THE LEAPFROG GROUP
Giant Leaps for Patient Safety

What Excellence Looks Like: Data, Safety, and the New Era of Glycemic Management

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II. Dr. Messler's Webinar Presentation

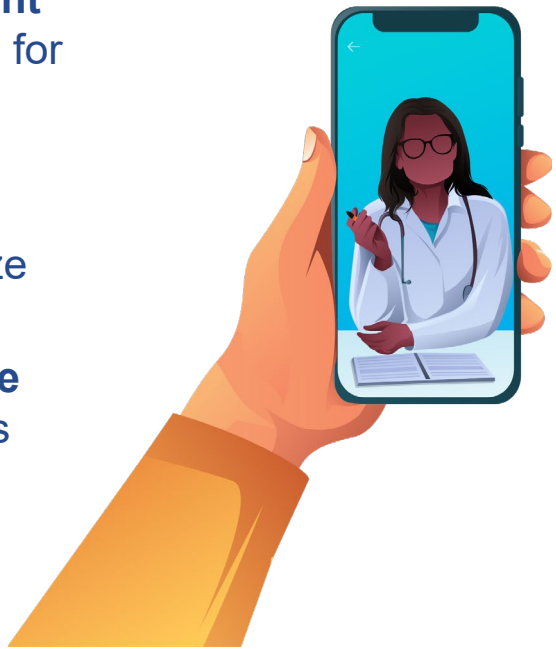
Learn more by contacting the Glytec team at info@glytec.com, visit glytec.com or reach out to Dr. Zilbermint at mzilber3@jhmi.edu or Dr. Messler at jmessler@glytec.com

What Excellence Looks Like: Data, Safety and the New Era of Glycemic Management

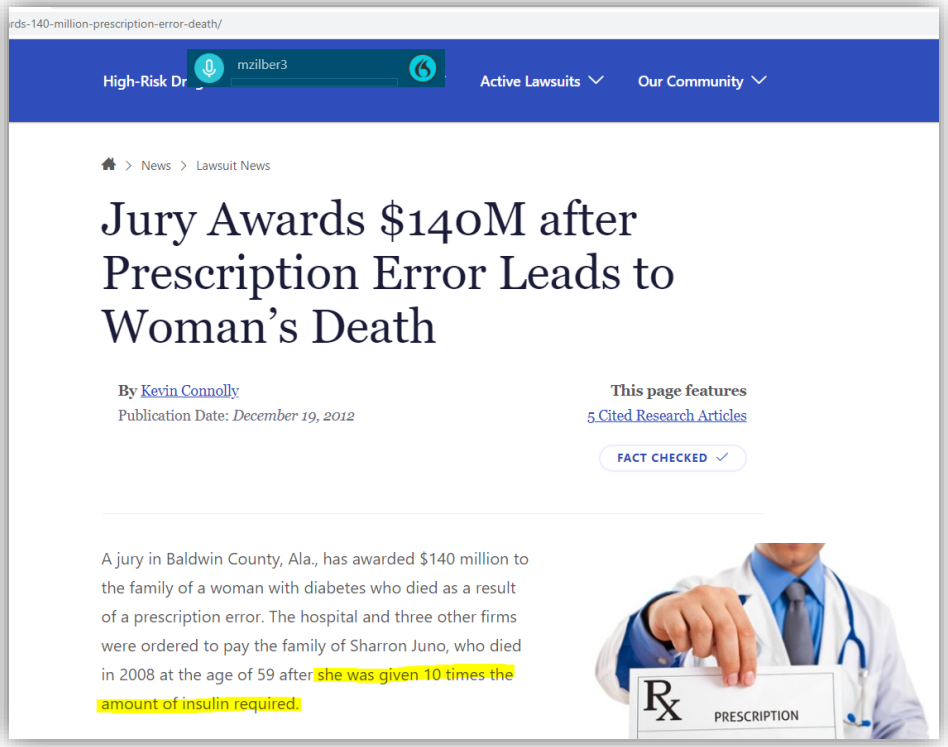
Mihail “Misha” Zilbermint, M.D., M.B.A., F.A.C.E.
Endocrine Hospitalist
Associate Professor of Clinical Medicine, Johns Hopkins University School of Medicine, Baltimore, MD
Director, Endocrine Hospitalists, Johns Hopkins Community Physicians, Bethesda, MD
mzilber3@jhmi.edu

Objectives

1. Understand the Urgency of **the CMS Glycemic Management Mandate**: Learn what the new CMS reporting standards mean for hospitals and why proactive action is essential.
2. Explore High-Impact Strategies for **Inpatient Glycemic Safety**: Gain insight into evidence-based interventions that improve patient safety, reduce adverse events, and standardize insulin management.
3. Leverage **Data for Compliance, Quality, and Performance** Improvement: See how real-time data monitoring and analytics are being used to track progress and drive sustained improvement.



Patient safety story



rds-140-million-prescription-error-death/

High-Risk Dr mzilber3 Active Lawsuits Our Community

News > Lawsuit News

Jury Awards $140M after Prescription Error Leads to Woman's Death

By Kevin Connolly
Publication Date: *December 19, 2012*

This page features
5 Cited Research Articles

FACT CHECKED

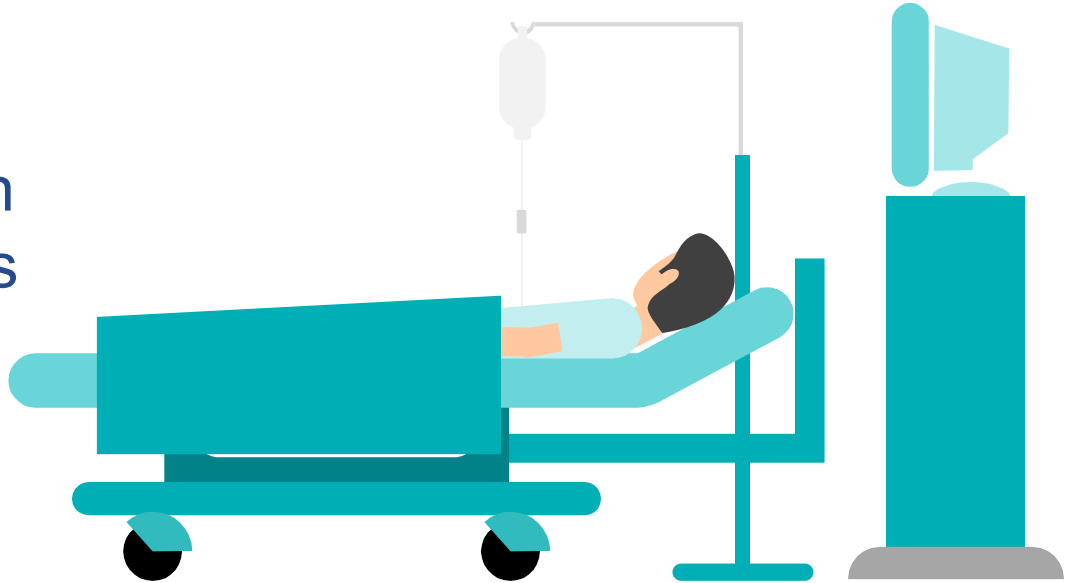
A jury in Baldwin County, Ala., has awarded $140 million to the family of a woman with diabetes who died as a result of a prescription error. The hospital and three other firms were ordered to pay the family of Sharron Juno, who died in 2008 at the age of 59 after she was given 10 times the amount of insulin required.

- 8U or 80 units of insulin?
- Prevention of extreme glucose levels
- How do we make sure this never happens at our hospitals?

https://www.drugwatch.com/news/2012/12/19/jury-awards-140-million-prescription-error-death/

Diabetes in the hospital

- One in four patients admitted to the hospital has a known diagnosis of diabetes
- 30% of patients with DM require 2-3 hospitalizations per year



Kalyani RR, Golden SH, Cefalu WT. Diabetes and Aging: Unique Considerations and Goals of Care. Diabetes Care. 2017 Apr;40(4):440-443.

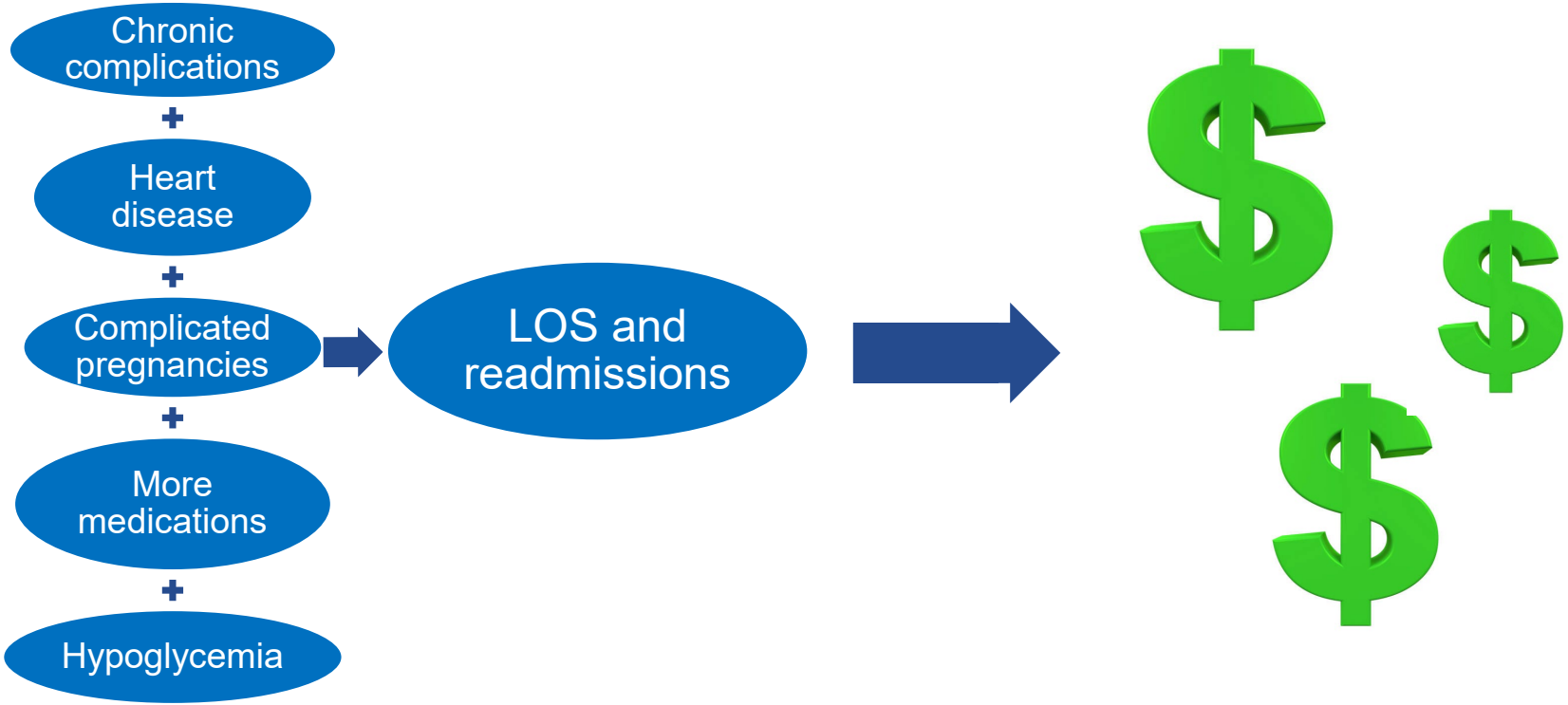
Impact of hyperglycemia and diabetes in the hospital



- Hyperglycemia is associated with:
  - 18-fold increase in mortality in hospital
  - More subsequent nursing home care
  - Greater risk of infection

