**Risk Factors and Management Practices of Recurrent Emergency Department Visits for Hyperglycemia in Patients with Diabetes Mellitus**

 **CASE RECORD FORM**

**Case #:** \_\_\_\_\_\_\_\_\_

**Verification:**  Research Assistant \_\_\_\_\_\_\_\_\_ Principal Investigator \_\_\_\_\_\_\_\_\_

 Coordinator \_\_\_\_\_\_\_\_\_ Data Entry \_\_\_\_\_\_\_\_\_

**DEMOGRAPHICS:**

Site: LHSC – UH ☐ LHSC – VH ☐ TOH-Gen ☐ TOH-Civic ☐

Date of visit: (yy/mm/dd) \_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_

Date of birth: (yy/mm) \_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_

Sex: Male ☐ Female ☐

Postal Code: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ No Fixed Address ☐ Nursing Home/Long-term care ☐

**EMERGENCY DEPARTMENT EVALUATION:**

Arrival Mode: EMS ☐ Self ☐

CTAS: (1-5) \_\_\_\_\_\_\_\_\_

Triage Time: (00:00-23:59) \_\_\_\_\_\_\_\_\_

Physician Assessment Time: (00:00-23:59) \_\_\_\_\_\_\_\_\_

Discharge Time: (00:00-23:59) \_\_\_\_\_\_\_\_\_

**INITIAL CLINICAL PRESENTATION:**

Main Presenting Symptom (1 only): All Symptoms (check any)

 High Blood Sugar ☐ ☐

Decreased LOC ☐ ☐

 Fever ☐ ☐

 Nausea/vomiting ☐ ☐

 Abdominal Pain ☐ ☐

 Dizzy/weak/unwell ☐ ☐

Short of breath ☐ ☐

 Chest Pain ☐ ☐

 Polyuria/dipsia ☐ ☐

Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ☐ ☐

Temp: \_\_\_\_\_\_\_\_ sBP: \_\_\_\_\_\_\_\_ HR: \_\_\_\_\_\_\_\_ RR: \_\_\_\_\_\_\_\_ SaO2: \_\_\_\_\_\_\_\_ on O2 Yes ☐ No ☐

POC Blood glucose: Home \_\_\_\_\_\_\_\_ EMS \_\_\_\_\_\_\_\_ Initial ED \_\_\_\_\_\_\_\_\_

EMS interventions: Yes ☐ No ☐

If yes: IV fluid: Yes ☐ No ☐

Antiemetic: Yes ☐ No ☐

Analgesia: Yes ☐ No ☐

Other Medication: Yes ☐ No ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Oral Airway: Yes ☐ No ☐

BVM: Yes ☐ No ☐

Intubation: Yes ☐ No ☐

Other Intervention: Yes ☐ No ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PAST MEDICAL HISTORY AND MEDICATIONS:**

Known History of Diabetes: Yes ☐ No ☐ Type: 1 ☐ 2 ☐

On insulin? Yes ☐ No ☐ If yes, on insulin pump? Yes ☐ No ☐

Insulin taken today? Yes ☐ No ☐ Unknown☐

On oral hypoglycemic? Yes ☐ No ☐

If yes: Metformin? Yes ☐ No ☐

Glyburide (Diabeta) Yes ☐ No ☐

Gliclazide (Diamicron) Yes ☐ No ☐

Rosiglitazone (Avandia) Yes ☐ No ☐

Pioglitazone (Actos) Yes ☐ No ☐

Sitagliptin (Januvia) Yes ☐ No ☐

Other: Yes ☐ No ☐

Comorbidities:

 Hyperlipidemia Yes ☐ No ☐

 Hypertension Yes ☐ No ☐

 Coronary artery disease (CAD) Yes ☐ No ☐

 Chronic renal failure (CRF) Yes ☐ No ☐

 Peripheral vascular disease (PVD) Yes ☐ No ☐

 Stroke/TIA Yes ☐ No ☐

 Asthma/COPD Yes ☐ No ☐

 Psychiatric illness Yes ☐ No ☐

 IVDU Yes ☐ No ☐

 Alcohol Abuse Yes ☐ No ☐

 Pregnancy Yes ☐ No ☐

 Cancer and type \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Yes ☐ No ☐

Other Medications:

 Blood Pressure Yes ☐ No ☐

 Cholesterol Yes ☐ No ☐

 Cardiac Yes ☐ No ☐

 Steroids Yes ☐ No ☐

 Antibiotics Yes ☐ No ☐

Has Family Doctor Yes ☐ No ☐

Has Internal Medicine Yes ☐ No ☐

Has Endocrinologist Yes ☐ No ☐

DM Education Nurse Yes ☐ No ☐

**INVESTIGATIONS**:

Bloodwork:

CBC: Hgb \_\_\_\_\_\_\_\_\_\_ WBC \_\_\_\_\_\_\_\_\_\_

Electrolytes: Na \_\_\_\_\_\_\_\_\_\_ K \_\_\_\_\_\_\_\_\_\_ Cl \_\_\_\_\_\_\_\_\_\_ CO2 \_\_\_\_\_\_\_\_\_\_

Anion Gap \_\_\_\_\_\_\_\_\_\_ Glucose \_\_\_\_\_\_\_\_\_\_

BUN \_\_\_\_\_\_\_\_\_\_ Creatinine \_\_\_\_\_\_\_\_\_\_

Blood Gas: Arterial ☐ Venous ☐

pH \_\_\_\_\_\_\_\_\_\_ pCO2 \_\_\_\_\_\_\_\_\_\_ pO2 \_\_\_\_\_\_\_\_\_\_ HCO3 \_\_\_\_\_\_\_\_\_\_

