

Improving Patient Outcomes and Satisfaction for Patients with Diabetes in Alberta Hospitals Through Improved Glycemic Management

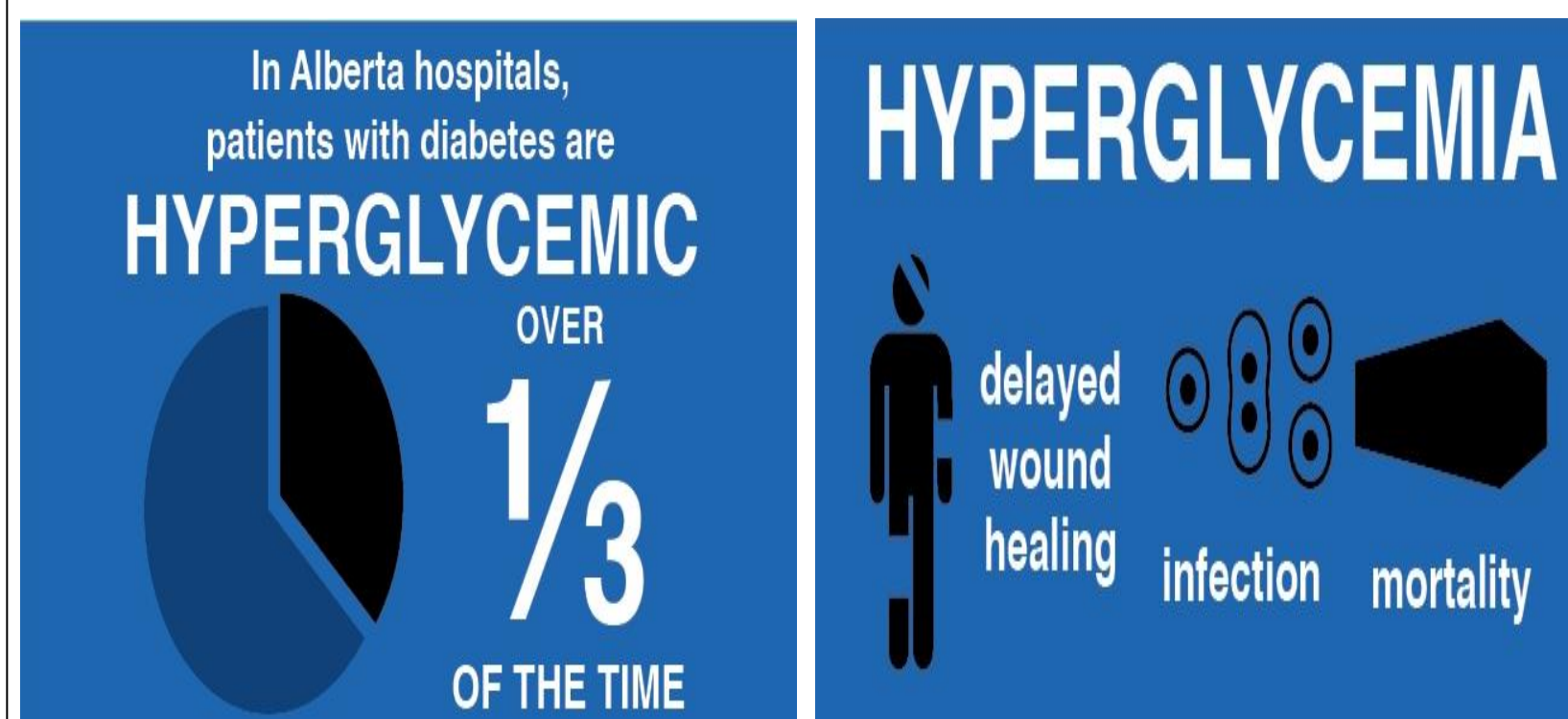


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What's The Issue?

1 in 5 of all adult patients in Alberta hospitals has Diabetes.

Inpatient Management of Diabetes in Alberta represents a dangerous and costly care gap.