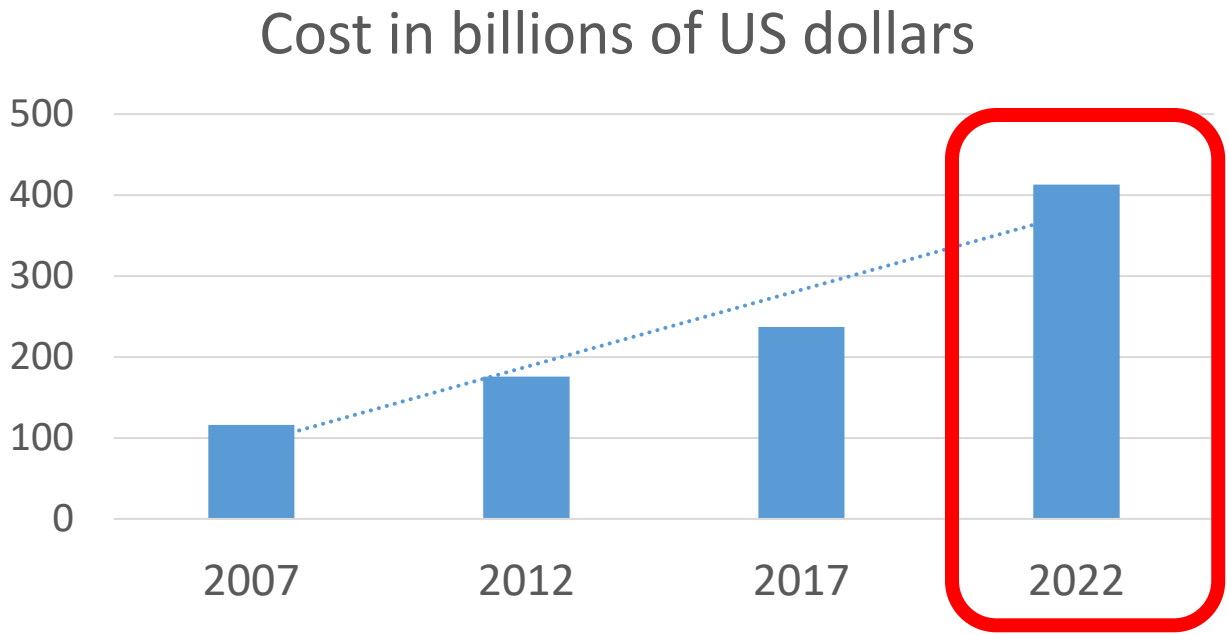
1. Umpierrez GE, Isaacs SD, Bazargan N, You X, Thaler LM, Kitabchi AE. Hyperglycemia: an independent marker of in-hospital mortality in patients with undiagnosed diabetes. J Clin Endocrinol Metab. 2002 Mar;87(3):978-82.
2. Mandel SR, …, Golden SH, Zilbermint M. Retrospective study of inpatient diabetes management service, length of stay and 30-day readmission rate of patients with diabetes at a community hospital. J Community Hosp Intern Med Perspect. 2019 Apr 12;9(2):64-73.

Cost of diabetes



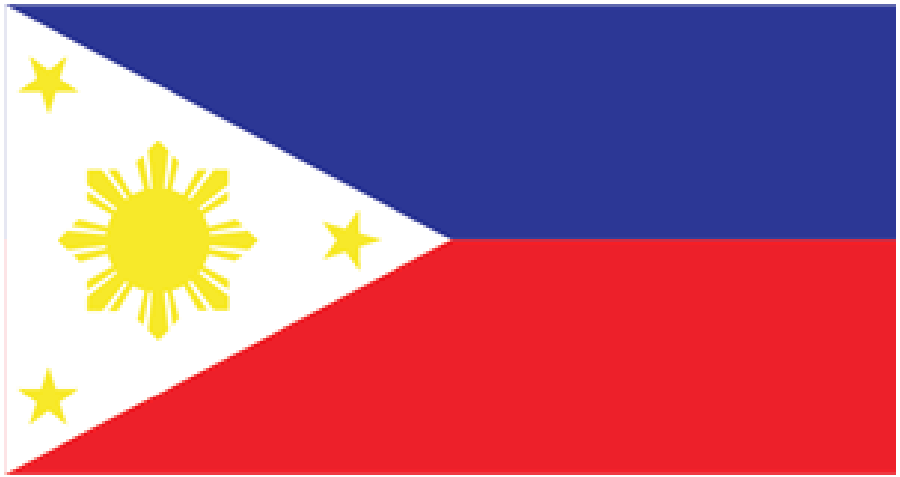
Haque WZ, Demidowich AP, Sidhaye A, Golden SH, Zilbermint M. The Financial Impact of an Inpatient Diabetes Management Service. Curr Diab Rep. 2021 Jan 15;21(2):5

Cost of diabetes



Parker ED, Lin J, Mahoney T, Ume N, Yang G, Gabbay RA, ElSayed NA, Bannuru RR. Economic Costs of Diabetes in the U.S. in 2022. Diabetes Care. 2023 Nov 1
Riddle MC, Herman WH. The Cost of Diabetes Care—An Elephant in the Room. Diabetes Care 2018; 41(5): 929-932.
Haque WZ, Demidowich AP, Sidhaye A, Golden SH, Zilbermint M. The Financial Impact of an Inpatient Diabetes Management Service. Curr Diab Rep. 2021 Jan 15;21(2):5

Name this country



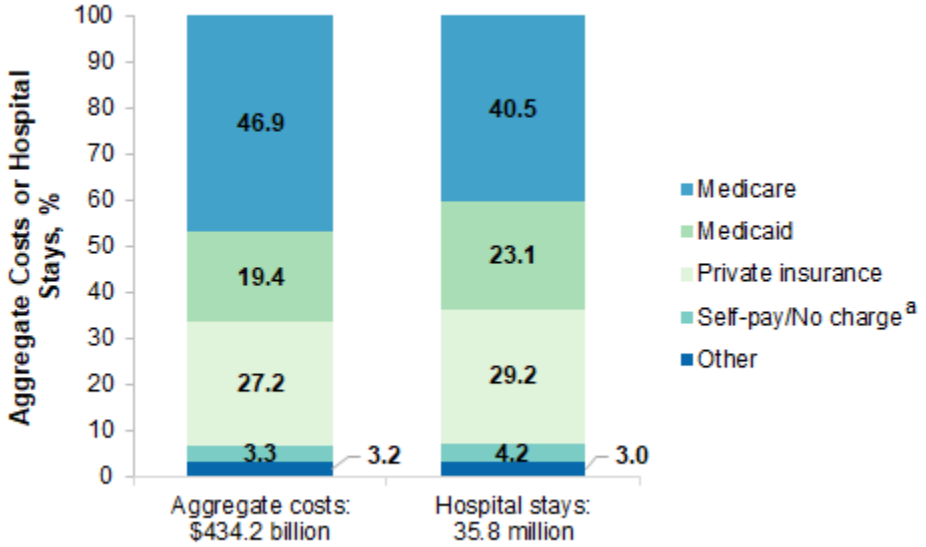


Philippines

GDP $406 billion (2022)

https://en.wikipedia.org/wiki and https://www.populationu.com/. Photo credit: M. Zilbermint

What is CMS's role in inpatient care?



- Centers for Medicare & Medicaid Services (CMS) pays acute care hospitals for inpatient stays under the Inpatient Prospective Payment System (IPPS)
- To get an increase in operating payment rates, hospitals must successfully participate in the Hospital Inpatient Quality Reporting (IQR) program

Lan Liang, Ph.D., Brian Moore, Ph.D., and Anita Soni, Ph.D. National Inpatient Hospital Costs: The Most Expensive Conditions by Payer, 2017
https://www.cms.gov/newsroom/fact-sheets/fy-2024-hospital-inpatient-prospective-payment-system-ipps-and-long-term-care-hospital-prospective (accessed on 05/14/2023)

Hospital Inpatient Quality Reporting (IQR) Program

- Pay-for-reporting quality program
- Quality measure data must be reported
- If not reported: up to ¼ cut in CMS payment



https://www.cms.gov/newsroom/fact-sheets/fy-2024-hospital-inpatient-prospective-payment-system-ipps-and-long-term-care-hospital-prospective (accessed on 05/14/2023)

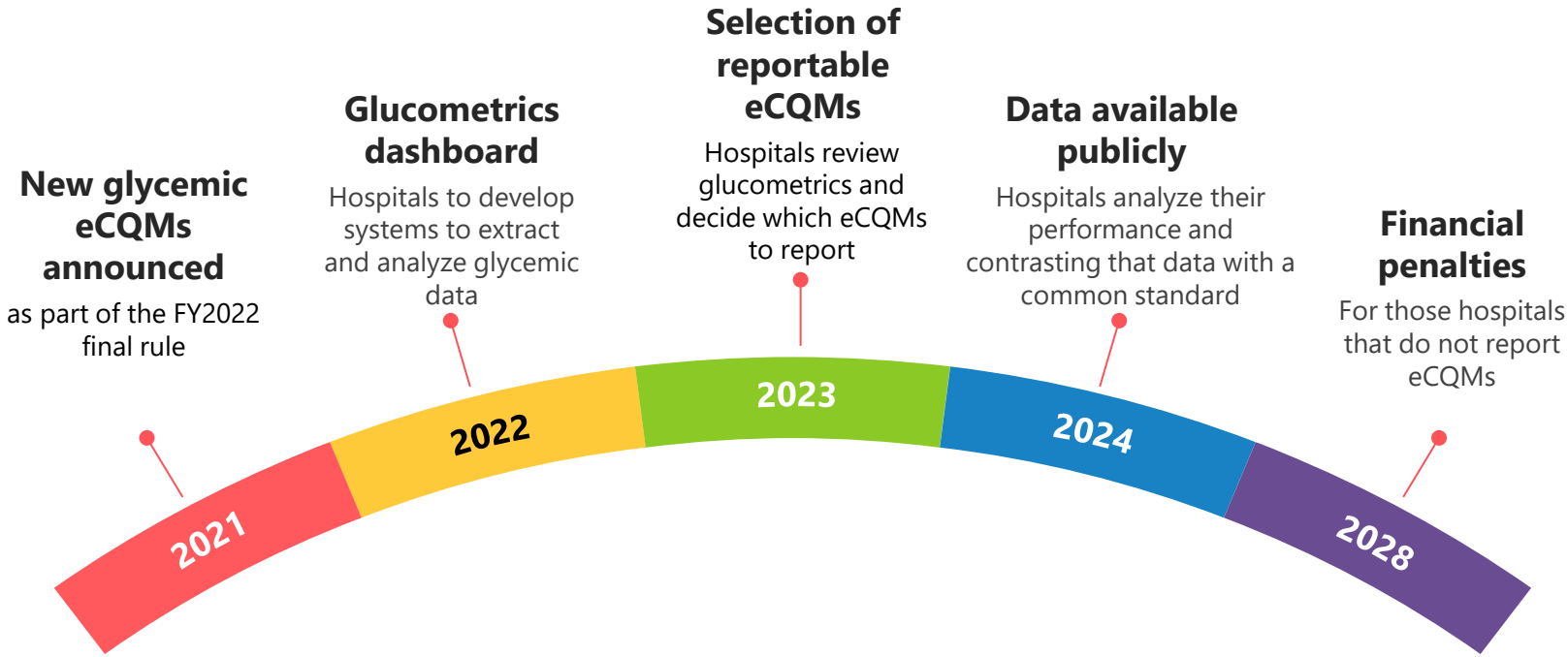
Electronic clinical quality measures (eCQMs)

Hospitals may “not know what they don’t know”



Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

CMS Hospital Harm eCQM glycemic metrics



Zilbermint M, Messler J, Stanback CF, Kulasa K, Demidowich AP. Bridging the Glycemic Gap: Will CMS-Mandated Reporting Improve Hospital Dysglycemia Management? J Diabetes Sci Technol. 2024 Nov;18(6):1521-1522.
Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Quiz popup

What is the glycemic target for most patients in a hospital setting?

A. Glucose 40-300 mg/dL
B. Glucose 140-180 mg/dL
C. Glucose 110 to 140 mg/dL
D. Any glucose >71 mg/dL

Quiz popup

What is the glycemic target for most patients in a hospital setting?

A. Glucose 40-300 mg/dL

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D. Any glucose >71 mg/dL

Blonde L, Umpierrez GE, Reddy SS, McGill JB, Berga SL, Bush M, Chandrasekaran S, DeFronzo RA, Einhorn D, Galindo RJ, Gardner TW, Garg R, Garvey WT, Hirsch IB, Hurley DL, Izuora K, Kosiborod M, Olson D, Patel SB, Pop-Busui R, Sadhu AR, Samson SL, Stec C, Tamborlane WV Jr, Tuttle KR, Twining C, Vella A, Vellanki P, Weber SL. American Association of Clinical Endocrinology Clinical Practice Guideline: Developing a Diabetes Mellitus Comprehensive Care Plan-2022 Update. Endocr Pract. 2022 Oct;28(10):923-1049.

