterans. Diabetes Care 1 February 2003; 26 (2): 495–501. <https://doi.org/10.2337/diacare.26.2.495>

⁴ Spanakis, Elias K et al. "Association of Glucose Concentrations at Hospital Discharge With Readmissions and Mortality: A Nationwide Cohort Study." The Journal of clinical endocrinology and metabolism vol. 104,9 (2019): 3679-3691. doi:10.1210/jc.2018-02575

⁵ Department of Health and Human Services (HHS). (2022 May 9). Adverse Events in Hospitals: A Quarter of Medicare Patients Experiences Harm in October 2018. Office of Inspector General (OIG), OEI-06-18-00400. <https://oig.hhs.gov/oei/reports/OEI-06-18-00400.pdf>

INPATIENT DIABETES MANAGEMENT



*Scheduled to be published 5/2/24 and available online at <https://federalregister.gov/d/2024-07567>

**CMS Hospital Inpatient Quality Reporting (IQR) Program Measures for the FY 2026 Payment Update <https://qualitynet.cms.gov/inpatient/iqr/measures>

FACTORS DRIVING COST AND READMISSIONS

Despite existing glycemic guidelines, translating them into practice is challenging.

Factors driving costs in hospitalized patients with diabetes

- Increased length-of-stay (LOS)
- Financial penalties for high 30-day readmission rates

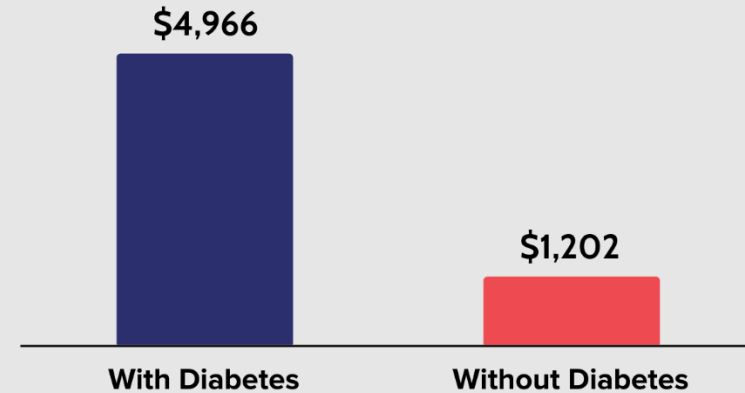
Dysglycemia during hospitalization linked to:

- Increased LOS
- Higher 30-day readmission rates

Study example: Each 50 mg/dL increase in glucose associated with:

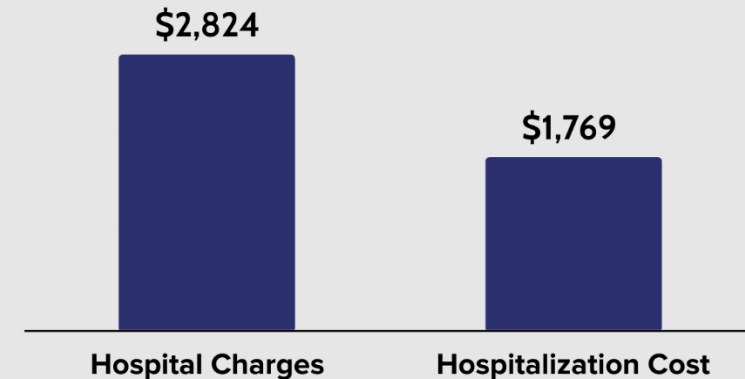
- 0.76 additional days of hospitalization post-operatively
- \$2,824 increase in hospital charges
- \$1,769 increase in hospitalization cost

2017 Per Capita Healthcare Expenditures For In-Hospital Care



American Diabetes Association. Economic costs of diabetes in the U.S. in 2017. *Diabetes Care*. 2018;41:917-928.

When Glucose Levels Increase by 50 mg/dL in CABG Patients



Carlos A, Estrada MM, Young JA, et al. Outcomes and perioperative hyperglycemia in patients with or without diabetes mellitus undergoing coronary artery bypass grafting. *Ann Thorac Surg*. 2011;75:1392-1399.



ADA STANDARDS OF MEDICAL CARE FOR INPATIENT MANAGEMENT

The American Diabetes Association (ADA) **recommends using a dedicated inpatient diabetes management team** to improve glycemic parameters and economic outcomes in hospitalized patients with diabetes and hyperglycemia.

