

Care of the Patient presenting with complications from Diabetes

ED: High-Risk Low Volume Checklist

Note: This checklist DOES NOT take the place of EPIC orders or EPIC documentation. It is strictly a reference to facilitate safe care within the ED environment.

Key Components of Care

Safety and Goals of Care:

- Maintain or facilitate the return of mental status, hydration status, respiratory status, and pertinent abnormal lab values.
- Prevent complications: progression of illness, hypoglycemia, cerebral edema

Nursing Orders:

- Vital Signs:** A full set of vital signs should be completed every 15 minutes until stable and then **hourly** once stable
- Nursing Assessment:** Utilize Doc Flowsheets to best monitor trends
 - Visual (with mental status) and respiratory assessments should be completed every 15 minutes until stable and then **every hour** once stable
 - Additional systems assessments as per patient symptoms, diagnoses, and order (Neurological, Abdominal, etc.) should be completed **hourly** or as ordered.

	Diabetic Ketoacidosis (DKA)	Diabetic Ketosis without Acidosis (DK no A)— “Sick Day Rules”			
Criteria	<i>Blood Sugar > 200, BHOB > 3, and pH < 7.3 or HCO₃ < 15</i>	<i>Acute illness/inadequate insulin dosing and Ketosis without acidosis</i>			
Monitoring	<ul style="list-style-type: none"> Admit patient to central monitor for continuous CR monitoring 	<ul style="list-style-type: none"> Utilize central monitor as needed based on patient condition and policy 			
Vascular Access	<ul style="list-style-type: none"> 2 PIVs required: 1 blood drawing and 1 fluids + medications Site assessment / documentation <u>Q1 hour</u> for infusing PIVs, <u>Q8 hours</u> for infusing central lines Hourly pump checks for all continuous infusions 	<ul style="list-style-type: none"> Site assessment / documentation <u>Q1 hour</u> for infusing PIVs, <u>Q8 hours</u> for infusing central lines 			
Nutrition	<ul style="list-style-type: none"> NPO 	<ul style="list-style-type: none"> Review appropriate nutrition with MD and count carbohydrate intake correction 			
Hydration Monitoring	<ul style="list-style-type: none"> Glucose: hourly checks → goal to decrease 50-100 mg/dL per hour. <ul style="list-style-type: none"> Begin dextrose containing fluids (D10) only when glucose is <300 or decrease in POC glucose >100 per hour BHOB checks q2 hours Rehydration: After bolus, begin 1.5x MIVF with 2 bag system with floor stock. Once available, replace floor stock with pharmacy-provided fluids containing electrolytes. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Blood Sugar ≥ 300: ALL Normal Saline</td> <td style="padding: 2px;">Blood Sugar 200-300: half D10 ± half NSS</td> <td style="padding: 2px;">Blood Sugar < 200: ALL D10</td> </tr> </table> <ul style="list-style-type: none"> Consider Zofran if patient is nauseous or vomiting Intake and output documentation <u>hourly</u>. 	Blood Sugar ≥ 300: ALL Normal Saline	Blood Sugar 200-300: half D10 ± half NSS	Blood Sugar < 200: ALL D10	<ul style="list-style-type: none"> Glucose checks via same route <u>q2 hours</u> BHOB checks via same route <u>q2 hours</u> Rehydration: <ul style="list-style-type: none"> Encourage PO hydration. Patient to drink 1 ounce per age in years every hour to help clear ketones <ul style="list-style-type: none"> Blood Sugar ≥ 200: sugar-free fluids Blood Sugar < 200: sugar-containing fluids For patients with BOHB > 2: Give NS bolus 10 mL/kg, repeat as clinically indicated, and add glucose to IVF if blood glucose < 200 Consider Zofran if patient is nauseous or vomiting Intake and output documentation <u>hourly</u>.
Blood Sugar ≥ 300: ALL Normal Saline	Blood Sugar 200-300: half D10 ± half NSS	Blood Sugar < 200: ALL D10			
Insulin <i>(Double Check with Endocrine notes for patient-specific considerations)</i>	<ul style="list-style-type: none"> Start insulin infusion <u>1 hour</u> after fluid resuscitation begins at 0.1 units/kg/hour. Ask for insulin to be ordered ASAP to allow Pharmacy time to prepare medication. Remove any continuous insulin pumps when roomed 	<ul style="list-style-type: none"> 1st Dose: Use SubQ rapid-acting insulin only (Aspart) 0.15 unit/kg 2nd Dose: Discuss 2nd insulin dose with Endocrine Fellow Carb Correction insulin should be given in addition to insulin correction factor Insulin Pump: Continue insulin basal rate after verifying recent infusion site change 			
Goal of treatment <i>(Refer to Endocrine recommendations for patient-specific care)</i>	<p>Transition to SubQ Insulin:</p> <ul style="list-style-type: none"> Criteria: normal Mental Status, Tolerating Small POs, HCO₃ ≥ 15 <u>or</u> HCO₃ ≤ 15 and BHOB < 2, and anion gap < 10-12 IV regular insulin is very short-acting, give 1st SubQ dose before stopping infusion. 	<ul style="list-style-type: none"> Discharge can occur once BHOB < 1 and patient is tolerating POs with reassuring vital signs and physical examination. 			

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Directions: Utilize this tool to map out ED care requirements. Reassessments should occur every hour or more frequently if needed. Any change in patient's clinical condition must be alerted to Attending. Utilize the Nursing assessment table (blue) with DKA (orange) or DKnoA/Sick Day Rules (yellow) depending on patient status.

		Start:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:
		NOW	@ 1 hour	@ 2 hour	@ 3 hour	@ 4 hour	@ 5 hour	@ 6 hour	@ 7 hour	@ 8 hour	@ 9 hour	@ 10 hour
Nursing Assessments & Care	Vital Signs											
	Assessment & Mental Status											
	Intake/Output											
	PIV assessments											

→ **AND** ←

DKA	POC Glucose		Recheck before starting insulin										
	POC Ketones												
	Blood Gas <i>Repeat Q2Hr until pH is >7</i>												
	BMP/Mag/Phos.												
	IVF	<i>20mL/kg bolus (infuse for 1 hour)</i>	CONTINUE NSS fluids @ 1.5x maintenance	Transition to electrolyte-containing IVF once BMP has resulted	_____ <i>Adjust IVF rate as ordered</i> _____								
	Insulin	ORDER ASAP	Insulin Infusion should be initiated 1 hour from the start of the bolus.		_____ DO NOT ADJUST THE INSULIN RATE _____								

OR

DK no A (Sick Day Rules)	POC Glucose											
	POC Ketones											
	Insulin		1 st dose		2 nd dose							
	Sliding Scale Insulin											
	PO Intake											

References- Policy/Procedure/Job Aid/Pathway: [Diabetic Ketoacidosis \(DKA\) Clinical Pathway — Emergency Department](#) & [Type 1 Diabetes Mellitus \(DM\) and Acute Illness Clinical Pathway--Emergency Department](#)