Severe hypoglycemia: BG <40 mg/dL

Measure	Description
Metric 1 (NQF 3503e)	Number of (adult) **inpatient encounters** with **BG <40 mg/dL** preceded by antihyperglycemic medication (24 hours prior)

Slide courtesy of Nadine Shehab, PharmD, MPH (Division of Healthcare Quality Promotion, CDC): nshehab@cdc.gov

Severe hypoglycemia: BG <40 mg/dL

Measure	Description
Metric 1 (NQF 3503e)	Number of (adult) **inpatient encounters** with **BG <40 mg/dL** preceded by antihyperglycemic medication (24 hours prior) --- Number of (adult) **inpatient encounters** with ≥1 antihyperglycemic medication administered

Counts number of *patients* with hypoglycemia per *number* of patients on antihyperglycemic medications

Slide courtesy of Nadine Shehab, PharmD, MPH (Division of Healthcare Quality Promotion, CDC): nshehab@cdc.gov

Severe hyperglycemia: BG >300 mg/dL

Measure	Description
Metric 2 (NQF 3533e)	Inpatient hospitalizations with a BG >300 mg/dl within the first 10 days of the encounter minus the first 24 hours, and minus the last period before discharge if less than 24 hours ----------

Centers for Medicare and Medicaid Services Measures Inventory Tool-Severe Hypoglycemia [article online], 2022.

Severe hyperglycemia: BG >300 mg/dL

Measure	Description
Metric 2 (NQF 3533e)	Inpatient hospitalizations with a BG >300 mg/dl within the first 10 days of the encounter minus the first 24 hours, and minus the last period before discharge if less than 24 hours --- Inpatient hospitalizations where the patient has one of more of the following: 1. diagnosis of diabetes; 2. administration of at least one dose of insulin or any hypoglycemic medication during the encounter; 3. BG >=200 mg/dL at any time during the encounter.

Counts *inpatient hospitalizations* with BG>300 per *number* of hospitalizations of people with diabetes and/or insulin use

Centers for Medicare and Medicaid Services Measures Inventory Tool-Severe Hypoglycemia [article online], 2022.

eCQMs: what has already happened?

- Quality and IT teams built report on all eCQM data
- Executive team has (already) decided which 4 (of 11) they will report to CMS and The Joint Commission



Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

How should hospitals prepare?

- Get the subject matter experts together:
  - Diabetes care & education specialists
  - Endocrinologists and APPs
  - Pharmacists
  - Hospitalists



Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

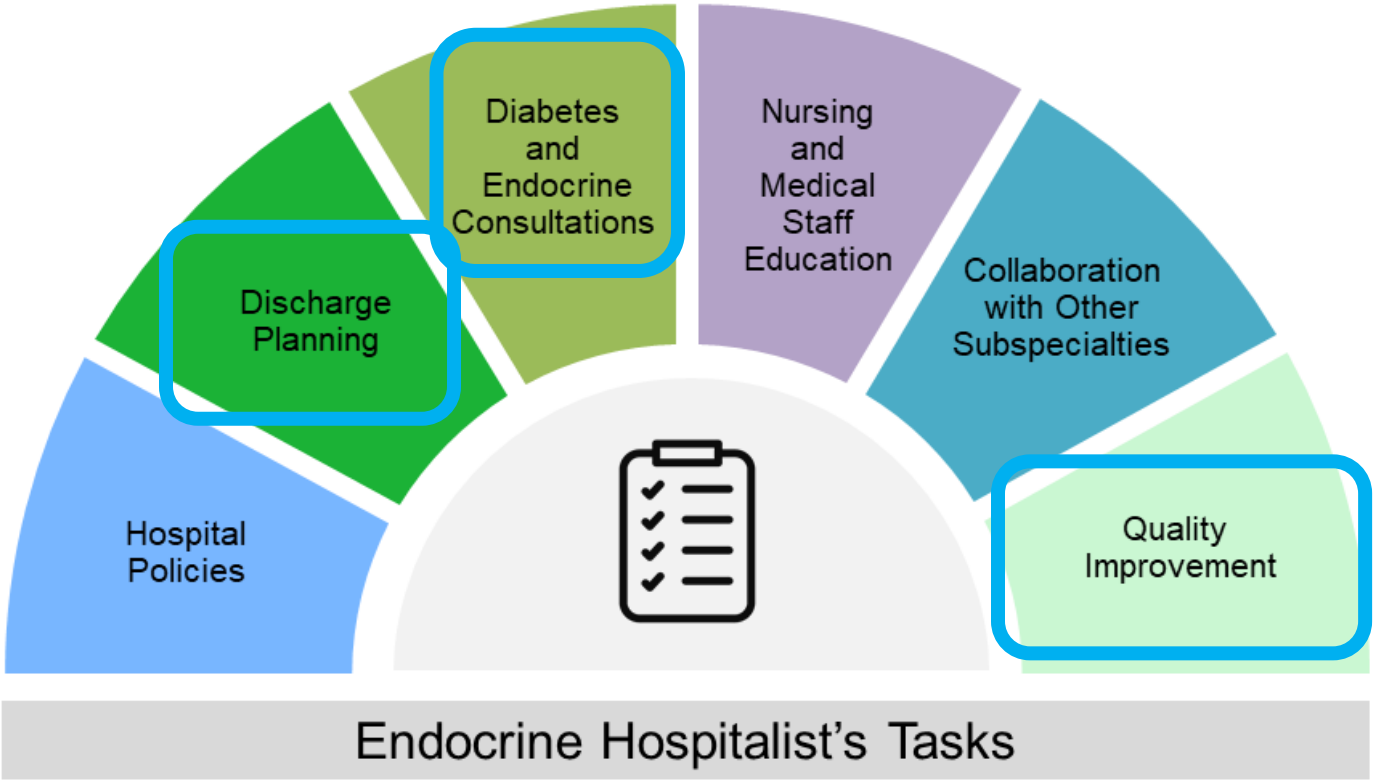
Endocrine Hospitalist model



- Improve glycemic control
- Reduce LOS
- Reduce readmissions
- Save $$$

Zilbermint M. The Endocrine Hospitalist: Enhancing the Quality of Diabetes Care. J Diabetes Sci Technol. 2021 Jul;15(4):762-767.

Our tasks



Zilbermint M. The Endocrine Hospitalist: Enhancing the Quality of Diabetes Care. J Diabetes Sci Technol. 2021 Jul;15(4):762-767.

How should hospitals prepare?



- Call Chief Quality Officer (or CMO)
- Call data analyst (or CMIO)

Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Glucometrics dashboard



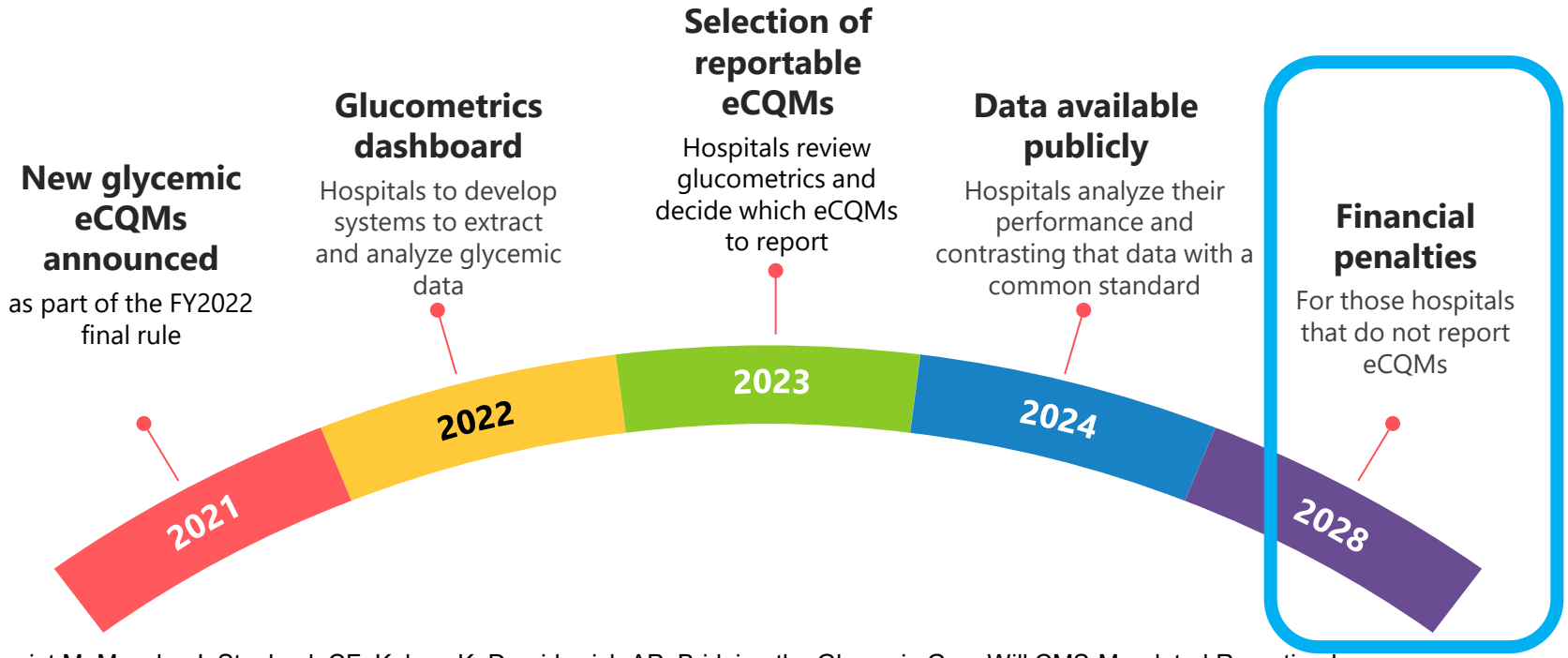
Sidhaye AR, Mathioudakis N, Bashura H, Sarkar S, Zilbermint M, Golden SH. BUILDING A BUSINESS CASE FOR INPATIENT DIABETES MANAGEMENT TEAMS: LESSONS FROM OUR CENTER. Endocr Pract. 2019 Jun;25(6):612-615.

Third-party glucometrics software developers



Insulin Management Software | Glytec [article online], 2022. Available from https://glytecsystems.com/.
Personal & Predictive Insulin Dosing | Monarch Medical Technologies [article online], 2022. Available from https://monarchmedtech.com/.
Insulin & Diabetes Software for Hospitals | GlucoStabilizer [article online], 2022. Available from https://www.glucostabilizer.net.

CMS Hospital Harm eCQM glycemic metrics

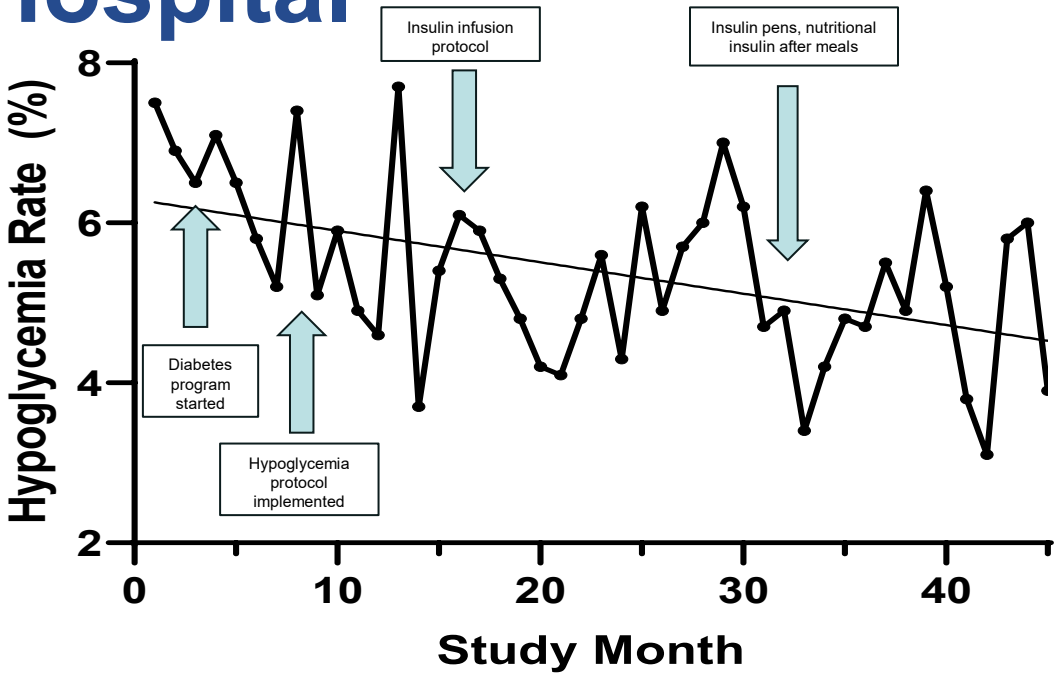


Zilbermint M, Messler J, Stanback CF, Kulasa K, Demidowich AP. Bridging the Glycemic Gap: Will CMS-Mandated Reporting Improve Hospital Dysglycemia Management? J Diabetes Sci Technol. 2024 Nov;18(6):1521-1522.
Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Examples of QI projects at Johns Hopkins Medicine (with a potential impact on glycemic outcomes)