PATIENTS WITH DIABETES SPEND ON AVERAGE **5 DAYS IN HOSPITAL** COMPARED TO **3 DAYS** FOR NON-DIABETIC PATIENTS

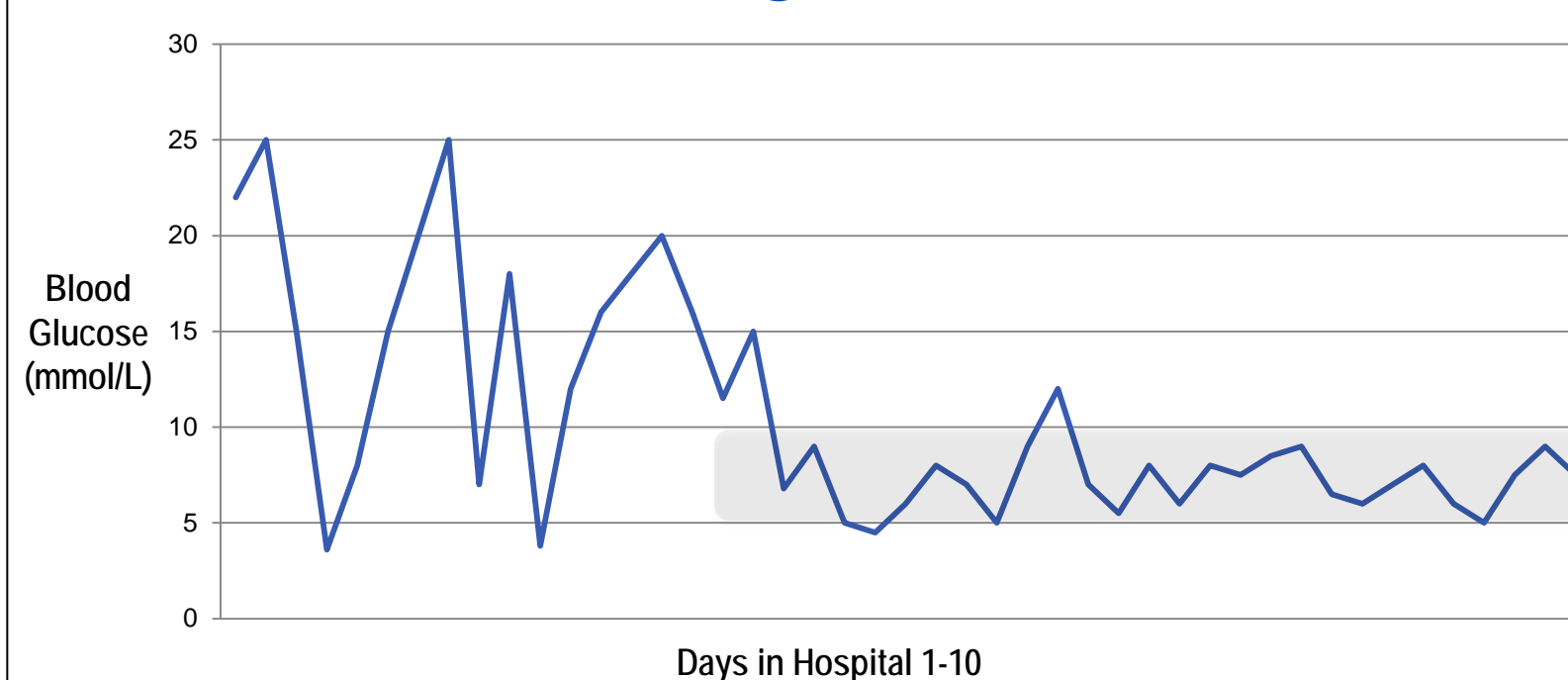
Patients with Diabetes are less satisfied



A Patient Survey conducted in 2014 revealed that patients with diabetes were less satisfied with their care compared to the general inpatient population.

- 675 Participants
- Patients requested:
- Improvement in blood sugar control and medication administration.
 - Improvement in food options for diabetic patients.
 - Improvement in health care providers' communication about diabetic patients, and being part of the care team.

Blood Sugar Control



The "Yo-Yo"

The patient feels unwell.

- Contributing factors:
- Sliding Scale Insulin
 - Overtreatment of hypoglycemia
 - Inappropriate holding of insulin

In Target

Insulin prescribed in a way that mimics normal physiologic insulin secretion

- Contributing factors:
- Basal Bolus Insulin Therapy
 - Appropriate treatment of hypoglycemia
 - Reducing dose versus holding insulin

What can be done?

The Diabetes, Obesity and Nutrition Strategic Clinical Network (DON SCN), in collaboration with AHS Provincial Pharmacy, AHS Provincial Nutrition and Food Services, and Zone operational areas, are leading a multifaceted quality improvement initiative to improve and standardize how patients with diabetes are cared for in Alberta hospitals.

Elements of the Multifaceted Initiative:



What Will Be Achieved?