American Diabetes Association Professional Practice Committee; 16. Diabetes Care in the Hospital: Standards of Care in Diabetes—2024. Diabetes Care 1 January 2024; 47 (Supplement_1): S295–S306. <https://doi.org/10.2337/dc24-S016>

ABOUT GLYCARE

GlyCare's service is an evidence-based population management program comprised of teams of Nurse Practitioners specifically trained for inpatient diabetes and glycemic management, supervised by GlyCare's Board Certified Endocrinologists. Our providers are responsible for glycemic management of all adult patients with diabetes, with some exceptions, and patients with hyperglycemia or hypoglycemia.

Services are provided 365 days a year, 24 hours a day

Takeaway

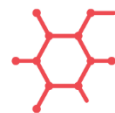
GlyCare adopts a proactive approach to patient care by focusing on prevention rather than responding to blood sugar abnormalities after they occur. This proactive approach helps reduce the risk of complications related to high or low blood sugar levels, such as infections, delayed wound healing, cardiovascular events, and other adverse outcomes.



Inaccurate use of insulin in hospital settings has led to its classification as a **high-risk medication**.



GlyCare®, an evidence-based and cost-effective solution offering numerous benefits that result in substantial cost savings for facilities. These advantages include reduced length of stay (LOS), decreased 30-day readmission rates (30DR), and reduction of staffing and overhead cost.



Much more than simply a standardized order-set.

Our daily assessment creates sustainable systemwide improvement & standardization of care throughout the facility.

SUSTAINMENT OF CARE IMPROVEMENTS

While we positively impact a single individual, GlyCare is a population management program. Impressive outcomes are achieved through the consistent care delivered to this population.



Lower Average
Glucose Readings



Reduced
Hypoglycemic Events



Fewer
Medical Errors



Reduced
Length of Stay



Reduced
Readmissions

The outcomes we achieved cannot be attributed solely to one aspect of our approach; rather, they are the result of combining multiple components and effectively minimizing unfavorable variations in the clinical practices of diabetes and glycemic management across all departments within the hospital.

yearly savings of
OVER \$5.5 MILLION

ESTIMATED SAVINGS PER 750 HOSPITAL BEDS AS A
RESULT OF REDUCED LENGTH OF GLYCARE PATIENT STAY

THE MECHANICS OF GLYCARE

1

At-Risk Population identified

GlyCare's clinical criteria will identify the at-risk population as well as hospitalized patients with hyperglycemia and hypoglycemia. Consults to our team are created through the EMR when patients meet pre-set diabetes and glycemic criteria.

2

Inpatient Glycemic Management

Diabetes patients are transitioned into the hospital. Treatment is adjusted based on clinical characteristics including severity of illness, hyperglycemia, the presence of complications and treatment before admission.

3

Diabetes Discharge Planning

Coordination of care in hospital and after discharge is key to prevent readmissions and improve diabetes care. Discharge planning begins at initial consultation. GlyCare handles the medication reconciliation and all diabetes related prescriptions.

4

Maximizing Glycemic Control through Collaborative Care

GlyCare providers take a team approach, working hand-in-glove with the physicians, nursing, dietitians, case managers, diabetes educators, and discharge planners to maximize glycemic control for the patient's benefit. Outside of glycemic management, the ongoing physician interactions will remain with the Hospitalist.

GLYCARE ADVANTAGES AND BENEFITS ACROSS THE HEALTH SYSTEM

1

Timescale

Timescale is in hours not days, with the Consult Order initiated immediately upon one or more of the clinical triggers. GlyCare is on the case Day 0. Our approach allows for early and quick intervention and is the catalyst for population management at a hospital level.

2

Workflow optimization

Our team will augment nursing and Hospitalists by taking over glycemic management responsibilities from admission through discharge. We standardize care across departments and personnel. We make available our proprietary, interactive dashboard, that reports on KPIs using data directly sourced from your EMR.

3

Going beyond surveillance

Daily Root Cause Analysis is undertaken by our team for all hyperglycemic events (BG>300 mg/dL) and hypoglycemic events (BG<70 mg/dL). This puts the focus on continuous improvement, helping to minimize the risk of avoidable complications and serious safety events (SSE).

4

Speed, Simplicity, Scalability

Our approach will reduce the nonbeneficial variations in clinical practice and spend. Our unique value is that we specifically focus on diabetes and glycemic control, delivered through Nurse Practitioners that are hired, trained, managed and supervised by GlyCare. We bill fee-for-service at the midlevel reduced rate.

REDUCTION OF SERIOUS SAFETY EVENTS

Partnering with GlyCare® reduces nonbeneficial variations in the clinical practice of diabetes management, thereby reducing the number of diabetes-related SSEs.

- ✓ Significant reduction of SSE due to nursing error.
- ✓ SSEs by GlyCare® providers is virtually nonexistent.