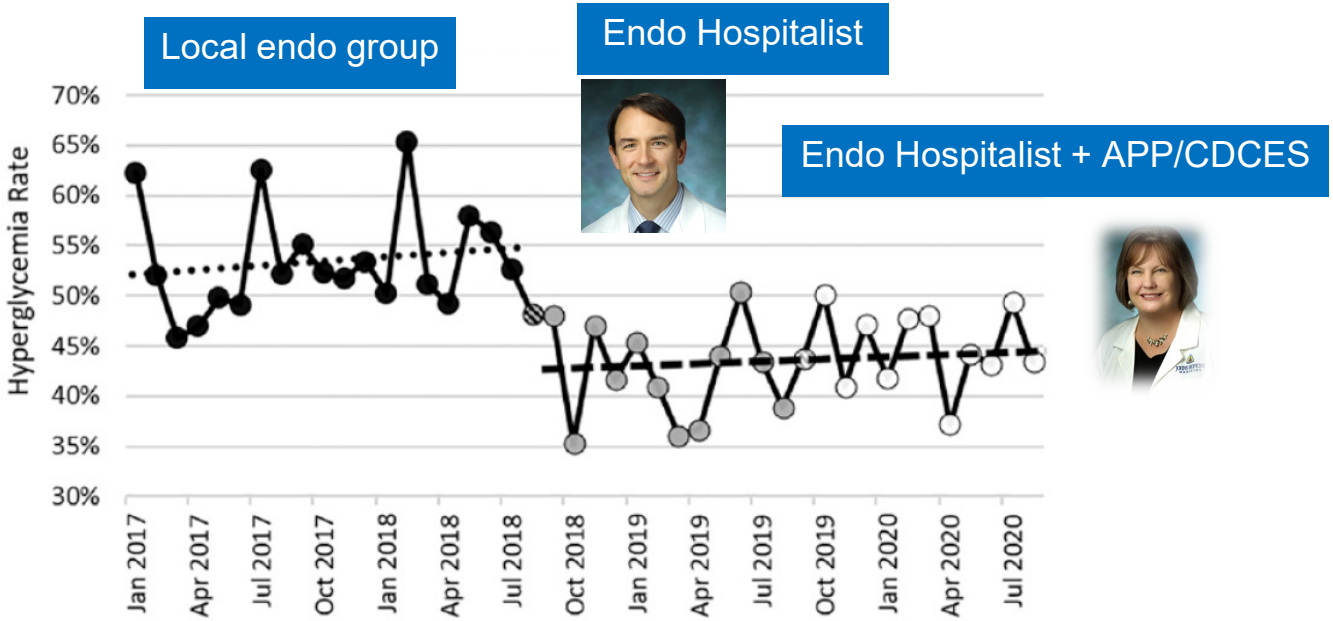
Hypoglycemia at Suburban Hospital



Cost savings: $98,635

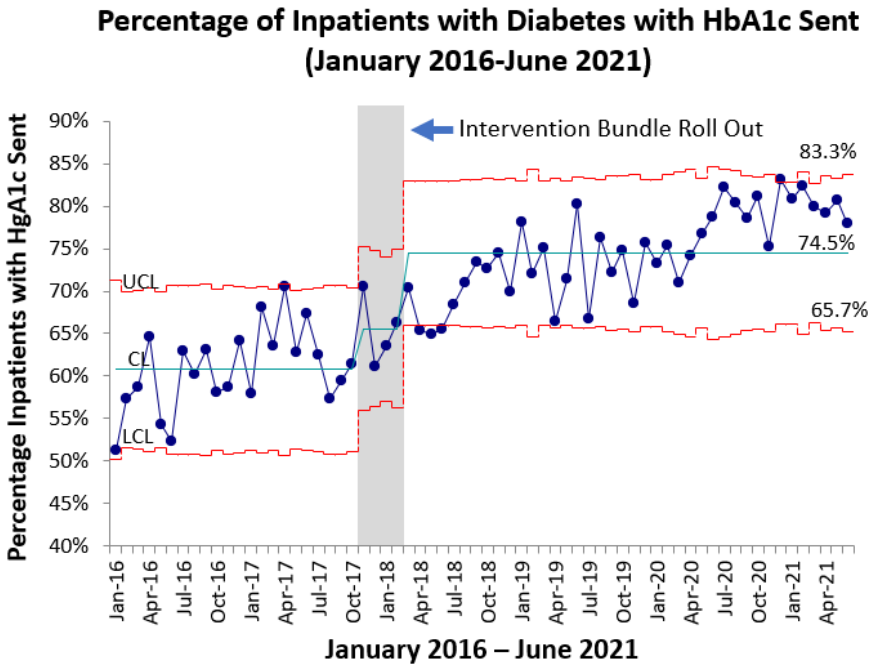
Shelton C, Demidowich AP, Motevalli M, Sokolinsky S, MacKay P, Tucker C, Abundo C, Peters E, Gooding R, Hackett M, Wedler J, Alexander LA, Barry L, Flynn M, Rios P, Fulda CL, Young MF, Kahl B, Pummer E, Mathioudakis NN, Sidhaye A, Howell EE, Rotello L, Zilbermint M. Retrospective Quality Improvement Study of Insulin-Induced Hypoglycemia and Implementation of Hospital-Wide Initiatives. J Diabetes Sci Technol. 2021 Jul;15(4):733-740.

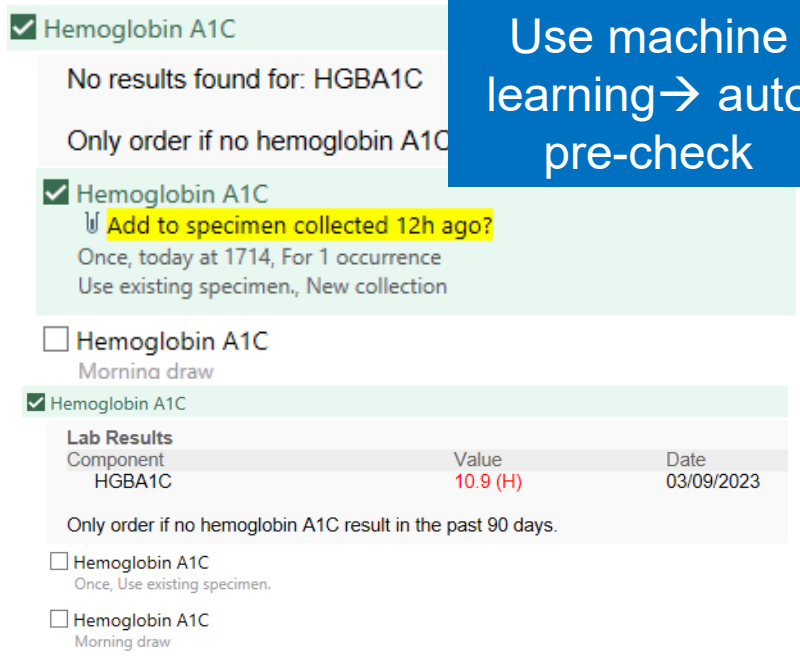
Hyperglycemia at Johns Hopkins Howard County Medical Center



Demidowich AP, Batty K, Love T, Sokolinsky S, Grubb L, Miller C, Raymond L, Nazarian J, Ahmed MS, Rotello L, Zilbermint M. Effects of a Dedicated Inpatient Diabetes Management Service on Glycemic Control in a Community Hospital Setting. J Diabetes Sci Technol. 2021 May;15(3):546-552.

A1C for diagnosis of diabetes

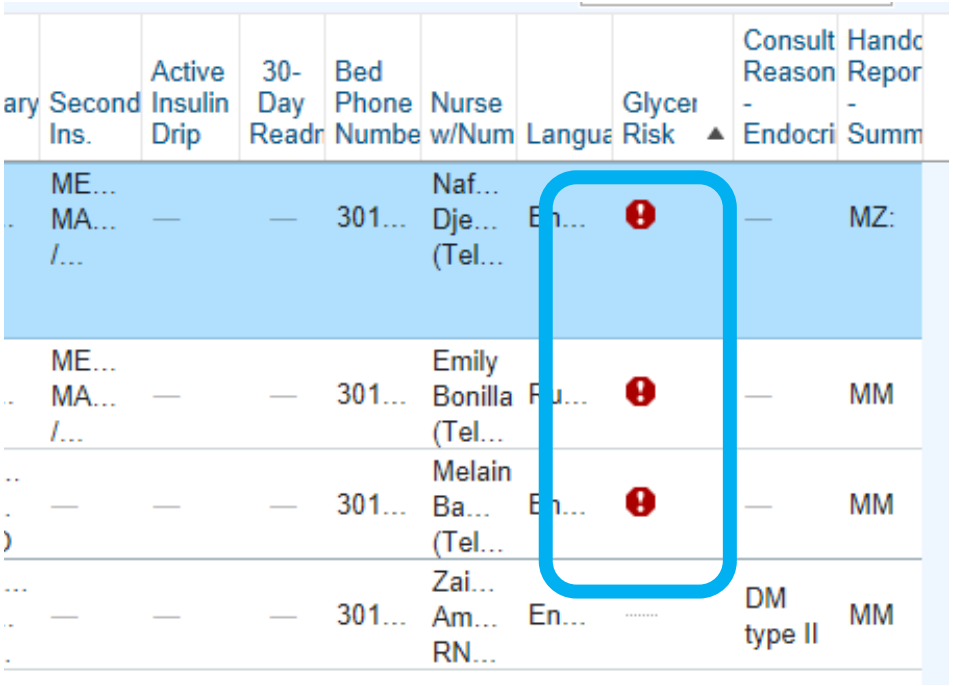




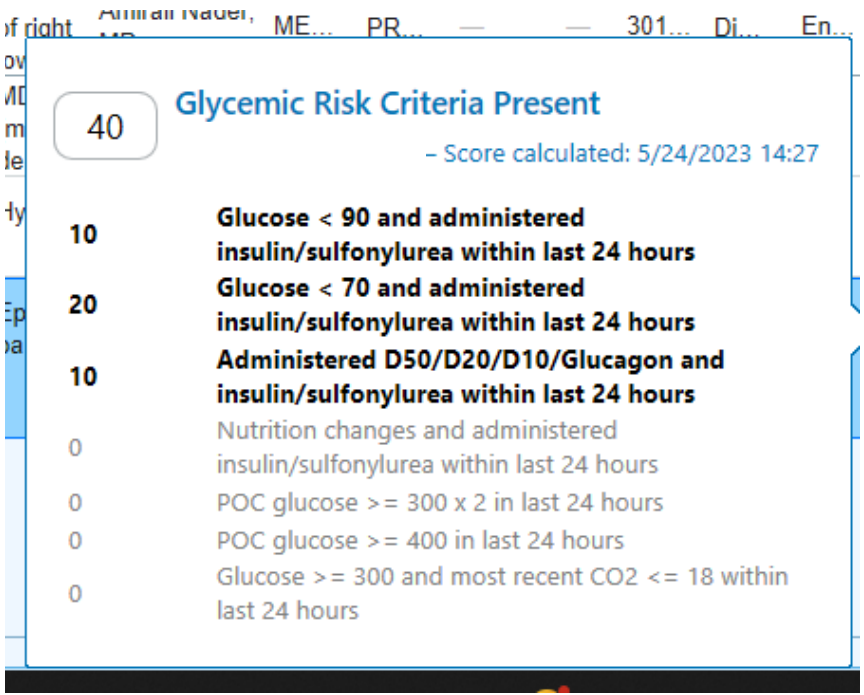
No recent A1C? Use machine learning→ auto pre-check

Khan SA, Demidowich AP, Tschudy MM, Wedler J, Lamy W, Akpandak I, Alexander LA, Misra I, Sidhaye A, Rotello L, Zilbermint M. Increasing Frequency of Hemoglobin A1C Measurements in Hospitalized Patients With Diabetes: A Quality Improvement Project Using Lean Six Sigma. J Diabetes Sci Technol. 2023 Feb 14:19322968231153883.

