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Improved Glycemic Management in Hospital

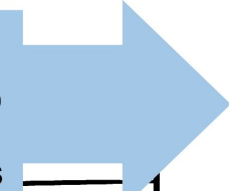
Project Bulletin

STANDARDIZE AND IMPROVE DIABETES INPATIENT CARE TO MEET NATIONAL GUIDELINES


1 in 5 OF ALL ADULT PATIENTS IN ALBERTA HOSPITALS HAS DIABETES



SUPPORTING PATIENTS to maintain their BLOOD SUGAR TARGETS




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



CARE TEAM

- standardized insulin ordering practice
- diabetes education
- safe insulin pump therapy management
- blood sugar management policy/guidelines
- safe management of diabetic ketoacidosis
- surgical guidelines




WORKING AS A TEAM WITH THE PATIENT

EXPECTED OUTCOMES

- more satisfied patients
- reduced rates of hyperglycemia & hypoglycemia in hospital
- fewer medical complications and infections
- smoother transitions – community to hospital, hospital to community
- shorter length of hospital stay

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



FOOD AND NUTRITION SERVICES


- carbohydrate information on meals/snacks

PHARMACY

- simplified insulin formulary is in place
- insulin dispensing is patient-specific


HYPERGLYCEMIA

In Alberta hospitals, patients with diabetes are **HYPERGLYCEMIC** OVER **1/3** OF THE TIME




HYPERGLYCEMIA

delayed wound healing infection mortality



1/2 BED DAY SAVED per patient could result in **22,000+ DAYS** returned to the system per year



Now available on *My Learning Link*:

Basic Diabetes Education Module For Acute Care: Supporting patients to achieve their glycemic targets in-hospital

(Includes a learning guide, knowledge-check quiz and a message from a patient.)

Search “Basic Diabetes” on *My Learning Link* or contact the [DON SCN](#) for an electronic copy.

Patient Perspective

“I am a diabetic 24 hours a day, 7 days a week, 52 weeks a year, in hospital and out of hospital” ...

Provincial Glycemic Management Policy Suite for Adults in Acute Care

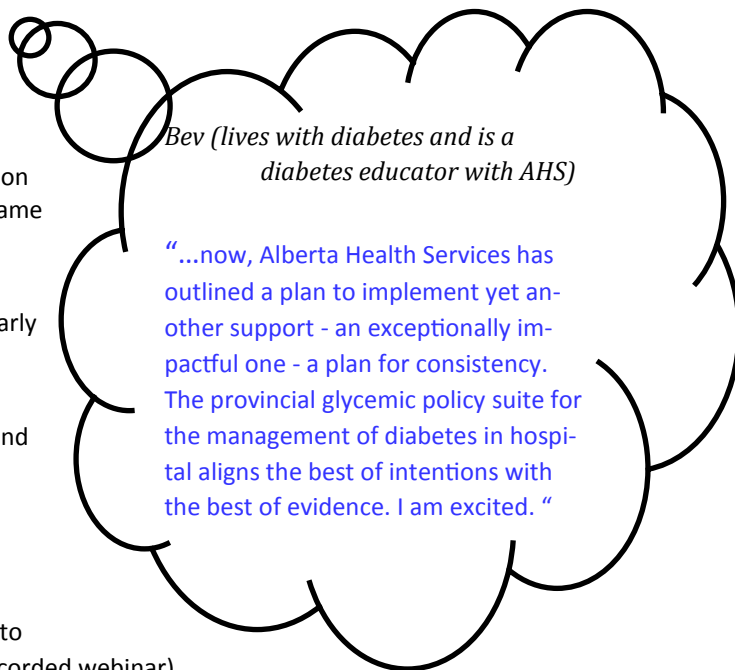
The DON SCN led the development of a provincial policy suite, through the guidance of a provincial multidisciplinary working group, and with input through broad stakeholder consultation.

The Glycemic Management Policy suite includes an overarching glycemic management policy with procedures and algorithms for the treatment of hyperglycemia and hypoglycemia. These provincial governance documents were approved by the AHS Clinical Operations Executive Committee (which includes representation from the five Zone Medical Advisory Councils) in May 2017, and became effective September 1, 2017.

The goal is to improve glycemic management in acute care settings through a number of coordinated strategies, and to support staff in early recognition and treatment of hypoglycemia and hyperglycemia, to prevent negative outcomes for adult patients.

The AHS policy department is currently rescinding outdated policies and documents that do not align with the new policy documents. Covenant Health participated in the development of the governance documents and has plans in place to adopt these governance documents.

For more information about the provincial policy suite and resources to introduce the new governance documents at your site (including a recorded webinar), we invite you to visit our webpage: <http://www.albertahealthservices.ca/scns/Page13361.aspx> OR contact us at: DiabetesObesityNutrition.SCN@ahs.ca.



