**Bree Collaborative | Surgical Patient Optimization**
Tuesday April 1st, 2025| 7-8:30AM
**Hybrid**

**MEMBERS PRESENT VIRTUALLY**

Carl Olden, MD, Central Washington Family Medicine
Vickie Kolios, CHPQ, SCOAP
Nick Kassebaum, MD, SCOAP
Nawar Alkhamesi, MD, PhD, MBA, FRCS (GEN. SURG.), FRCS, FRCSEd, FRCSC, FACS, FASCRS
Evan P. (Patch) Dellinger, MD
Andrea Allen, RN, Washington HCA
Rosemary Grant, RN, BSN, CHPQ, CPPS, Washington State Hospital Association
Thien Nguyen, MD, Overlake
Tiffany Leiva, RN, Proliance
Edie Shen, MD, UW Medicine
Cristina Stafie, MD, Kaiser Permanente
Scott Helton, MD, Virginia Mason
Eduardo Smith-Singares, MD, Kadlec Medical Center

**STAFF AND MEMBERS OF THE PUBLIC**

Beth Bojkov, MPH, RN, Bree Collaborative
Emily Nudelman, DNP, RN, Bree Collaborative
Karie Nicholas, MA, GDip, Bree Collaborative

**WELCOME**

Carl Olden, MD, workgroup chair, welcomed everyone to the Bree Collaborative Surgical Patient Optimization April Workgroup. Those new to the group introduced themselves, their role, and their reason for interest in this group. Carl then asked for a motion to approve the minutes.

**Action:** March minutes unanimously approved

**GLYCEMIC CONTROL PROTOCOL OVERLAP**

Beth reviewed overlapping components of protocols for different organizations. The main protocols we were able to compare were VMFH and HMC.

| | **VMFH** | **HMC** | **KP** | **Kadlec** |
|---|---|---|---|---|
| **Who get's a BG check day of surgery preoperatively?** | Patients with diabetes Patients without diabetes but with known risk factors of BMI>30, Age >45 | Patients with diabetes Consider checking for patients with known risk factors (high BMI, infection, trauma) | All patients with diabetes and high impact procedures( i.e procedures that have a high risk of infection). | |
| **When to initiate insulin?** | BG > 180mg/dL | Consider >160mg/dL, start IV >180mg/dL | 150mg/dL nutritional dose only, >200mg/dL add insulin | |

| | | | | |
|---|---|---|---|---|
| **When is IV insulin gtt recommended?** | All major surgeries, critically ill, and those lasting >2 hours. Outpatient procedures gtt stopped on admission to PACU | Insulin gtt recommended for inpatient/AM admits with BG>160mg/dL; IV insulin BOLUS for diabetic outpatient BG >160mg/dL | | |
| **Target BG** | 100-180mg/dL (if drops below 150 on insulin gtt consider dextrose) | <160mg/dL | <200mg/dL (amb) | 140-180mg/dL |
| **Preoperative management/evaluation** | **For elective procedures for patients with poorly controlled diabetes, refer to PCP/perioperative surgical home/endocrinologist to optimize A1c before surgery** | **Identify patients with diabetes and refer to pre-anesthesia clinic; surgery team to order A1 if none in the previous 3 months.** | All patients with diabetes and high impact procedures( i.e procedures that have a high risk of infection) get their BG checked. | |
| **Postoperative Management - Outpatient** | Stop gtt immediately in PACU, check BG every 2 hours if diabetic or with risk factors (BMI>30, age>45); **contact anesthesia for BG >200mg/dL** for orders | No gtt initiated – check BG 60 minutes after last insulin dose in OR | | |
| **Postoperative Management – Inpatient, on insulin gtt** | Discuss glycemic control plan with surgeon. Continue infusion if critically ill or unstable with elevated BG levels > 200 ml/dl. Transition to scheduled subcutaneous basal insulin dosing + correction scale OR BG monitoring + correction scale based on PMH, insulin gtt rate and med | Continue (strongly encouraged), Anesthesia places IV order set, may continue while transitioning to PO. If discontinued, recheck in 1 hour and surgical/primary team order subq insulin | | |

| | | | | |
|---|---|---|---|---|
| | administration (steroids) | | | |
| **Postoperative Management – Inpatient, not on insulin gtt** | Transition to correctional insulin if: no pmh diabetes and one high BG level, well controlled DM on diet alone/one oral med, or dexamethasone/other steroid administered periop | Check BG hourly in OR and PACU if given any IV insulin | | |