Glycemic risk score in EPIC



ary	Second Ins.	Active Insulin Drip	30-Day Readr	Bed Phone Numbe	Nurse w/Num	Langua	Glycer Risk ▲	Consult Reason - Endocri	Handc Repor - Summ
	ME… MA… /…	—	—	301…	Naf… Dje… (Tel…	E…	!	—	MZ:
	ME… MA… /…	—	—	301…	Emily Bonilla (Tel…	R…	!	—	MM
	—	—	—	301…	Melain Ba… (Tel…	E…	!	—	MM
	—	—	—	301…	Zai… Am… RN…	En…		DM type II	MM



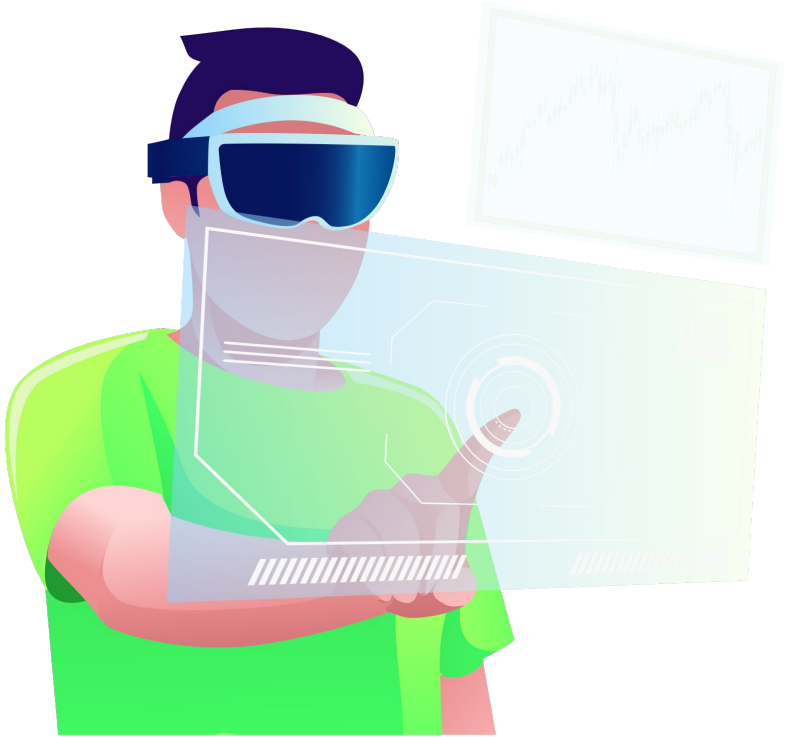
Possible future directions

- “Pay for reporting” → may become “pay for performance”



Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Other possible measures



- Admission HbA1c in people with hyperglycemia and diabetes
- Recurrent hypoglycemia
- Time in range

Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Are performance measures effective?



Zilbermint M, Messler J, Stanback CF, Kulasa K, Demidowich AP. Bridging the Glycemic Gap: Will CMS-Mandated Reporting Improve Hospital Dysglycemia Management? J Diabetes Sci Technol. 2024 Nov;18(6):1521-1522.

Performance-based model?

- CMS→ commercial insurers
- Benchmarks: quality over quantity → best clinical practices
- Transparency?
- Accountability?



Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Concerns about performance measures

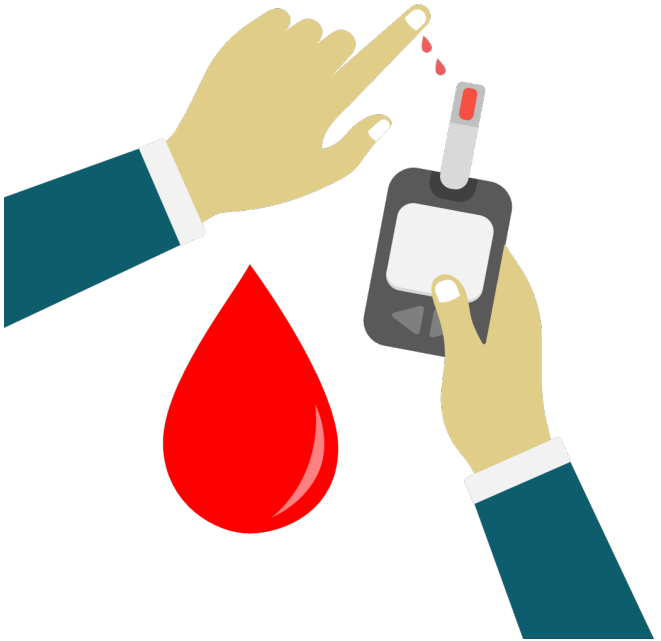


- Hospitals that serve may low-income and high risk patients, who struggle to engage with healthcare system → poor performance→ patient avoidance?
- Job satisfaction reduction
- Provider burnout
- High cost of data reporting

Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Glycemic metrics ≠ glycemic outcomes

- OK, we have the data… now what?
- Hospitals will have to still figure out how to interpret the data and translate into actionable items
- All data (critical and non-critical care) will be lumped
- What about glucose of 54 mg/dl?
- Is glucose of 275 mg/dL considered severe?



Khan SA, Zilbermint M. Centers for Medicare & Medicaid Services' Hospital Harm Measures for Severe Hypoglycemia and Hyperglycemia: Is Your Hospital Ready? Diabetes Spectr. 2022 Fall;35(4):391-397.

Summary



- New eCQM hospital harm measures:
  - Glucose <40 mg/dL
  - Glucose >300 mg/dL
- Hospitals must partner with diabetes educators, endocrine hospitalists, pharmacists, IT & nurses
- Balancing hypo- and hyperglycemia should be the goal
- Standardize the quality of diabetes care across the nation
- Making hospitals safer for people living with diabetes

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Thank you



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What Excellence Looks Like: Data, Safety and the New Era of Glycemic Management

glytec®

Data to drive change

Jordan Messler, MD, SFHM, FACP
Chief Medical Officer
jmessler@glytec.com

glytec®

Glytec's diabetes and insulin management technology platform

Innovative and integrated digital health technology platform uniquely positioned to address the needs of hospitals and health systems and drive better results



Glucommander

Point-of-care insulin dosing

- FDA-cleared
- Cloud-based
- Easy EHR integration
- Simple clinician - workflows



Command Center

Executive / admin diabetes control center

- Holistic view across system, hospitals & units
- Real-time insights & alerts
- Risk-based workflows & prioritization
- Executive level personas

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glytec

About us

Pioneers since day 1

Like many great innovations, Glytec was born from the combination of two very different realms of expertise.

Dr. Bruce Bode published the “paper-protocol” for insulin delivery but deemed it “not good or safe enough.” He teamed with Robby Booth to pioneer glucose management software.



Our mission: *To empower providers with data and insights to provide better, more cost-effective diabetes care and insulin management*

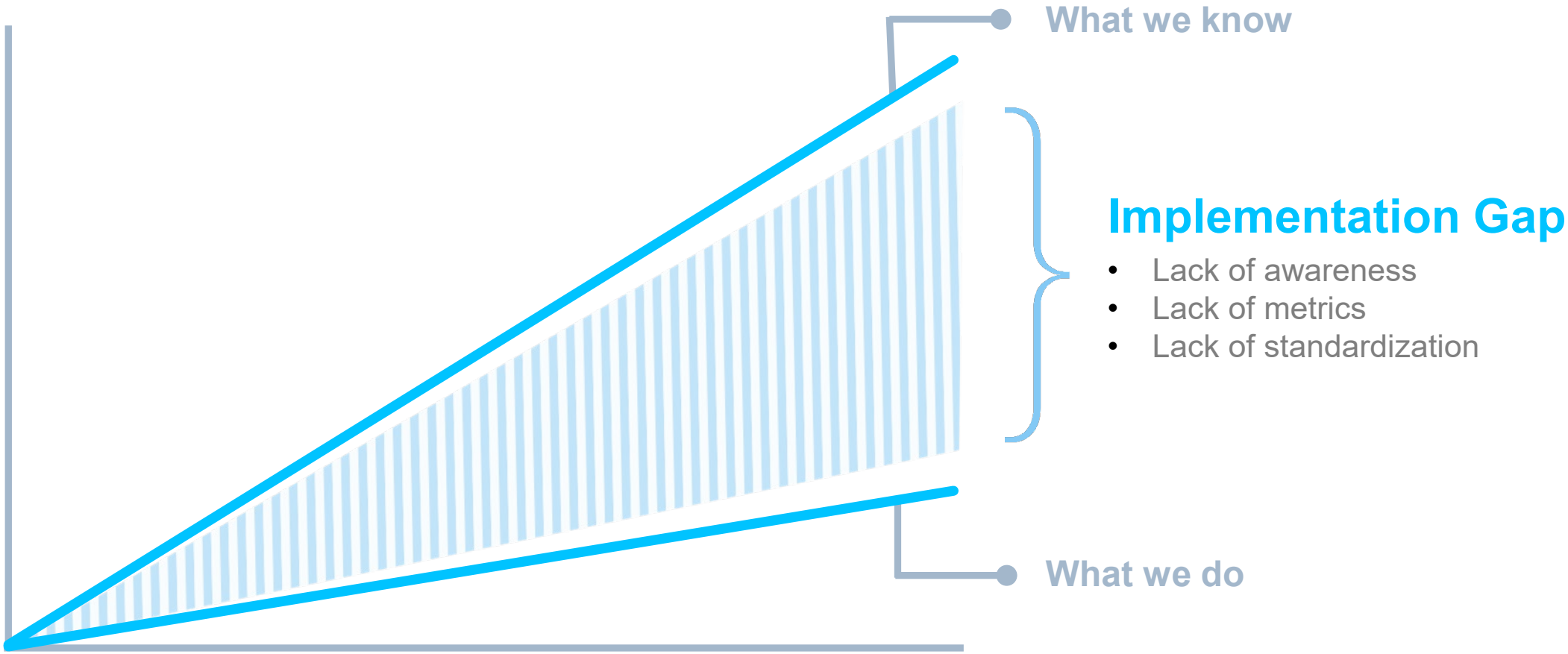
Glytec today

- FDA clearance
- >400 hospitals / health systems nationwide
- Growing team, investment, and innovation
- ROI of 6-8x
- >100 patents
- >100 clinical papers

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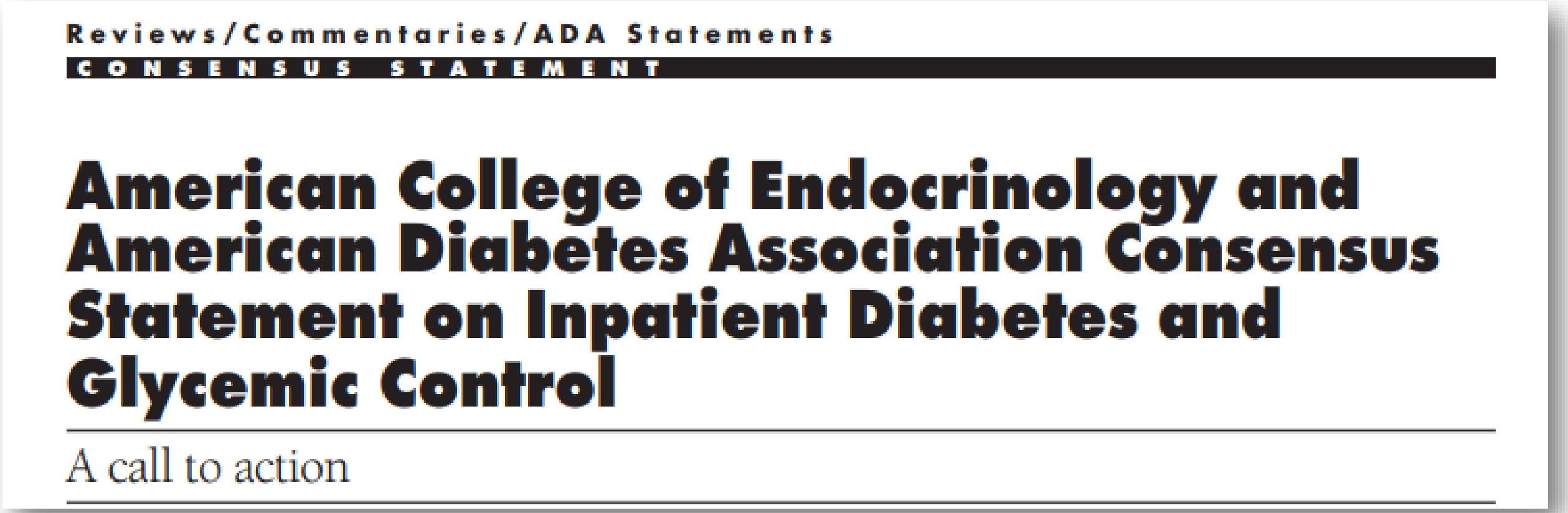
The Challenge

Understanding the problem



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January 2006



Reviews/Commentaries/ADA Statements

CONSENSUS STATEMENT

American College of Endocrinology and American Diabetes Association Consensus Statement on Inpatient Diabetes and Glycemic Control

