

Adult Peri-Operative Glucose Management

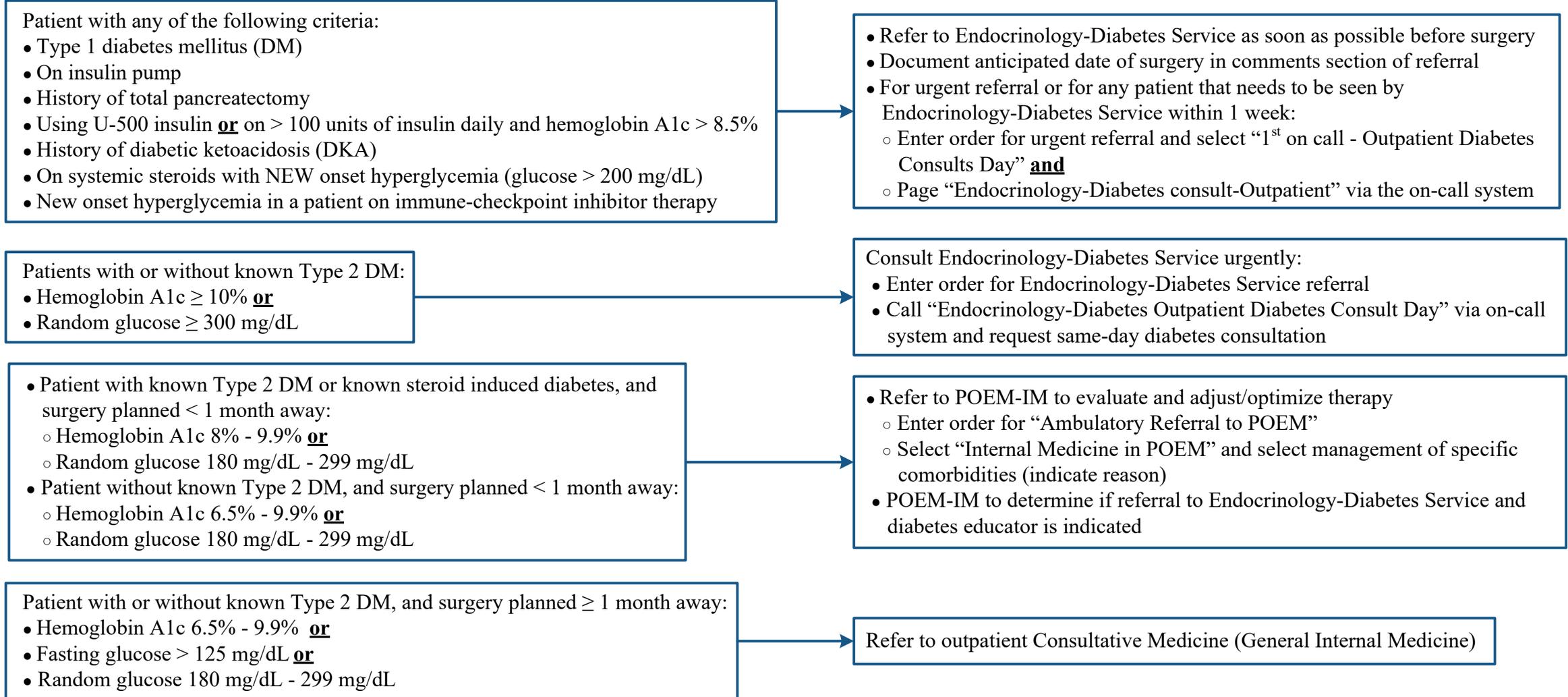
Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

Note: This algorithm is intended for operative procedures in the Main and/or Mays operating rooms

PRESENTATION

Guidelines for Pre-operative Referrals

DISPOSITION



POEM = Peri-Operative Evaluation and Management
 POEM-IM = Peri-Operative Evaluation and Management-Internal Medicine