We closely track all patient glucose levels greater than 300 and less than 70. In doing so, we may come across an error as the cause. We provide a daily root cause analysis on these events.

Measure - Hospital Harm



Severe Hypoglycemia -HH-01 CMS816v3

- NQF Measure Number 3503e
- Measure Steward: CMS
- Diagnosis of diabetes with a blood glucose <40 mg/dL
- Endorsement Type: Endorsed by National Quality Forum
- Care Setting: Inpatient/Hospital
- National Quality Strategy Priorities: Patient Safety
- Current Use: In Use



Severe Hyperglycemia: HH-02 CMS871v3

- NQF Measure Number 3533e
- Measure Steward: CMS
- Diagnosis of diabetes with a blood glucose of >300mg/dL
- Endorsement Type: Endorsed by National Quality Forum
- Care Setting: Inpatient/Hospital
- National Quality Strategy Priorities: Patient Safety
- Current Use: In Use

Primary Category	Subcategory 1
Dietary/Nutrition	Incorrect diet
	Snacks given
	Outside food
	Extra juice/soda given
Medication	Medication Delay
	Medication ordered, not administered
	Medication underdose
	Medication overdose
	Stacking - Insulin administered too close together
	Patient off unit for scheduled doses
BG Monitoring Error	Inaccurate timing
	Taken after started eating
	Taken too close to insulin administration
	Missed monitoring
	Patient off unit
Lab Result Error	Blood drawn inappropriately (via PICC, etc.)
	Transcription Error (typo)
Patient Refusal	Insulin
	Oral Medication
	BG Monitoring
Hyperglycemia	IV steroids
	PO steroids
	IV fluids
	Brittle diabetes
	Unknown reason
Hypoglycemia	NPO
	Dialysis
	Brittle diabetes
	Unknown reason

784 MED SURG BEDS (2022 DATA)

Glycemic Summary Table

Encounter Type

Inpatient ▼

Physician Attending

(All) ▼

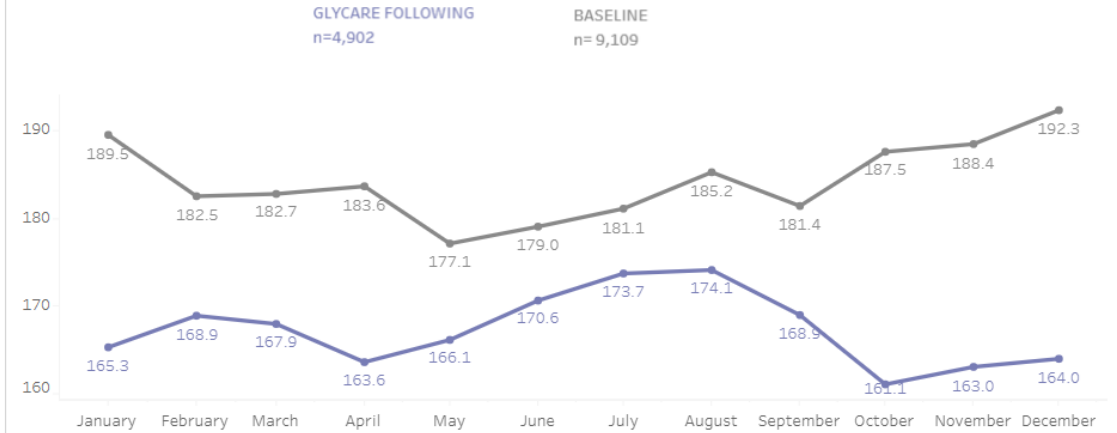
Glycare Following ⓘ

Glycare Period ⓘ

Baseline ⓘ

Facility Average Blood Sugar	166.9	168.4	183.9
Avg. blood sugar on day 3	166.4	167.1	182.7
Avg. BG change in mg/dL day 3 vs day 0	-15.3	-16.3	-13.9
% patient-days with Severe Hyperglycemic Events (BG>300 mg/dL)	13.41%	13.88%	20.47%
% patient-days with Severe Hypoglycemic Events (BG<40 mg/dL)	0.34%	0.32%	0.94%
% of patients within normal limits (BG 55-180 mg/dL)	88.80%	84.17%	74.12%
% of patients readmitted within 30 days of discharge	3.61%	3.46%	6.30%
Number of visits	4,902	6,576	9,109