Stayed Tuned

Alerts are being added on all adult Roche glucose meters in hospitals across the province to align with the new policy and procedures. These alerts will support staff in the early recognition of hypoglycemia and hyperglycemia.

Safe Management of Insulin Pump Therapy In-Hospital

In-hospital guidelines and required forms for the self-management on Insulin Pump Therapy (IPT) in-hospital can be found at: www.ipumpit.ca

South Zone has been working collaboratively on zone-wide awareness and education for the safe use of insulin pump therapy in hospital. They are working towards bringing awareness to front-line health-care providers that patients with insulin pumps can be supported to safely self-manage, when appropriate, while they are in hospital. A multidisciplinary zone-wide team of acute-care and community providers has come together to work on education and a plan to share the guidelines and forms at all acute care sites in the zone.

Nursing Education Days Inpatient Diabetes Management

Helping your patients achieve their glycemic targets

The DON SCN, in collaboration with operations in Calgary and Edmonton Zone, supported four successful interactive basic diabetes education days for LPNs, RNs and RPNs who work in acute care. We are excited to be supporting Central Zone operations in an upcoming education day. Please contact the [DON SCN](#) if you are interested in more information about hosting an education day.

Carbohydrate Content of AHS Menu Items Information for Patients

Handouts for patients regarding the carbohydrate content of menu items are available on AHS Insite by searching "carbohydrate content". These handouts can also be found on the external website www.ipumpit.ca (supporting patients who are self managing their insulin pump in-hospital).

For more information on the above quality improvement initiative, contact Janet Nielsen, RD, Program Lead, Standards and Practice, Nutrition Services janet.nielsen@ahs.ca.

Peri-operative Guidelines Diabetes Management

The DON SCN is happy to be collaborating with the Surgery SCN and Clinical Knowledge and Content Management (CKCM) to develop guidelines for patients with diabetes who are having surgery. Dr. Zaina Albalawi is the topic lead, and will be leading the multidisciplinary working group of experts across the province to develop these provincial guidelines.

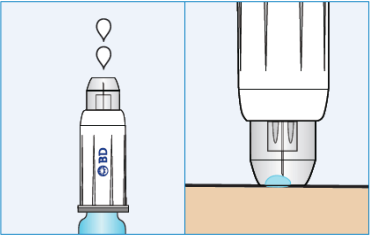
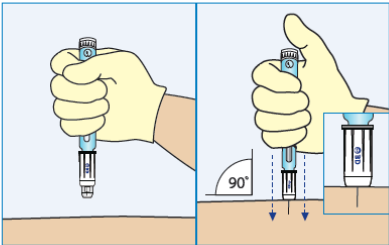
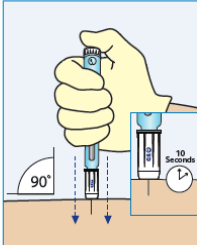
Update from Provincial Pharmacy

Nancy Louis, Medication Safety Pharmacist

The Pharmacy Services Medication Quality and Safety Team (MQST) continues to monitor the Reporting and Learning System (RLS) for issues related to insulin pens and safety pen needles. Proper technique is critical to ensure that patients receive the correct dose. Resources to support staff—including a Quick Reference Guide, Competency Checklist, troubleshooting poster and more—can be found on Insite by typing “insulin” into the search bar and selecting the **Insulin Safety & Diabetes Management Toolkit**.

If you have any other suggestions for follow-up, or if you are aware of a specific practice area that might be experiencing difficulties, please forward the information to Nancy Louis @ nancy.louis@ahs.ca

Why is insulin remaining on my patient’s skin after injection?

Prime Not Shaken Off	Depressing Dosing Button Prematurely	Not Waiting 10 Seconds
		
<ul style="list-style-type: none"> ◇ After priming with 2 units, shake off the insulin gently to ensure there is no insulin in the needle shield. 	<ul style="list-style-type: none"> ◇ Hold pen in fist grip, keeping thumb away from the dosing button. ◇ Insert needle at 90 degree angle. Once needle is inserted into the skin, then lift thumb to depress the dosing button. 	<ul style="list-style-type: none"> ◇ After the dosing button has been fully depressed, hold for 10 seconds. ◇ If you remove the needle too quickly, insulin can leak onto the skin.

Managing Large Doses of Subcutaneous (sc) Insulin

When a dose is 50 units or greater it should be administered in two equally divided injections and in separate sites on the body. The Forum for Injection Technique (FIT) [\[FIT guidelines\]](#) recommends splitting the dose to help reduce the risk of leakage of insulin at the site, enhance absorption of the insulin and increase patient comfort.