Adult Peri-Operative Glucose Management

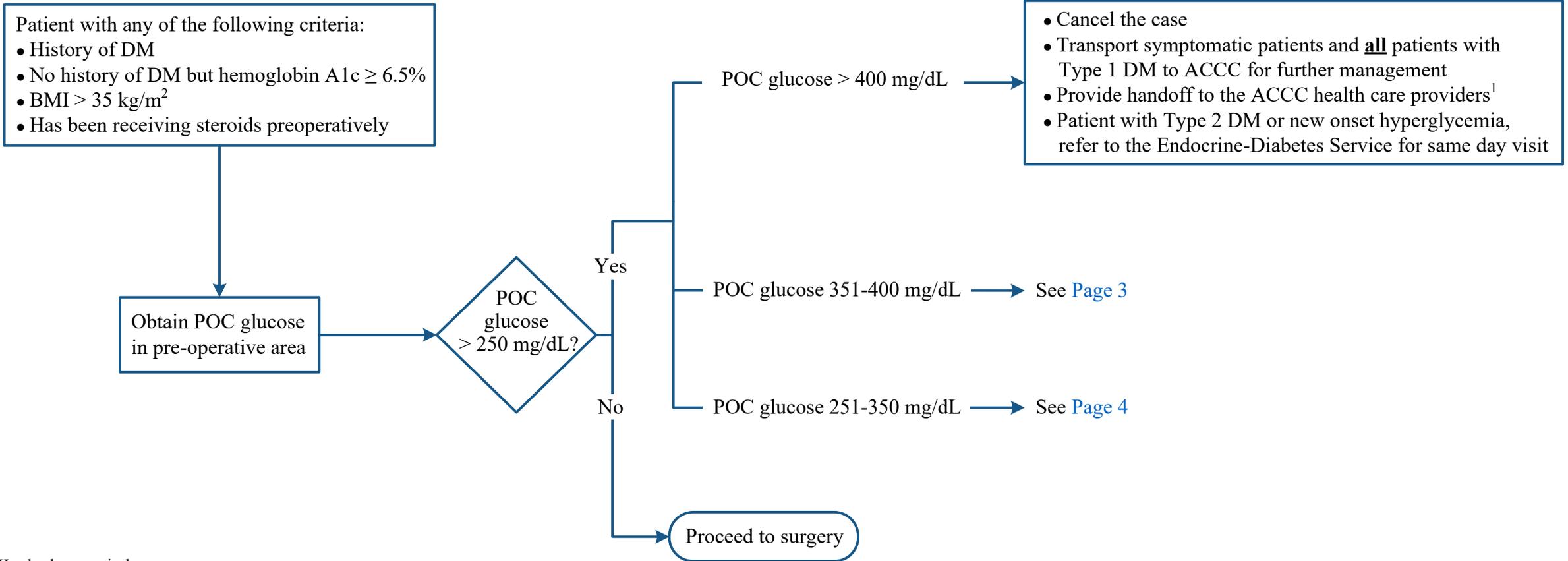
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Measurement and Management of Hyperglycemia in the Pre-operative Area

PRESENTATION

DISPOSITION



BMI = body mass index
 POC = point of care
 ACCC = Acute Cancer Care Center

¹ Refer to Hand-Off Communication Policy (#CLN0513)