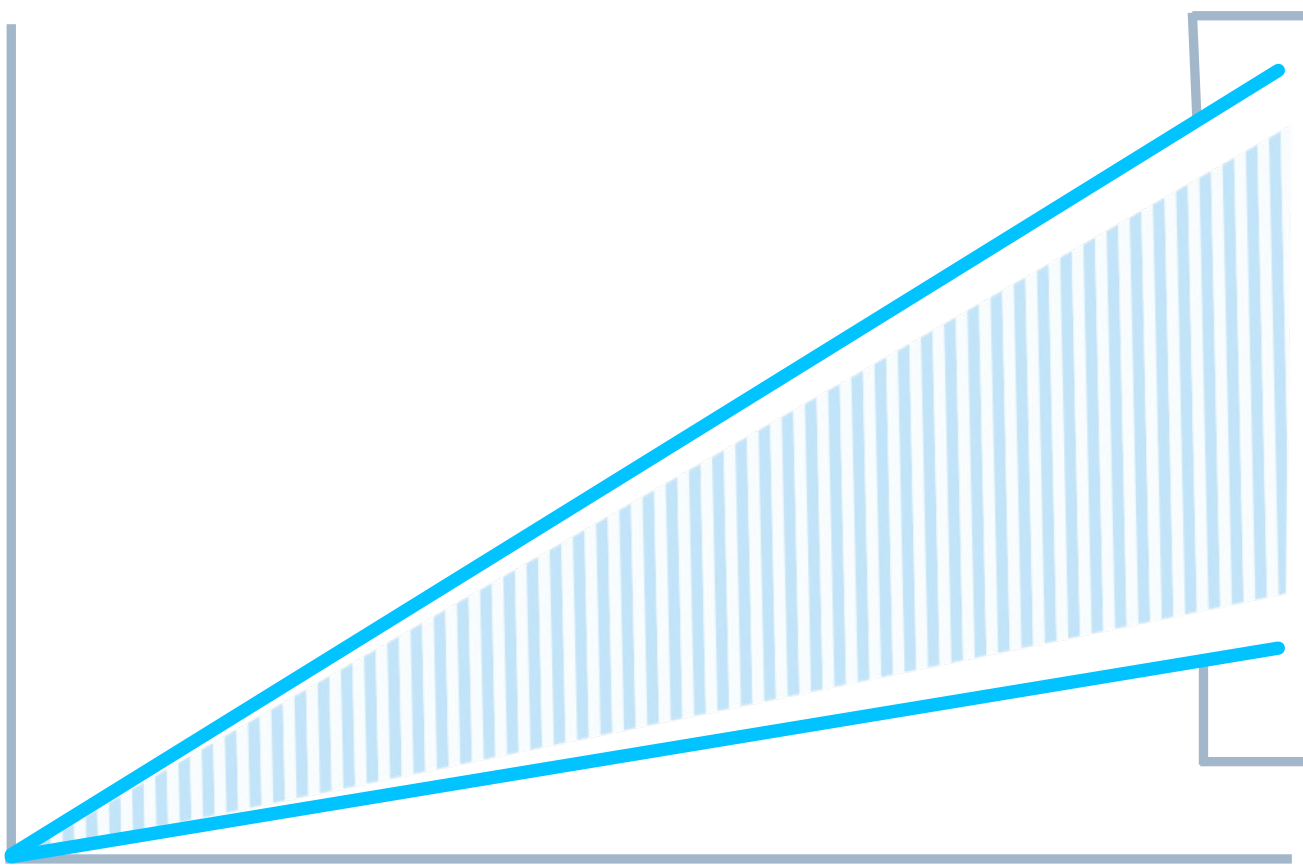
A call to action

ACE/ADA Task Force on Inpatient Diabetes. American College of Endocrinology and American Diabetes Association Consensus statement on inpatient diabetes and glycemic control. Diabetes Care. 2006 Aug;29(8):1955-62. doi: 10.2337/dc06-9913. PMID: 16873812.

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The Clinical Challenge

Understanding the problem



What we know
ADA GUIDELINES/BEST PRACTICES
-IV insulin for critically ill
-Basal Bolus for DM/Hyperglycemia
-Adjust insulin after hyper/hypoglycemia

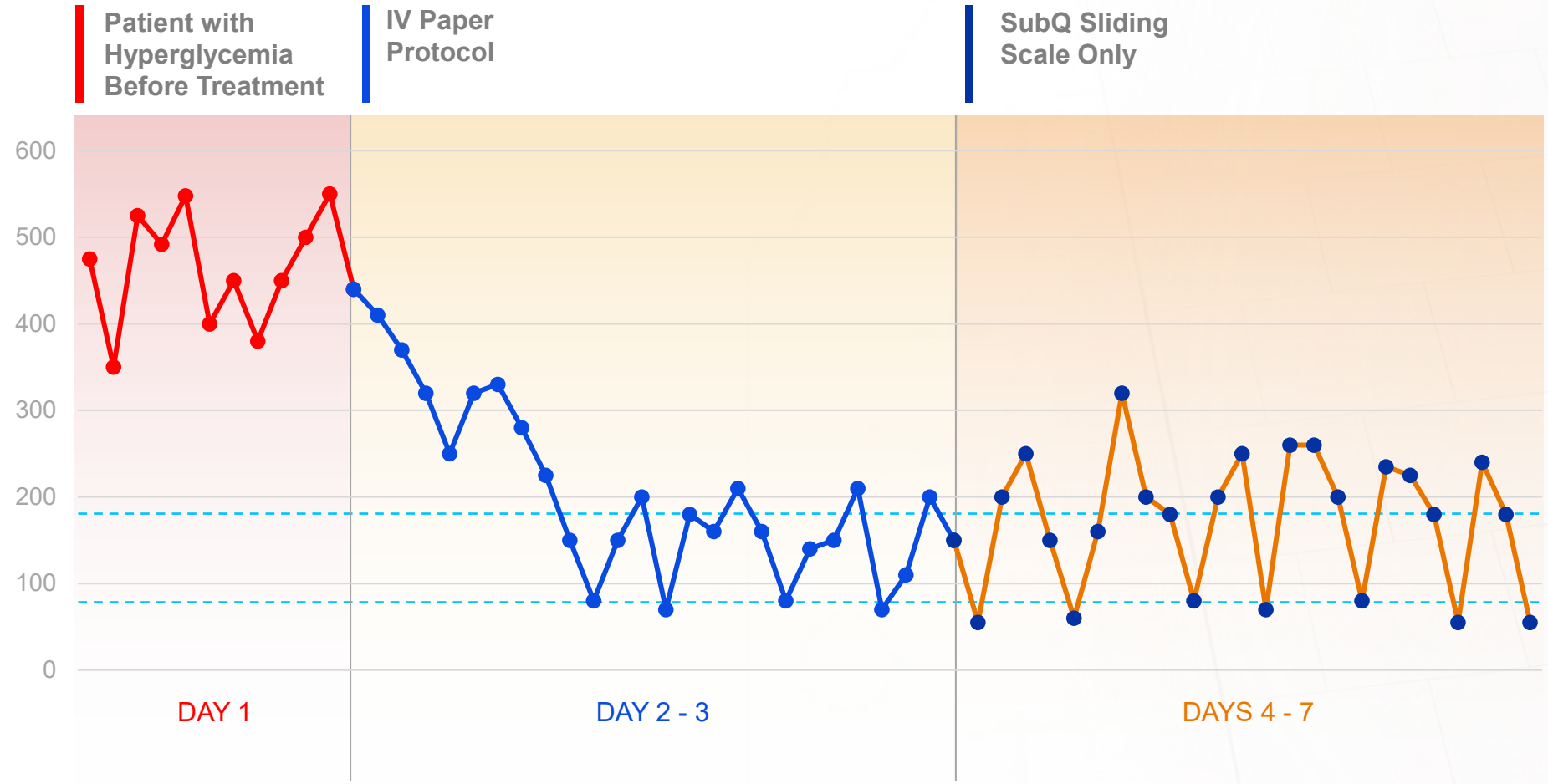
Implementation Gap

- Lack of awareness
- Lack of metrics
- Lack of standardization

What we do
-avoid IV insulin
-SSI only
-no adjustments

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How the Right Technology Can Help



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Current State: Challenge of Usual IV Insulin Protocols

Errors

85% of hypoglycemia events due to errors in utilizing the protocol
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3476387/

8.7x higher error rate: Simulation: paper vs. computerized, 13 vs. 113 errors ($p=0.0001$)[2]
https://pubmed.ncbi.nlm.nih.gov/20430622/

Deviation from Protocol

Numerous clinical deviations from protocol, *with only 7% justified*
Wrong algorithm, wrong infusion rate chosen, poor timing of BG checks
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3476387/

Proof in Research

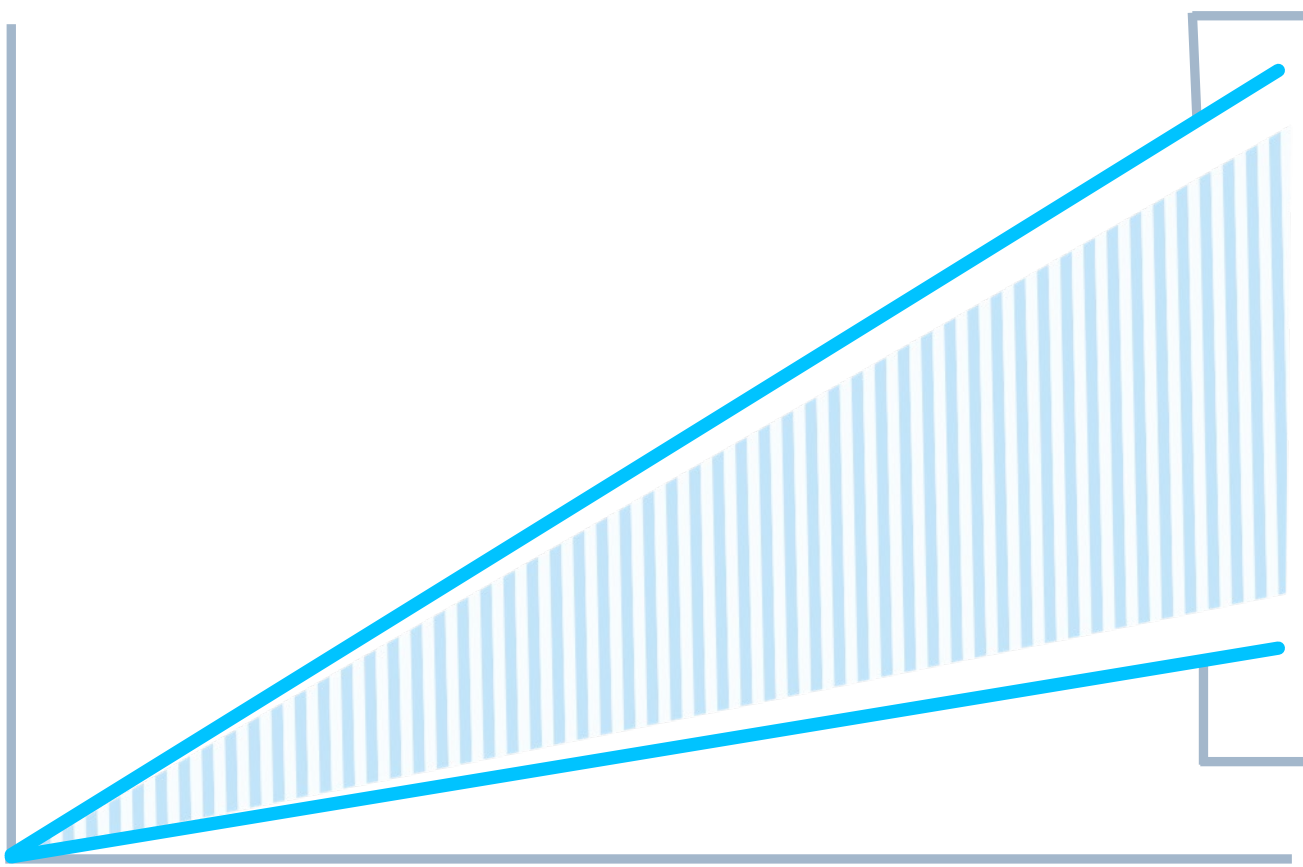
Hypoglycemia reduction consistently 90-99% with use of IV Glucommander compared to usual care