Early Adopter Sites

Each early adopter site has a unique culture, but they all work towards common objectives, including:

- ⇒ Identified site champions (Physician, Nurse Practitioners, Nursing, Pharmacy and Administration) who work collaboratively to support the implementation of this clinical practice change.
- ⇒ Data collection populated into an audit tool dashboard in Tableau and sharing of data with front line staff in an info graphic.
- ⇒ Using a pre-populated basal bolus insulin order set and a blood glucose and subcutaneous insulin administration record that links the patient's blood glucose to the insulin ordered.

Have you visited

www.bbit.ca ?

This website is used to share resources with early adopter sites and stakeholders. We are continually providing new or revised resources as we work with early adopter sites.

Educational Resources:

- Site Implementation Guidelines
- How to BBIT (for prescribers)
- BBIT self study guide (for nurses)
- Patient Handout
- Surgical Considerations for BBIT ordering
- Online calculator

North Zone:

QEII Hospital- Grande Prairie- is in the pre-implementation phase, site champions are reviewing the site implementation guidelines and site readiness document. Champions at QEII are making preparation plans for a Train The Trainer in November 2017.

Edmonton Zone:

University of Alberta Hospital - The UAH implemented BBIT throughout early 2017. All departments within the hospital work collaboratively together to support BBIT uptake and improved glycemic management. The site has completed their first audit data collection and are awaiting a data report.

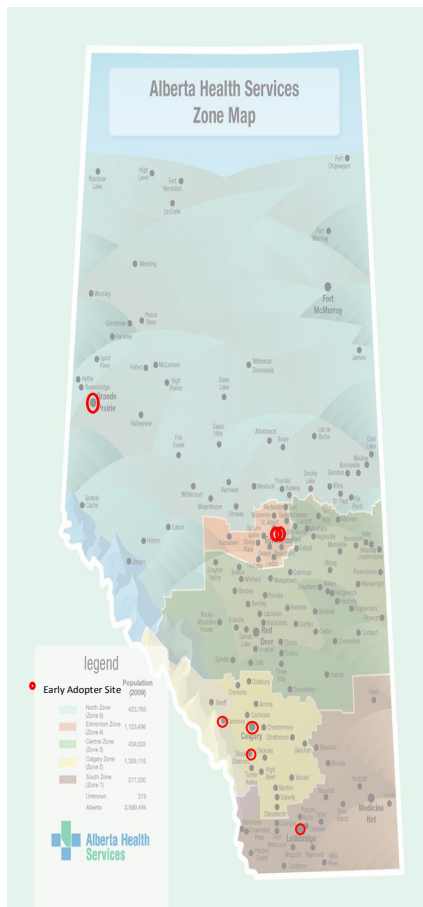
Grey Nuns Community Hospital (Covenant Health)-

successfully implemented BBIT in June 2017. Implementation also forced use of the sliding scale into retirement. Through supportive connections with the DON SCN prior to roll-out, nearly 100% of nursing staff were educated and a significant number of physicians from all services practicing within the site.

The first post implementation audit is underway as we look to the DON SCN for strategies to improve compliance and opportunities for diabetes education and management options. With the GNCH entering sustainment, Covenant Health is considering the next site for BBIT adoption, likely a rural facility.

Integrated Quality Management Portfolio -

is collaborating with DON SCN and are in the planning stages for the spread to the remainder of sites within the Edmonton zone for improved glycemic control including the use of BBIT. IQM leadership is identifying physician champions around their zone.



Calgary Zone:

Hospitalist Program cares for over 800 patients in hospital daily, focusing on glycemic optimization through a multidisciplinary collaboration. The reimplementation of BBIT using the GO Project, continues to monitor their audit data. The Calgary Hospitalist Improvement Committee (CHIC) is sharing their "GO Project" nationally at the Canadian Society of Hospital Medicine Conference this fall in Halifax. The spread of the reimplementation in Calgary urban zone was supported by ZMAC through the retirement of the pre-populated subcutaneous sliding scale insulin order sets available in SCM (Sunrise Clinical Manager) EMR across all 4 acute care sites in Calgary in June. The surgical portfolio in Calgary urban has collaborated with this initiative to support educational resources specific to surgical considerations in glycemic management, see www.bbit.ca to view document.

Canmore General Hospital and **Oilfields General Hospital** (Black Diamond, AB) are two rural sites in Calgary Zone who were the first early adopter sites, both implementing in early 2016. They are now sharing their experience with other rural sites in their zone. The remaining 5 AHS **Calgary Zone rural sites** have implemented the BBIT order set and continue to work towards improved glycemic management in-hospital through the fall of 2017. Banff Mineral Springs Hospital will be supported during the Covenant spread.