Adult Peri-Operative Glucose Management

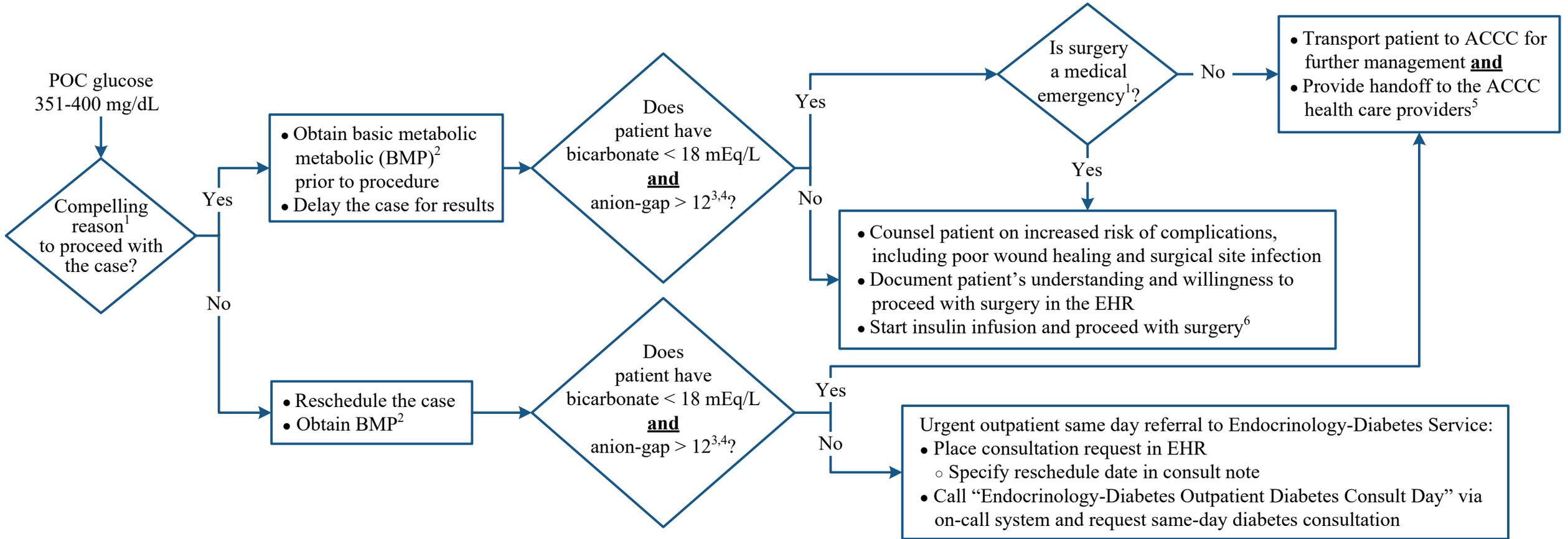
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Measurement and Management of Hyperglycemia in the Pre-operative Area

PRESENTATION

DISPOSITION



¹ Joint discussion to be held between anesthesia and surgical teams regarding medical urgency of the planned procedure

² i-STAT or sent to lab

³ If patient has an anion gap > 12 [anion gap = sodium – (chloride + bicarbonate)] without a metabolic acidosis (bicarbonate < 18 mEq/L) **or** a normal anion gap metabolic acidosis (bicarbonate < 18 mEq/L and anion gap ≤ 12), DKA is not likely and other etiologies should be evaluated based on patient risk factors

⁴ If anion-gap metabolic acidosis based on i-STAT results, send STAT BMP to lab for confirmation

⁵ Refer to Hand-Off Communication Policy (#CLN0513)

⁶ Post-operative management:

- For patients admitted to inpatient care
 - Initiate post-operative glucose management (see [Inpatient Hyperglycemia - Adult algorithm](#))
 - Consult inpatient Endocrinology-Diabetes Service
- Ambulatory surgery patients should be referred to primary care provider or outpatient Endocrinology-Diabetes Service as indicated