- Some hospitals check every patient's BG before going into the operating room, and others do not.
- Some hospitals identify if the patient is likely to be admitted, then they would check a blood sugar
- HgA1c is a marker only of past glycemic control, and ideally would want to get better coordination between surgical preop teams and endocrinology and/or primary care to support optimization of glycemic control shortly before surgery
- How do we optimize control screening and then control before patients get in the hands of the surgeon, really depends on how much time we have.
- Transitions are where patients fall through the cracks – need to find ways to make that as airtight as possible
- There is a timeframe preoperatively where you can optimize care for people with known diabetes, screen for diabetes in people that have BMI>30 and/or age>45 to understand if they are going to be higher risk on the day of surgery, and have a plan in place to identify and treat on day of surgery if you don't already screen everybody in preop.
- Is there a way to re-imagine the course of surgery – there's lots of elective patients who through shared discussion with the surgery team and their primary care team, can get further evaluation and only once they are optimized they come back and get the surgery scheduled. Lots of challenges arising from short timelines – maybe for elective surgery we could adjust that time schedule.
- For patients that come in without glycemic control issues, and then show up with a high blood sugar on day of surgery, patients should be able to be sent home if they're safe enough and next day follow up could theoretically be given to PCP for their new diabetes/BG care
- There needs to be a protocol saying when its important to keep patients in the hospital long enough to get blood sugar under control
- Should emergency surgery be incorporated?
    - Given we have seen the data to suggest that the most important time to control blood sugar is on day of surgery and postoperatively, we should likely include emergency surgeries

**BREAKOUT ROOMS**

Beth Bojkov invited workgroup members to join breakout rooms for either ambulatory or inpatient surgery

Discussion

- Ambulatory Group
    - The group identified an example of ambulatory procedures for which preoperative glucose level on the day of surgery is tested
        - Colon Procedures/Bowel Resection
        - Spinal Laminectomy (any level(s))
        - Spinal Fusion (any level(s))
        - Total Joint Implants (Hip and Knees)
        - Hysterectomy (with any type of abdominal incision)
        - Hernia Repair (any approach, with or without implant)
        - Breast Procedures (includes reduction, mastectomy, with or without implants)
        - Orthopedic procedures with implants (cadaver tissue, pins, plates, screws, bone grafting, etc.)
        - ANY procedure with implantation of materials such as: cardiac devices, cochlear implants, plates, screws, pins, mesh, cadaveric tissue, bone grafting, and others.
        - Does not include: Implantation of ocular lenses, hormonal implants, tracheostomies, gastric tubes, urinary stents or other drains.
    - How do we identify if there's intensive preoperative glucose management in known diabetics in the week prior?
        - Can we use CGM as a tool both for confirming intensive preoperative glucose management and postoperative glucose management
    - If we can't get a patient who was hyperglycemic during surgery into next day follow-up, consider if they need to be admitted
    - Need to identify patients who are high risk of surgical site infection, wouldn't necessarily apply to some ambulatory surgeries like cataract replacements/outpatient screening, endoscopies, or other small procedures -> demonstrate good glucose control or a plan for good periop glucose control. If neither can be demonstrated it should not be done outpatient -> move to inpatient basis, scheduled admission where they can control BG better.
    - What are our criteria for identifying the subset of patients for whom we're going to insist on either good perioperative glucose control or plan for it -> BG screening with articulated criteria (BMI>30, Age>45) the idea being people with a random glucose test over a certain level should have their A1c checked, and those with an elevated A1c should require demonstration of better perioperative glucose control either recently or plan for how they would manage it intraoperatively and postoperatively.
    - We should also articulate who should receive a random BG test at all at the time of surgical evaluation if they're not a known diabetic and under what circumstances should they also have a reflexive A1c tested
- Inpatient
    - Surgical team taking more ownership of the process to optimize BG, given the state of PCP access
    - Shared decision making when it comes to any postponements of procedures, if there's elective procedures building that into the conversation.

**PUBLIC COMMENT AND GOOD OF THE ORDER**

Beth invited final comments or public comments, then thanked all for attending. The workgroup's next meeting will be on Tuesday, May 6th from 7-8:30AM.