South Zone:



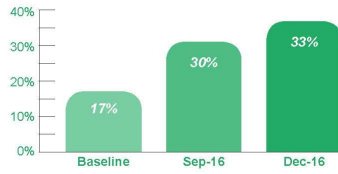
CHINOOK REGIONAL HOSPITAL

UPDATE: APR-DEC 2016

16%

BBIT USAGE IS UP

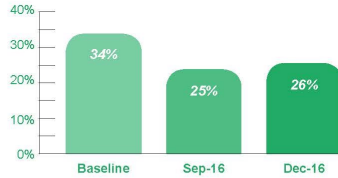
Chinook Regional Hospital has seen a 16% increase in BBIT usage Apr - Dec 2016.



8%

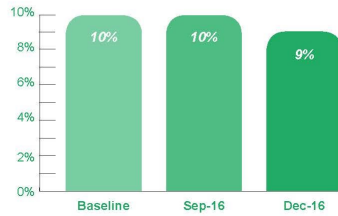
HYPERGLYCEMIA IS DOWN

Chinook Regional Hospital has seen an 8% decrease in hyperglycemic events Apr - Dec 2016.



HYPOGLYCEMIA IS STABLE

Chinook Regional Hospital hasn't seen any significant change in hypoglycemic events Apr - Dec 2016.



LENGTH OF STAY IS UNCHANGED

Chinook Regional Hospital hasn't seen any significant change in length of stay when comparing baseline to post-implementation data.



Chinook Regional Hospital- Lethbridge implemented BBIT and improved glycemic management across the site in April 2016. The hospital continues to collect audit data, which is then shared with peers at their site, as well as provincially. Data from April—November 2016 continues to show positive improvement in BBIT uptake and improved glycemic management. The site champions at Chinook Hospital participated in focus groups over the summer, that will provide learnings to support other sites across the province in their implementation plans.

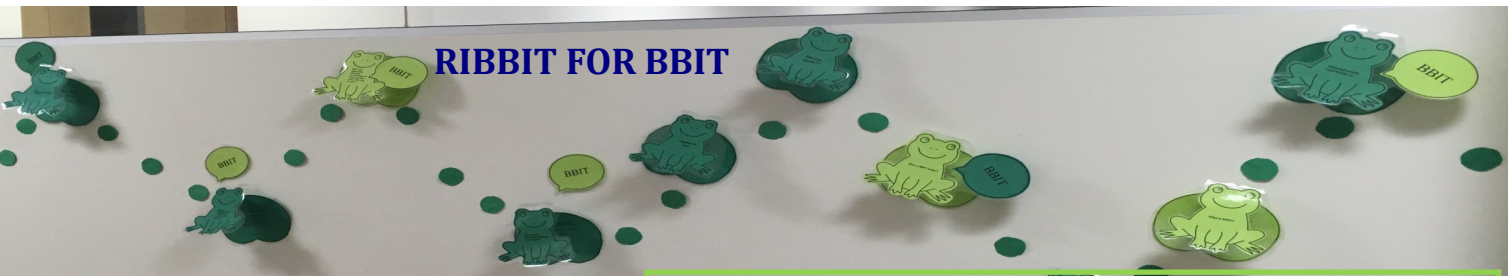
Audit Data Feedback

for DON SCN Early Adopter Sites

Data is one tool being used to support clinicians and teams in their transition to basal bolus insulin therapy and improved glycemic management. Working with AHS analytics, an audit tool dashboard in Tableau was developed to review progress. A data communication strategy is being used to provide site stakeholders with data feedback.

To the left is Chinook Regional Hospital audit data from September 2016 to December 2016 presented in an info graphic. Way to go Chinook!

RIBBIT FOR BBIT



South Health Campus
Tracey Cressman, Site Champion (Nursing)

The above photo is from Medical Unit 68 at South Health Campus. A group of nursing students was encouraged to develop an educational resource related to diabetes management. Patients, nurses and other health-care professionals are often seen looking at the wall for information. These frogs have a question on their belly and when you lift them the fact is on the lily pad. Contact [DON SCN](#) if you would like a template and fact sheet.



Grey Nuns Community Hospital
Joy Hatton, Patient Safety Practitioner

The Grey Nuns Community Hospital successfully implemented BBIT in June 2017. Through supportive connections with the DON SCN prior to roll-out, nearly 100% of nursing staff within the site was educated about basal bolus insulin therapy and improved glycemic management.

Through the development of a site-wide CNE subcommittee, the educators came together to create a cohesive education plan. This included one-hour sessions intended for drop-in education blitzes over one month. A frog sticker was used to let staff know that the patient was on a BBIT order set during the initial implementation phase. The strategy of enabling the GNCH nurse educators to design their own education plan and rotate through instruction created not only consistent education among the various departments of nursing staff, but also empowered the educators with both autonomy and collaborative practice.