Improving blood sugars in hospital will:
Reduce rates of infection
Reduce length of stay
Reduce rates of readmission

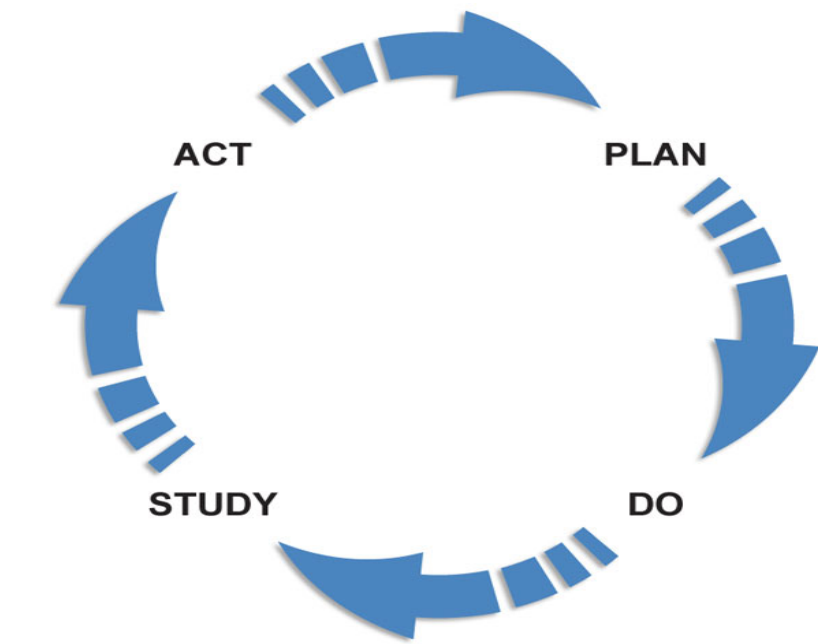
IN-HOSPITAL BLOOD SUGAR TARGET RANGE
5-10 mmol/L



How Can Current Practice be Changed?



Basal Bolus Insulin Therapy (BBIT) is a way of ordering insulin injections that better replicates how the body naturally produces insulin.



Quality Improvement through Knowledge Translation
(How to implement and sustain new practice)

Known Barriers and Facilitators

- Facilitators / Enablers**
- Standardized order set
 - Site Champions (MD, RN, Pharmacist, Administrative Support / sponsor)
 - Communication between team members and patient
 - Education- ongoing multi-modal multidisciplinary
 - MD to MD
 - Nursing to Nursing
 - Pharmacy to Pharmacy
 - Engage medical learners and practicum students
 - Building in direction about hyperglycemia and hypoglycemia management in order sets (when notification of physician or NP required)
 - Building in direction about appropriate holding of insulin
 - Follow up with clinicians that order SSI on its own (either by Pharmacy, Nursing, or MD lead)
 - Linking glycemic control to order set
 - Using data to measure and support change and share progress with the front line team
 - Eliminate sliding scale option

- Barriers**
- Personal preference of the prescriber
 - Availability and continued use of SSI order set
 - BBIT orders not being given as prescribed
 - Fear of hypoglycemia
 - Lack of communication between care team and/or patients
 - Lack of ongoing education and monitoring
 - Practice regression in the absence of ongoing support

Each site will have their own unique barriers and facilitators

Implementation Strategy

Pre-Implementation

- Site readiness assessment
 - Building awareness
 - Identifying and preparing multidisciplinary team
- Baseline data collection and analysis
- Multidisciplinary education
- Assessment and mapping of site specific barriers and facilitators

Implementation

- Mobilizing local champions
- Ongoing discipline specific education
- Audit data

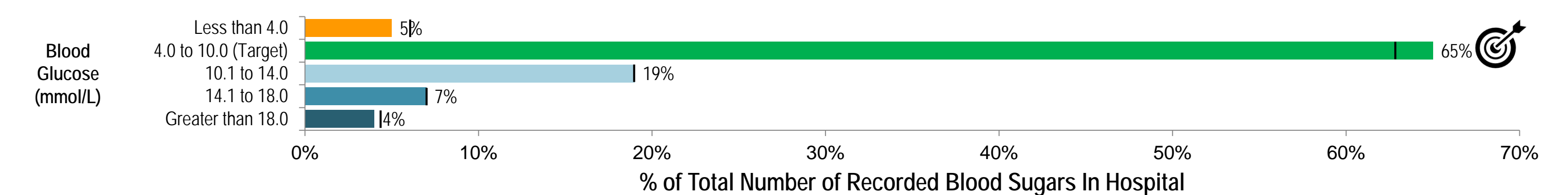
Post Implementation

- Sustaining the change through measurement data
- Ongoing education

Tool Kit for Change

- Standardized Order Set –with direction for the appropriate holding of insulin
- Site readiness assessment tool
- Site champions
- Site specific barriers and facilitators
- Communication - collaborative problem solving within site champions, with the provincial team, and other early adopter sites
- Education resources
 - Train the Trainer
 - BBIT website
- Data
 - Baseline Data Collection
 - Audit Data
 - Data collected and reported monthly
 - Audit tool- populated in Tableau dashboard (including hypo and hyperglycemia)
- Evaluation of provincial initiative

The Data



- Demonstrates improvement in blood glucose levels following the *Implementation Strategy*:
- Target blood glucose levels were improved from baseline (baseline = black line in graph)
 - Out-of-target blood glucose levels were improved or sustained from baseline (baseline = black line in graph)

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