https://journals.sagepub.com/doi/full/10.1177/1932296817747617

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The Data Challenge

Understanding the problem



What we want

Actionable Insights

-Hypo driven by renal patients

-50% DKA pts have incorrect fluids

-Basal Dose Adjusted 25% of time after Hypo

DATA GAP

- Lack of resources
- Lack of metrics
- Lack of expertise

What we have

-basic hypo rates

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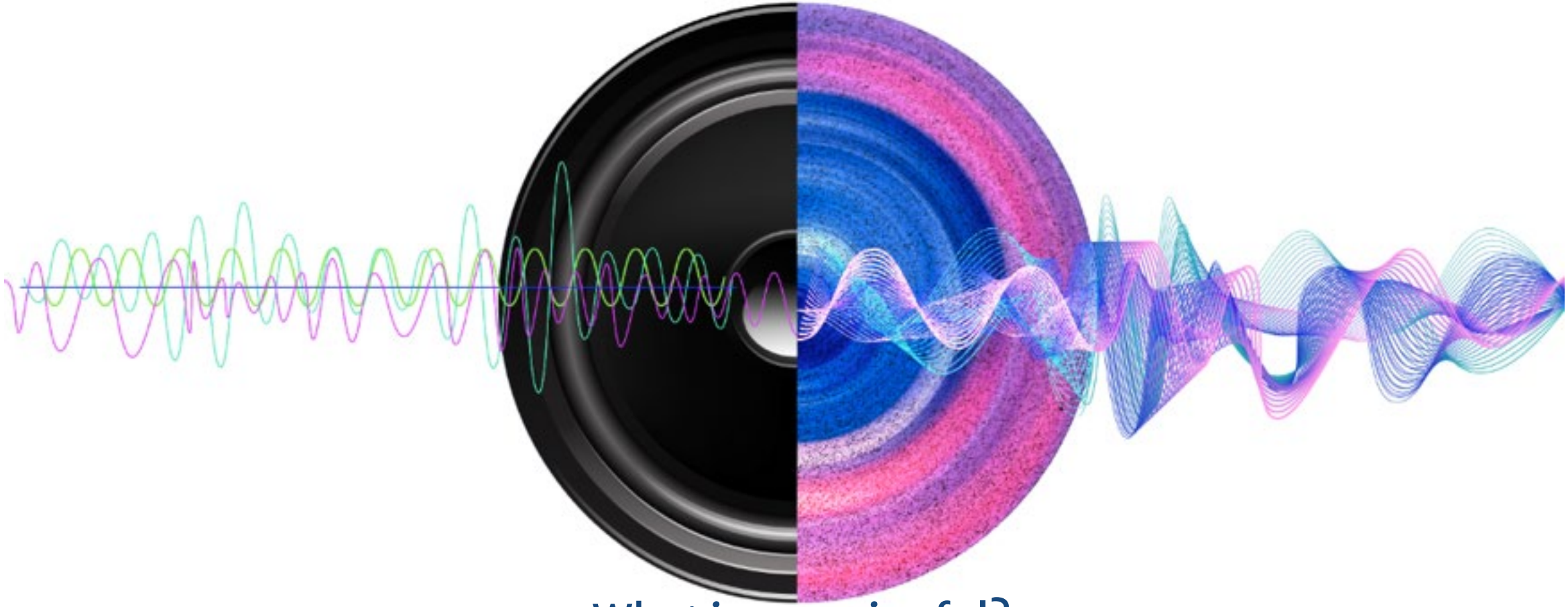
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60% of hospitals have no meaningful glycemic outcomes data

Cook CB, Elias B, Kongable GL, Potter DJ, Shepherd KM, McMahon D. Diabetes and hyperglycemia quality improvement efforts in hospitals in the United States: current status, practice variation, and barriers to implementation. Endocr Pract. 2010 Mar-Apr;16(2):219-30. doi: 10.4158/EP09234.OR. PMID: 20061279.

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Signal vs Noise



What is meaningful?
What is the data telling us?
What actions can we take now?

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Every hospital should prospectively monitor/measure rates of hypoglycemia and hyperglycemia, insulin use patterns, coordination of insulin administration, glucose testing, and nutrition delivery.

Real-time, institution-wide glucose reports should be provided to health care team members to ensure appropriate surveillance and management of patients with unexpected hypoglycemia and hyperglycemia

-Cobaugh and Maynard et al
August 2013

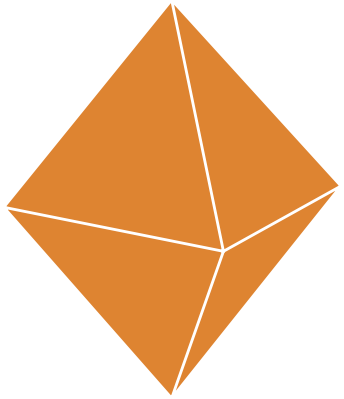
Cobaugh DJ, Maynard G, Cooper L, Kienle PC, Vigersky R, Childers D, Weber R, Carson SL, Mabrey ME, Roderman N, Blum F, Burkholder R, Dortch M, Grunberger G, Hays D, Henderson R, Ketz J, Lemke T, Varma SK, Cohen M. Enhancing insulin-use safety in hospitals: Practical recommendations from an ASHP Foundation expert consensus panel. Am J Health Syst Pharm. 2013 Aug 15;70(16):1404-13. doi: 10.2146/ajhp130169. PMID: 23903479.

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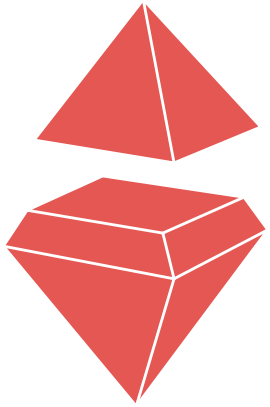
Data-Driven Refinement



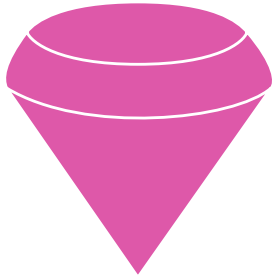
DATA



INFORMATION



INSIGHTS



DECISIONS

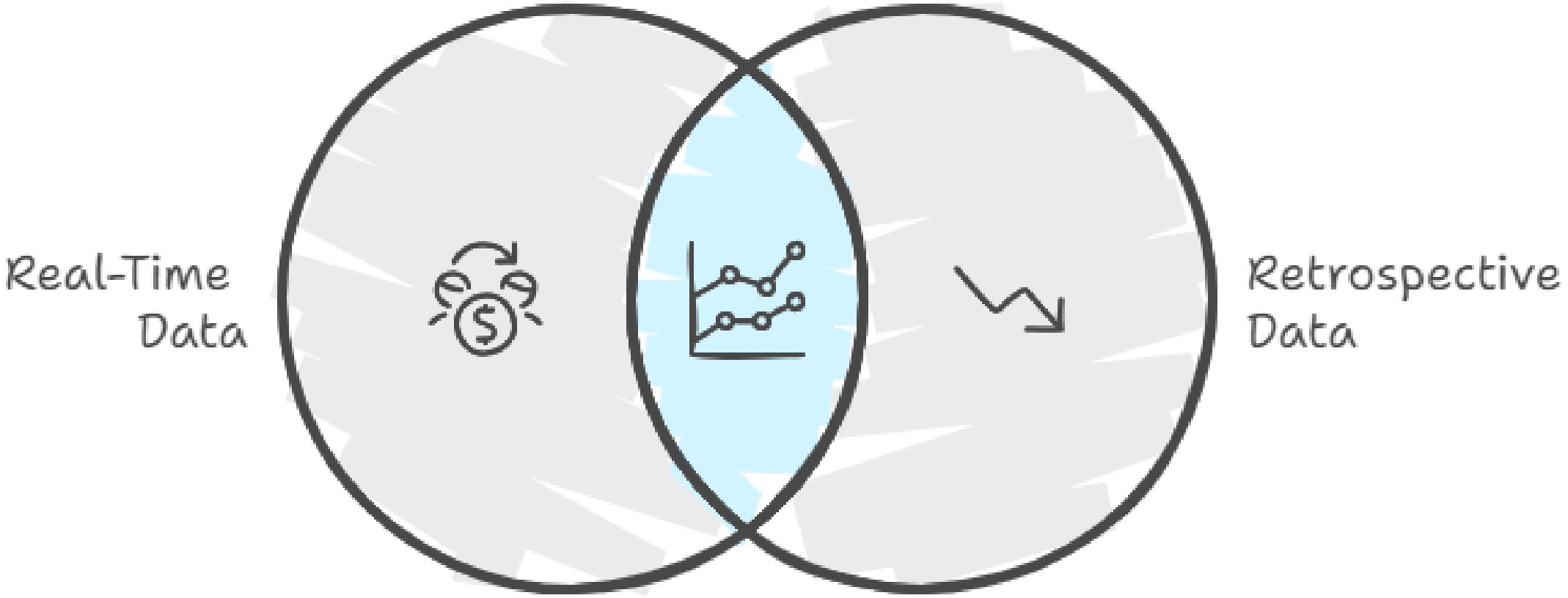


ACTIONS
Real time

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Complementary Insights



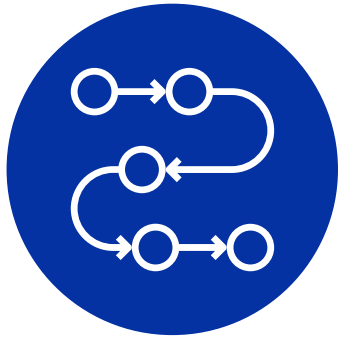
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Types of Measures



Structure

- Committee
- Champions
- Meetings



Process

- Ordering practices
- Workflows: meal time triad, BG timeliness checks
- A1c ordering



Outcomes

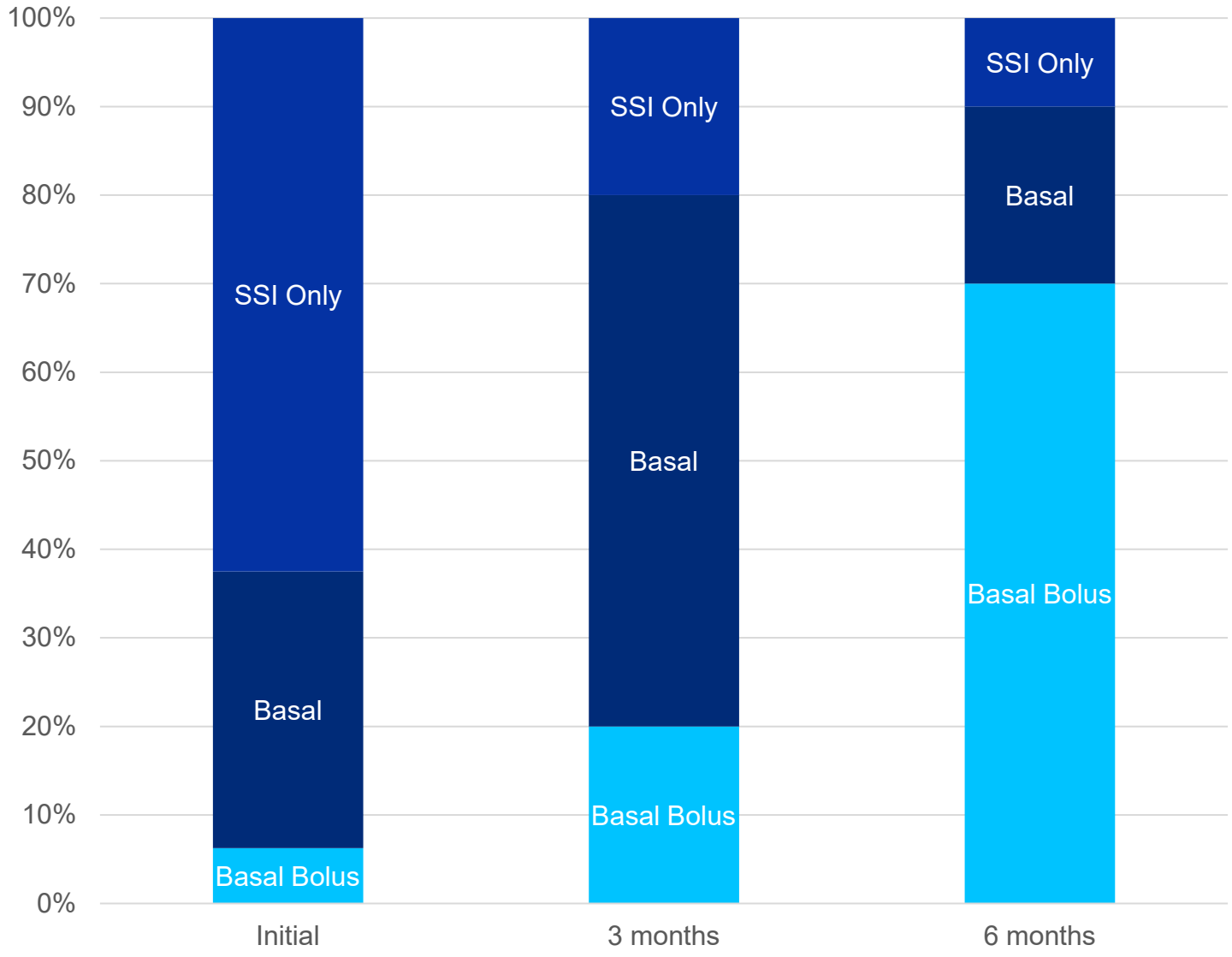
- Glucometrics
- Clinical (surgical site infections, complications, mortality)
- Financial (LOS)



Balancing

- Hypo to hyperglycemia
- LOS to readmissions

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Sliding Scale Insulin (SSI) only

↓

Basal

↓

Basal/Bolus

↓

Correct Starting Doses

↓

Edits (following excursions)

Process

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<40 mg/dl and >300 mg/dl

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Don’t you want to know more?

