Hyperglycemia in Hospitalized Patients

Glycemic monitoring and insulin management for adults hospitalized for noncritical illness, with and without known diabetes.

2022 Endocrine Society
Hyperglycemia in Hospitalized Patients (Non-ICU)
Korytkowski et al. · JCEM 2022;107:2101–2128

GRADE — 1 · Strong For | 2 · Suggest For | 2- · Suggest Against | Ungraded / Best Practice

1 Glucose Target & Monitoring

1 Target BG **100–180 mg/dL** for all noncritically ill hospitalized patients with diabetes.

2 Use **real-time CGM + confirmatory POC-BG** (rather than POC-BG alone) in insulin-treated patients at **high hypoglycemia risk** — age ≥65, BMI ≤27, TDD ≥0.6 U/kg, CKD ≥3/liver failure/CHF/active malignancy, or prior hypoglycemia — where resources allow. Not valid with hypoperfusion, extensive skin infection, or pressor therapy.

2 Use **scheduled insulin therapy** rather than noninsulin therapies for most hyperglycemic patients (with or without known T2D).

2 Insulin Strategy by Scenario

SCENARIO	APPROACH
No known diabetes, BG >140 mg/dL	Correctional insulin initially; add scheduled insulin if persistent hyperglycemia (≥2 POC-BG ≥180 mg/dL in 24h)
Diet/noninsulin meds pre-admission	Correctional or scheduled insulin initially; add/start scheduled insulin if admission BG ≥180 mg/dL or hyperglycemia persists on correctional alone
Insulin-treated pre-admission	Continue the scheduled regimen, modified for nutrition/illness severity; reduce basal dose 10–20% if basal-heavy (≥0.6–1.0 U/kg/d)
On glucocorticoids	NPH-based or basal-bolus insulin regimen
On enteral nutrition	NPH-based or basal-bolus insulin regimen (diabetes-specific or standard formulas)
On insulin pump pre-admission	Continue pump if hospital has pump expertise; transition to basal-bolus SC insulin before day 1–2 if not, or if critically ill/DKA/HHS/impaired consciousness

3 Non-Insulin & Prandial Dosing

2 **DPP4i + correction insulin** is an option in select mild T2D (recent HbA1c <7.5%, BG <180, TDD <0.6 U/kg if on insulin) instead of scheduled insulin. Switch to scheduled insulin if BG persists >180 mg/dL on DPP4i.

2- **Against carbohydrate counting** for prandial dosing in noninsulin-treated T2D newly needing prandial insulin; carb counting **or** fixed dosing both reasonable in T1D/insulin-treated T2D.

4 Perioperative & Discharge

2 **Elective surgery:** target preop HbA1c <8% and BG 100–180 mg/dL (1–4h preop); if HbA1c <8% isn't feasible, target BG alone. **Against** preoperative carbohydrate-containing oral fluids in T1D, T2D, or other diabetes.

2 **Discharge planning:** provide inpatient diabetes education (survival skills, follow-up scheduling, medication/supply access) as part of a comprehensive discharge process — prioritize high-readmission-risk, diabetes-related admissions, and newly diagnosed/newly insulin-started patients if resources are limited.

Korytkowski MT, Muniyappa R, Antinori-Lent K, et al. Management of Hyperglycemia in Hospitalized Adult Patients in Non-Critical Care Settings: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab.* 2022;107(8):2101–2128.