Facility Average Blood Sugar



FIRST 90 DAYS

296 MED SURG BEDS

Glycemic Summary Table

Encounter Type

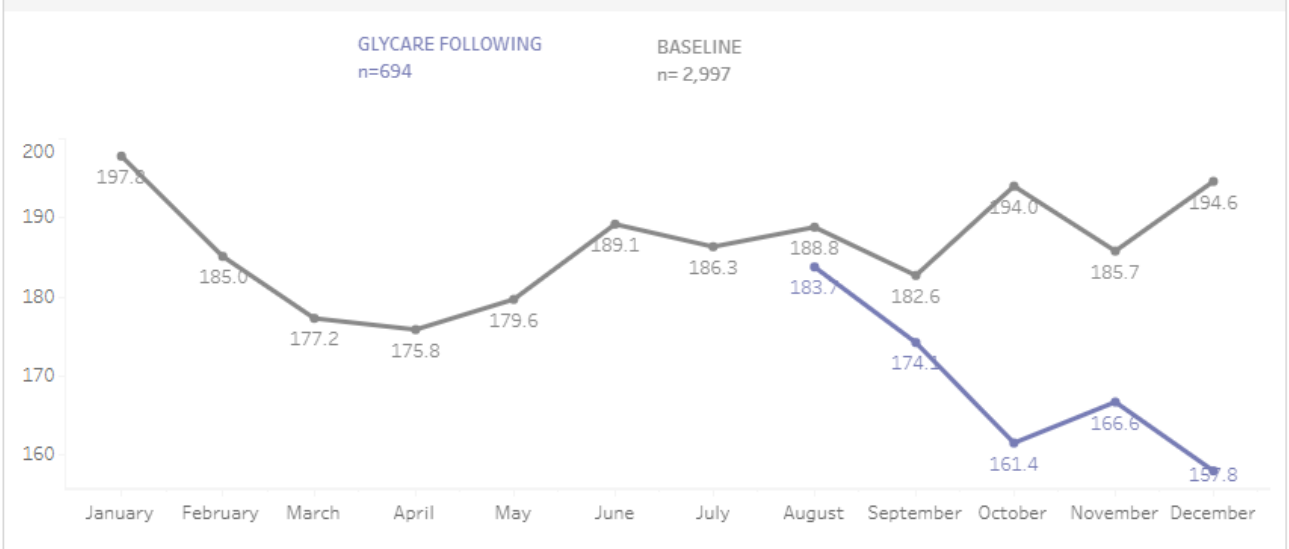
Inpatient

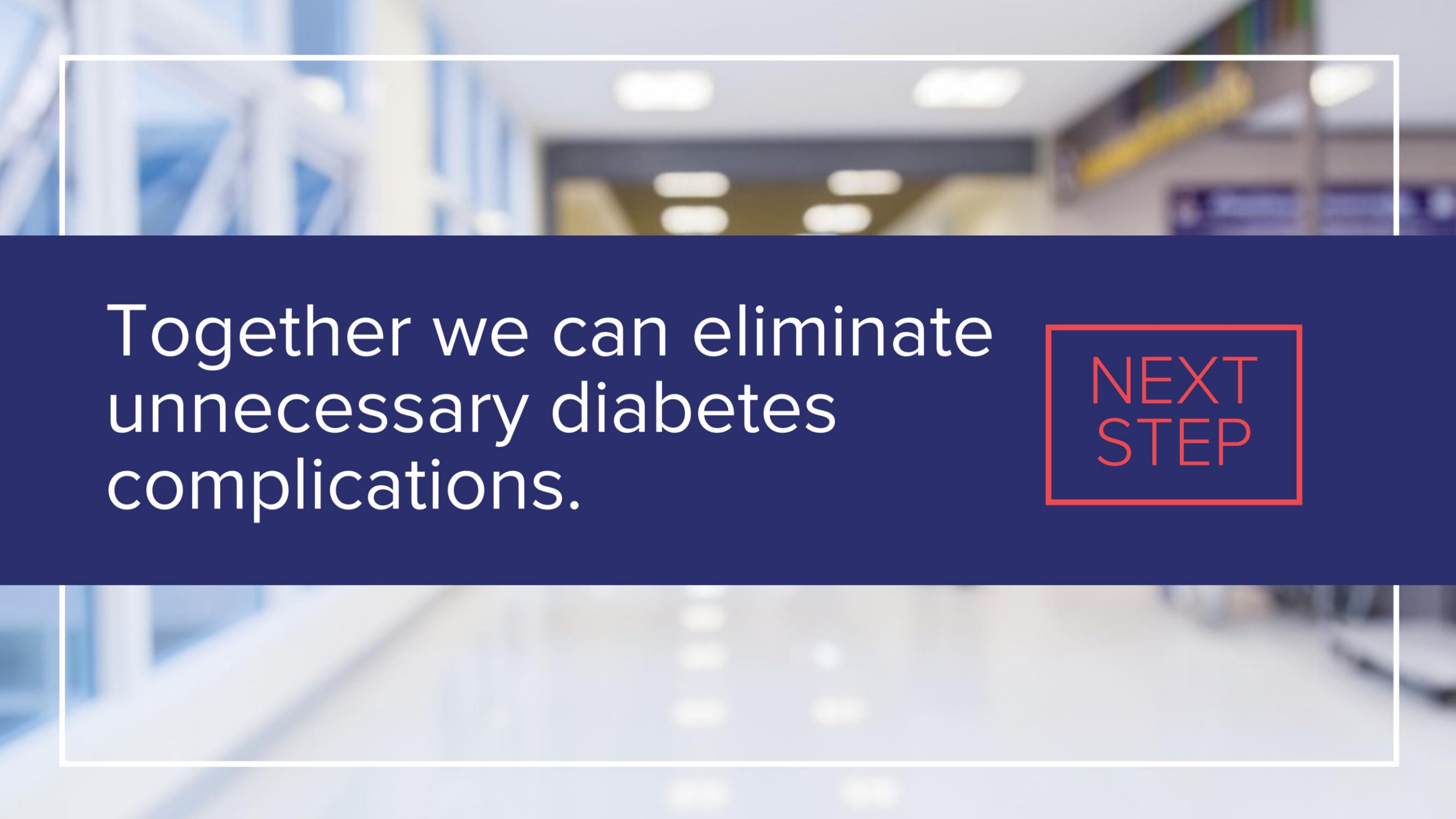
Physician Attending

(All)

	Glycare Following ⓘ	Glycare Period ⓘ	Baseline ⓘ
Facility Average Blood Sugar	167.5	173.1	186.3
Avg. blood sugar on day 3	168.6	171.6	184.2
Avg. BG change in mg/dL day 3 vs day 0	-12.9	-17.8	-17.3
% patient-days with Severe Hyperglycemic Events (BG>300 mg/dL)	12.22%	15.67%	20.85%
% patient-days with Severe Hypoglycemic Events (BG<40 mg/dL)	0.30%	0.41%	0.85%
% of patients within normal limits (BG 55-180 mg/dL)	91.50%	85.60%	76.39%
% of patients readmitted within 30 days of discharge	2.64%	2.42%	4.88%
Number of visits	694	1,161	2,997

Facility Average Blood Sugar



The background of the slide is a blurred image of a hospital hallway. It shows white walls, blue doors, and a series of bright, rectangular lights on the ceiling that create a perspective effect as they recede into the distance. The overall tone is clinical and clean.

Together we can eliminate
unnecessary diabetes
complications.

NEXT
STEP



The state of diabetic care in hospitals

ONLINE WEBINAR: Enhance Your Hospitals Diabetes Care Program with GlyCare

5.7.2024 @ 12 – 1PM EST