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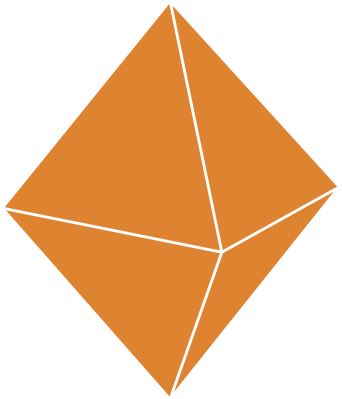
Let’s look at <40 mg/dl

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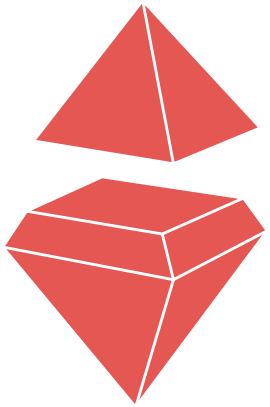
Data-Driven Refinement



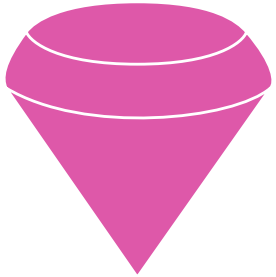
DATA



INFORMATION



INSIGHTS
Process Metrics



DECISIONS
Real Time



ACTIONS
Predictive
AI tools

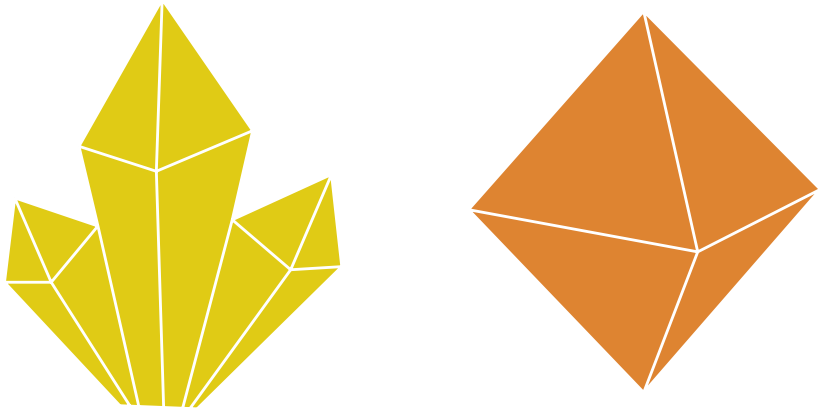
- How many <40 last month, in our health system?
- How many <40 last month, by hospital, unit, category?
- How many <40 not related to insulin?
- How many <40 compared to baseline? Compared to benchmark?
- Why did we have these <40 last month?
- How many <40 or at risk for <40 today?
- How many <40 in the next month and Why?

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You likely have a lot of glycemia questions

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FUTURE STATE HYPOGLYCEMIA STORY
Patients at Risk for Hypo



Top Reasons for hypoglycemia

1. Acute worsening kidney function or CKD
2. Resolution of acute illness (Stress hyperglycemia)
3. On Oral Agent that contributes to hypoglycemia
4. Low Target Range 100-140 mg/dl or 80-120 mg/dl (in patient who is not in L and D or immediate post CABG)
5. Steroids suddenly discontinued

At risk for hypoglycemia
(70-100 mg/dl in past 24 hours)
30 Patients

Patients in Range (70-100 mg/dL)

Patients with the last BG reading between 70-100 mg/dL.

Search in this table:

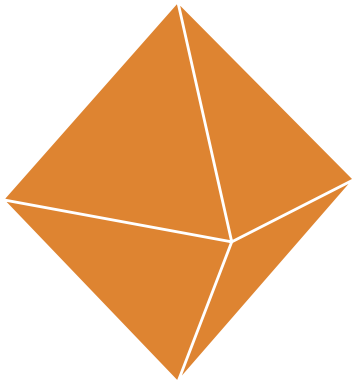
Patient	Hospital	Unit	Room	Last BG	Diabetes Type	Therapy Type	Endo Consult?
Miller, Anna	Charity	Cardiac Stepdown	D13	86 mg/dL (06/04 - 08:54)	Undiagnosed	Basal/Bolus	Yes
Robertson, Mike	Apex Health	Med-Surg 4A	D04	88 mg/dL (06/04 - 07:52)	Type 1	IV Insulin	Yes
Harris, Jean Paul	Charity	ICU	D01	96 mg/dL (06/04 - 06:31)	Type 2	Basal/Bolus	Yes

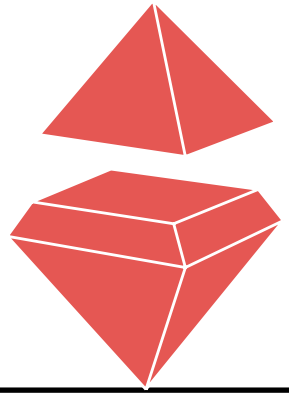
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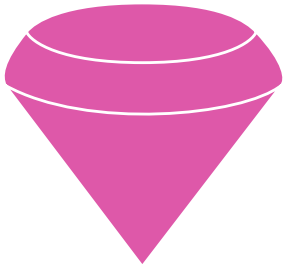
EXAMPLE OF REAL TIME DATA STORY

Top Reasons for hypoglycemia
1. Acute worsening kidney function or CKD
2. Resolution of acute illness (Stress hyperglycemia)
3. On Oral Agent that contributes to hypoglycemia
4. Low Target Range 100-140 mg/dl or 80-120 mg/dl (in patient who is not in L and D or immediate post CABG)
5. Steroids suddenly discontinued









At risk for hypoglycemia
(70-100 mg/dl in past 24 hours)
30 Patients

Developed Acute Renal failure
10 patients

Normal A1c
10 patients

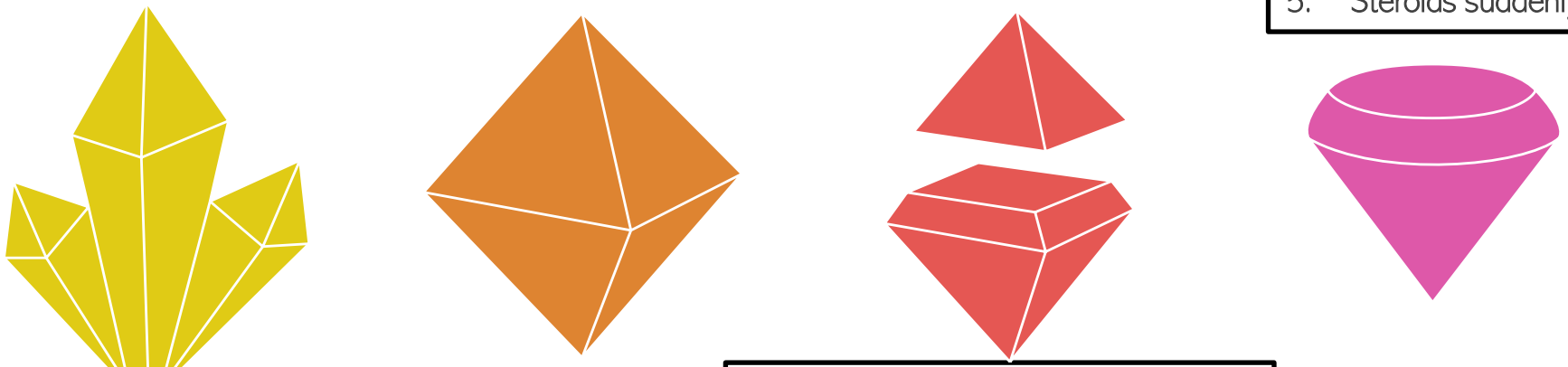
Received oral antidiabetic medication
5 patients

Target Range 100-140 mg/dl
5 patients

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EXAMPLE OF REAL TIME DATA STORY

Top Reasons for hypoglycemia
1. Acute worsening kidney function or CKD
2. Resolution of acute illness (Stress hyperglycemia)
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At risk for hypoglycemia
(70-100 mg/dl in past 24 hours)
30 Patients

Developed Acute Renal failure
10 patients

Normal A1c
10 patients

Received oral antidiabetic medication
5 patients

Target Range 100-140 mg/dl
5 patients

Normal A1c
PATIENT A
Insulin <20 units TDD, no clear home medications
Recommendation: stopping insulin and monitoring BGs. Resume insulin if BGs >180 mg/dl x 2

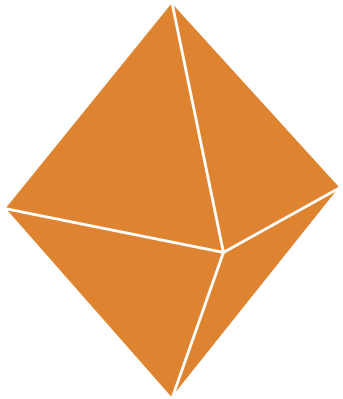
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Further Data Refinement



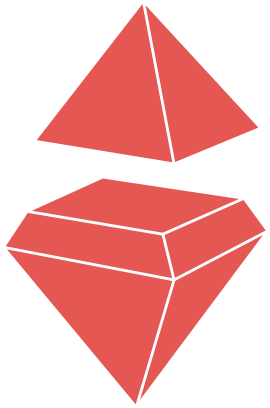
Basic Metrics

Simple outcome tracking



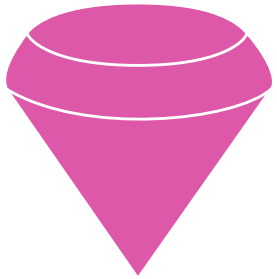
Predictive Models

Forecasting future trends



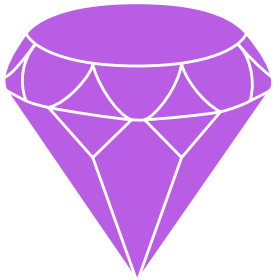
Real-Time Analytics

Immediate data insights



AI-Driven Innovation

Intelligent automation and insights



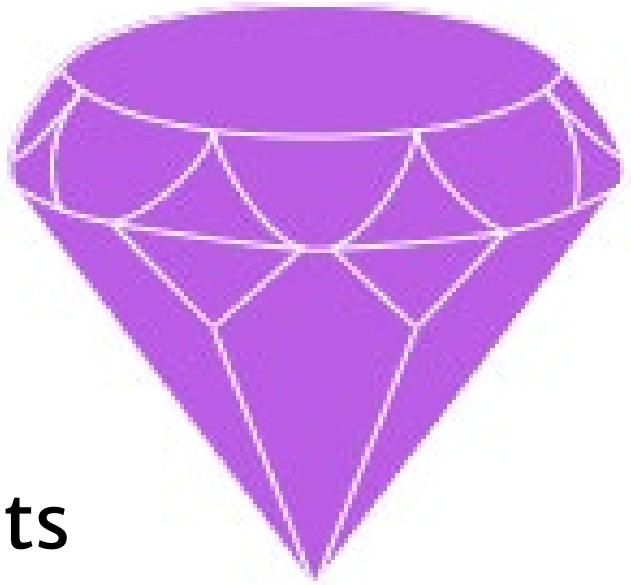
Future Metrics

Shaping business strategies

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FUTURE DIRECTIONS



- Predictive analytics (prevent events)
- How to manage CGM data (once FDA cleared)
- Building AI tools to personalize glycemia insights
- Hospital at Home opportunity
- Command Center Glycemia Care Traffic Control
  - Real Time Insights
  - Optimize Rounds
  - Optimize Workflows

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