Serum ketones or beta-hydroxybutyrate \_\_\_\_\_\_\_\_\_\_

Lactate \_\_\_\_\_\_\_\_\_\_

Urinalysis: Ketones: Yes ☐ No ☐ Protein: Yes ☐ No ☐

Leuks: Yes ☐ No ☐ Glucose: Yes ☐ No ☐

Nitrites: Yes ☐ No ☐ Blood: Yes ☐ No ☐

ECG: Rhythm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ischemic Changes: Yes ☐ No ☐

Imaging:

Chest xray: Yes ☐ No ☐

If yes, Normal: ☐ Pneumonia: ☐ CHF/Pulmonary Edema: ☐

Other: Yes ☐ No ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CT head: Yes ☐ No ☐

If yes, Normal: ☐ Cerebral edema: ☐ Ischemic stroke: ☐

Intracranial hemorrhage: ☐ Other: ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**EMERGENCY DEPARTMENT MANAGEMENT:**

ED Hyperglycemia Interventions:

 Oral hypoglycemic administered: Yes ☐ No ☐

 Type/dose: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Insulin **bolus** administered: Yes ☐ No ☐

 Method: IV ☐ SC ☐

 Type/dose: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Insulin **infusion** administered: Yes ☐ No ☐

 Type/dose: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fluids administered: Yes ☐ No ☐

 Amount: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Sodium Bicarbonate administered: Yes ☐ No ☐

 Amount: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ED Supportive Care Interventions

 Airway Intervention/Intubated: Yes ☐ No ☐

 Inotropes: Yes ☐ No ☐ Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Other: Yes ☐ No ☐ Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Consultations in the ED:

 Medicine: Yes ☐ No ☐

ICU: Yes ☐ No ☐

Endocrine: Yes ☐ No ☐

Other: Yes ☐ No ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Final Hyperglycemic Diagnosis (1 only):

Hyperglycemia/DM ☐ DKA ☐ HHS ☐

Other: ☐ ­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Alternate Diagnoses (check any):

UTI ☐ Pneumonia ☐ Sepsis ☐

Cardiac/coronary artery disease ☐ Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Disposition (1 only):

LAMA ☐ Discharge ☐ Admitted to ward ☐ Admitted to ICU ☐ Death in ED ☐

If admitted: Survived to hospital discharge ☐ Death in hospital ☐

Likely precipitant of hyperglycemia (check any)

 Insulin related/control ☐

Non-compliance ☐

New diagnosis of DM ☐

 Infection ☐

 Respiratory ☐ Urinary ☐ GI ☐

Neurologic ☐ Skin/Soft tissue ☐ Genital/Gyne ☐

 Cardiac Ischemia ☐

 Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Discharge instructions: Yes ☐ No ☐

 Follow up ☐

 Family Physician ☐ Internal Medicine ☐

Endocrinology ☐ DM Education RN ☐ Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Medication change ☐

 Insulin ☐ Oral hypoglycemic ☐

 Prescription ☐

 Insulin ☐ Oral hypoglycemic ☐ Antibiotics ☐

 Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**30-DAY OUTCOMES (ALL PATIENTS):**

Return visit to ED for hyperglycemia within 30 days: Yes ☐ No ☐

Hospital admission for hyperglycemia within 30 days: Yes ☐ No ☐

ICU admission for hyperglycemia within 30 days: Yes ☐ No ☐

**PREVIOUS “SENTINEL” ED VISIT FOR ANY REASON**

Within past 14 days: Yes ☐ No ☐

Date of visit: (yy/mm/dd): \_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_

POC Blood glucose Documented: Yes ☐ No ☐ If yes, level: \_\_\_\_\_\_\_\_\_

Final Diagnosis:

Hyperglycemia ☐ Sepsis ☐

DKA ☐ Pneumonia ☐

 HHS ☐ UTI ☐

 Cardiac/coronary artery disease ☐

 Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Disposition:

LAMA ☐ Discharge ☐ Admitted to ward ☐ Admitted to ICU ☐

Discharge instructions: Yes ☐ No ☐

 Follow up ☐

 Family Physician ☐ Internal Medicine ☐

Endocrinology ☐ DM Education RN ☐ Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Medication change ☐

 Insulin ☐ Oral hypoglycemic ☐

 Prescription ☐

 Insulin ☐ Oral hypoglycemic ☐ Antibiotics ☐

 Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PREVIOUS VISITS FOR HYPERGLYCEMIA**

In past 1 month : Yes ☐ No ☐

If yes: Disposition: ED visit only ☐ Admission ☐ ICU Admission ☐

Diagnosis: Hyperglycemia ☐ Sepsis ☐ DKA ☐ Pneumonia ☐ HHS ☐ UTI ☐ Cardiac/coronary artery disease ☐

 Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_

In past 6 months Yes ☐ No ☐

If yes: Disposition: ED visit only ☐ Admission ☐ ICU Admission ☐

Diagnosis: Hyperglycemia ☐ Sepsis ☐

 DKA ☐ Pneumonia ☐

 HHS ☐ UTI ☐

 Cardiac/coronary artery disease ☐

 Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_

In past 12 months Yes ☐ No ☐

If yes: Disposition: ED visit only ☐ Admission ☐ ICU Admission ☐

 Diagnosis: Hyperglycemia ☐ Sepsis ☐

 DKA ☐ Pneumonia ☐

 HHS ☐ UTI ☐

 Cardiac/coronary artery disease ☐

 Other ☐ \_\_\_\_\_\_\_\_\_\_\_\_\_\_