The following guideline are intended for situations in which a patient is anticipated to spend a prolonged time in areas where a procedure or imaging study will occur or where the patient will recover from a procedure or imaging study. Examples may include the following:

* Patients coming from home who are undergoing interventional or diagnostic imaging procedure
* Patients transferred from the emergency department for emergency procedure
* Patients transferred from inpatient bed to surgery or imaging study

Areas of the hospital that may be candidates for use of this guideline include

* Pre-operative holding
* Post-anesthesia care unit (PACU)
* Operating room (OR)
* Cardiac catheterization suite
* Interventional radiology
* Outpatient procedures (e.g., endoscopy, arthroscopy, urologic procedure)

1. Administration of AM basal or pre-mixed insulin dose (if applicable)
   1. For patients on chronic AM basal insulin (NPH, glargine, detemir), administer 50% of usual dose if patient has not already taken this prior to procedure
   2. For patients on a “pre-mixed insulin” (70/30, 75/25, 50/50) administer 33% of usual AM dose if patient has brought home insulin or order 33% of usual AM dose as NPH and administer as soon as possible on arrival
   3. See Preoperative Management Guideline for further details explaining situations for administration of pre-procedure basal insulin
2. Perioperative blood glucose monitoring
   1. Check point-of-care (POC) glucose upon arrival to the hospital and every 4 hours while in the preoperative and postoperative areas (this is particularly important if surgery or procedure is late in the day or delayed substantially)
   2. Check POC glucose hourly while in OR
   3. If the patient is on IV insulin infusion, measure POC glucose at least every hour before, during, and after procedure
3. Periprocedure glucose monitoring
   1. Check POC glucose upon arrival to the hospital or procedure area and every 4 hours thereafter (this is particularly important if procedure is late in the day or delayed substantially)
4. For hyperglycemia (glucose over 150 mg/dL)
   1. Administer regular insulin by sliding scale (low dose in computerized prescriber order entry [CPOE] system) for every elevated blood glucose measurement (but no more frequently than every 4 hours)
      1. BG <150 mg/dL no insulin
      2. BG 151-200 mg/dL 1 units sc
      3. BG 201-250 mg/dL 3 units sc
      4. BG 251-300 mg/dL 4 units sc
      5. BG 301-350 mg/dL 5 units sc
      6. BG >350 mg/dL Call MD
   2. If glucose is > 200 mg/dL for longer than 4 hours
      1. Consider starting IV insulin protocol [insert path to protocol] if possible (PACU/OR)
5. For hypoglycemia
   1. If glucose is < 100 mg/dL
      1. Increase glucose monitoring frequency to every 60 minutes until stable for 2 hours
      2. Consider continuous glucose (D5W or D10W) infusion during the surgery or procedure, titrated to maintain BG 100-150 mg/dL. (This is necessary if patient has received any insulin or sulfonylurea medication in 24 hours.)
   2. If glucose at any time is <70 mg/dL
      1. Give 1 ampule (25 g) D50 IVP and then start D5W or D10W IV infusion and titrate rate to maintain glucose 100-150 mg/dL.
6. For patients on IV insulin
   1. For patients requiring interruption of IV insulin drip for a procedure of anticipated duration of less than 120 minutes
      1. Stop insulin infusion on departure from unit
      2. If procedure unexpectedly requires patient to be off floor beyond 2 hours, POC testing should be done at site of procedure and regular insulin sliding scale administered every 4 hours as in point 4 above until returning from procedure
   2. For patients requiring interruption of IV insulin drip for a procedure for anticipated duration of greater than 120 minutes
      1. Subcutaneous regular insulin should be given subcutaneously prior to stopping IV insulin: suggested dose would be current drip rate (example if current rate is 3 units/hour, a dose of 3 units regular insulin would be given sc) for 2-4 hour procedure; 10 units max
      2. Contact primary team for appropriate insulin dose orders
      3. Resume IV insulin upon completion of procedure and returning to care area
      4. For interruptions of IV insulin lasting longer than 4 hours, glucose level should be obtained during procedure and sliding scale insulin administered as per point 4 above.
   3. For patients on IV insulin drip following procedure either started during procedure or continued from before procedure
      1. Determine need to continue IV insulin: appropriate for patients returning to ICU settings
      2. Subcutaneous insulin should be given prior to stopping IV insulin
      3. See glucose control order set for assistance
7. For patients self-managing with insulin pump
   1. Test glucose on arrival and at least every 4 hours
   2. For hyperglycemia (BG >150 mg/dL)
      1. Patient to administer correctional insulin if awake and alert
      2. If patient unable to administer correctional insulin with pump device, use sliding scale insulin as above
   3. For hypoglycemia (BG <100 mg/dL)
      1. Administer glucose as per protocol above
      2. If patient awake and alert, patient will adjust rate on device
      3. If patient unable to adjust device, remove device and use insulin as above
   4. Duration of procedure
      1. If anticipated duration <2 hours, pump may continue to infuse
      2. If anticipated duration >2 hours, consider suspending pump use during procedure and using IV insulin (if capability available) until patient able to self-manage pump. In areas where IV insulin is not available, stable patients may continue to pump use.
8. For patients to be admitted
   1. Basal insulin dose should be ordered with order for sliding scale
   2. If basal insulin dose not known, use 0.15-0.2 units/kg/day as starting basal insulin dose (glargine give full dose once a day, NPH give 50% bid)
   3. Admitting house staff should order

**Diabetes Management Service [insert pager number]**

**Endocrine Consult Service [insert pager number]**