Adult Peri-Operative Glucose Management

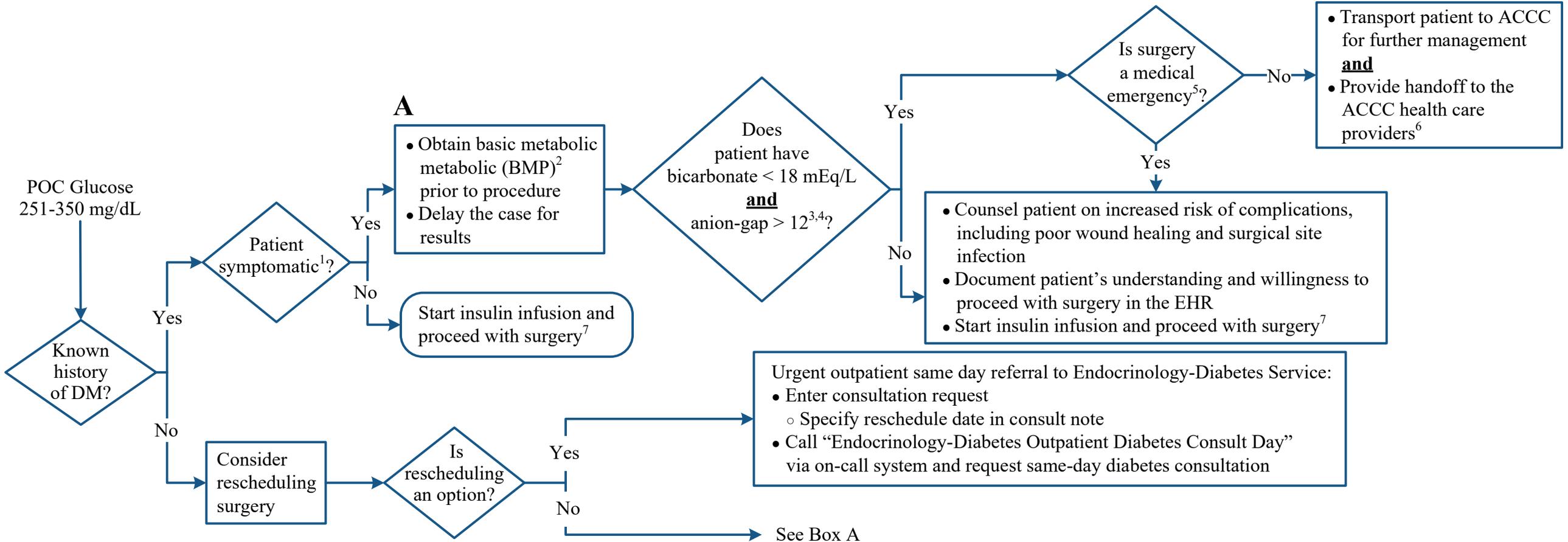
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Measurement and Management of Hyperglycemia in the Pre-operative Area

PRESENTATION

DISPOSITION



¹ Patient symptomatic with polyuria, polydypsia, nausea/vomiting

² i-STAT or sent to lab

³ If patient has an anion gap > 12 [anion gap = sodium – (chloride + bicarbonate)] without a metabolic acidosis (bicarbonate < 18 mEq/L) **or** a normal anion gap metabolic acidosis (bicarbonate < 18 mEq/L and anion gap ≤ 12), DKA is not likely and other etiologies should be evaluated based on patient risk factors

⁴ If anion-gap metabolic acidosis based on i-STAT results, send STAT BMP to lab for confirmation

⁵ Joint discussion to be held between anesthesia and surgical teams regarding medical urgency of the planned procedure

⁶ Refer to Hand-Off Communication Policy (#CLN0513)

⁷ Post-operative management:

- For patients admitted to inpatient care
 - Initiate post-operative glucose management (see [Inpatient Hyperglycemia - Adult algorithm](#))
 - Consult Inpatient Endocrinology-Diabetes Service
- Ambulatory surgery patients should be referred to primary care provider or outpatient Endocrinology-Diabetes Service as indicated

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SUGGESTED READINGS

Kang, Z. Q., Hou, J. L., & Zhai, X. J. (2018). Effects of perioperative tight glycemic control on postoperative outcomes: A meta-analysis. *Endocrine Connections*, 7(12), R316-R327. doi:10.1530/EC-18-0231

King, J. T., Goulet, J. L., Perkal, M. F., & Rosenthal, R. A. (2011). Glycemic control and infections in patients with diabetes undergoing noncardiac surgery. *Annals of Surgery*, 253(1), 158-165. doi:10.1097/SLA.0b013e3181f9bb3a

MD Anderson Institutional Policy #CLN0513 - Hand-Off Communication Policy

Michaelian, N., Joshi, R., Gillman, E., Kratz, R., Helmuth, A., Zimmerman, K., ... Houseal, L. (2011). Perioperative glycemic control: Use of a hospital-wide protocol to safely improve hyperglycemia. *Journal of PeriAnesthesia Nursing*, 26(4), 242-251. doi:10.1016/j.jopan.2011.04.068

Vongsumran, N., Buranapin, S., & Manosroi, W. (2020). Standardized glycemic management versus conventional glycemic management and postoperative outcomes in type 2 diabetes patients undergoing elective surgery. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, 2020(13), 2593-2601. doi:10.2147/DMSO.S262444

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DEVELOPMENT CREDITS

This practice consensus statement is based on majority opinion of the Peri-operative Glucose Management experts at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

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