Don't miss out on the opportunity to transform your diabetes care program. Join GlyCare's co-founders, Drs. Gary Evans and David Sutton, along with Dr. Guillermo Umpierrez, a distinguished member of our Medical Advisory Board, as they unveil how GlyCare can revolutionize your diabetes care program.

Explore the presentation sources!

- American Diabetes Association Professional Practice Committee; 16. Diabetes Care in the Hospital: *Standards of Care in Diabetes—2024*. *Diabetes Care* 1 January 2024; 47 (Supplement_1): S295–S306. <https://doi.org/10.2337/dc24-S016>
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- Duncan AE. [Hyperglycemia and perioperative glucose management](#). *Curr Pharm Des*. 2012;18(38):6195-6203. doi:10.2174/138161212803832236
- Jessie A. Young, Charles Maynard, Gayle Reiber, Edward J. Boyko; Effects of Ethnicity and Nephropathy on Lower-Extremity Amputation Risk Among Diabetic Veterans. *Diabetes Care* 1 February 2003; 26 (2): 495–501. <https://doi.org/10.2337/diacare.26.2.495>
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- Department of Health and Human Services (HHS). (2022 May 9). Adverse Events in Hospitals: A Quarter of Medicare Patients Experiences Harm in October 2018. Office of Inspector General (OIG), OEI-06-18-00400 <https://oig.hhs.gov/oei/reports/OEI-06-18-00400.pdf>
- <https://federalregister.gov/d/2024-07567>
- CMS Hospital Inpatient Quality Reporting (IQR) Program Measures for the FY 2026 Payment Update <https://qualitynet.cms.gov/inpatient/iqr/measures>
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