Measure Abbreviation: GLU 02

Description: Percentage of glucose labs with perioperative glucose < 60 with administration of dextrose containing solution or glucose recheck within 90 minutes of original glucose measurement

NQS Domain: Patient Safety

Measure Type: Process

Measure Summary:
The Treatment of Perioperative Hypoglycemia measure will tell you the percentage of cases that you administered a dextrose containing solution or checked a glucose level within 90 minutes of when the documented glucose level was less than 60 mg/dL. The purpose of this measure is to prevent prolonged periods of hypoglycemia. Acute hypoglycemia in the perioperative period can lead to inadequate supply of glucose to the brain, resulting in seizures, permanent brain damage, and death. The common signs/symptoms of hypoglycemia are masked by general anesthesia, making vigilance and quick treatment especially important.

There are two measurement components for GLU 02. ASPIRE can only report on GLU02b for sites contributing PACU data.

GLU 02a: Percentage of intraoperative glucose labs with perioperative glucose <60 with administration of dextrose containing solution or glucose recheck within 90 minutes of original glucose measurement for the time period between Anesthesia Start and Anesthesia End.

GLU02b: Percentage of glucose labs with perioperative glucose <60 with administration of dextrose containing solution or glucose recheck within 90 minutes of original glucose measurement for the time period between 2 hours before Anesthesia Start to 2 hours after Anesthesia End.

Rationale: Perioperative hypoglycemia is a rare event typically caused by the following:

1. Insulin overdose, either by patient taking higher than normal doses on the morning of surgery or by providers giving more insulin than necessary.
2. Septic or circulatory shock.
3. Failure to monitor.

Inclusions:
- All patients with glucose level less than 60 mg/dL between
  - GLU 02a: Anesthesia Start and Anesthesia End
  - GLU 02b: 2 hours before Anesthesia Start to 2 hours after Anesthesia End
- Patients with and without diagnosis of diabetes
GLU 02 Measure Specification (Page 2 of 3)

Exclusions:
- ASA 5 and 6 cases
- Glucose measurements < 60 mg/dL within 90 minutes before Anesthesia End for GLU 02a
- Obstetric Non-Operative Procedures- CPT 01958, 01960, 01967
- Obstetric Non-Operative Procedures with procedure text: “Labor Epidural”

MPOG Concept IDs Required:

<table>
<thead>
<tr>
<th>Dextrose MPOG Concept IDs</th>
<th>Glucose MPOG Concept IDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>10152 Dextrose</td>
<td>3361 POC- Glucose (Fingerstick)</td>
</tr>
<tr>
<td>10153 Dextrose 50%</td>
<td>3362 POC- Glucose (Unspecified Source)</td>
</tr>
<tr>
<td>10460 Dextrose / Water 5%</td>
<td>3405 POC- Blood Gas- Glucose</td>
</tr>
<tr>
<td>10461 Dextrose / Lactated Ringers 5%</td>
<td>5003 Formal Lab-Glucose, Serum/Plasma</td>
</tr>
<tr>
<td>10462 Dextrose / Water 10%</td>
<td>5036 Formal Lab-Blood Gas, Glucose</td>
</tr>
<tr>
<td>10465 Dextrose / Saline 5% / 0.225%</td>
<td></td>
</tr>
<tr>
<td>10466 Dextrose / Saline 5% / 0.45%</td>
<td></td>
</tr>
<tr>
<td>10467 Dextrose / Saline 5% / 0.9%</td>
<td></td>
</tr>
<tr>
<td>10468 Dextrose / Saline w/KCl 5%/ 0.45% + 20 MEQ/L</td>
<td></td>
</tr>
<tr>
<td>10469 Dextrose / Saline w/KCl 5%/ 0.9% + 20 MEQ/L</td>
<td></td>
</tr>
<tr>
<td>10470 Dextrose / Saline 10% / 0.45%</td>
<td></td>
</tr>
<tr>
<td>10539 Dextrose 10% w/ Lactated Ringers</td>
<td></td>
</tr>
<tr>
<td>10548 Plasmalyte 148 w/ Dextrose 5%</td>
<td></td>
</tr>
<tr>
<td>10558 Dextrose / Saline w/KCl 5%/ 0.225% + 20 MEQ/L</td>
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<tr>
<td>10559 Dextrose / Saline w/KCl 5%/ 0.45% + 40 MEQ/L</td>
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<tr>
<td>10588 Dextrose / Saline w/KCl 10%/ 0.225% + 20 MEQ/L</td>
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<tr>
<td>10594 Dextrose / Saline w/KCl 5%/ 0.45% + 10MEQ/L</td>
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</tr>
<tr>
<td>10602 Dextrose / Saline 10% / 0.225%</td>
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<tr>
<td>10471 Total Parenteral Nutrition</td>
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</tr>
<tr>
<td>10530 Peripheral Parenteral Nutrition</td>
<td></td>
</tr>
</tbody>
</table>
Data Diagnostics Affected:
- Percentage of Cases with Insulin Administration Mapped Correctly
- Percentage of Cases with POC Glucose Labs
- Percentage of Cases with a Lab Drawn during Anesthesia
- Percentage of Labs Mapped to a Meaningful Lab Mapping
- Percentage of Medications with a Meaningful Medication Mapping
- Percentage of Fluids with a Meaningful Fluid Mapping

Collations Used:
- AnesthesiaEnd
- AnesthesiaStart
- AsaNotes
- MpogCaseId
- ProcedureText
- Asa5or6
- GlucoseObservationsDuringAnesthesia
- ProcedureTypeLaborEpidural

Success:
- Administration of dextrose containing solution within 90 minutes (IV)
- OR
- Recheck of glucose level within 90 minutes

Threshold: 90%.

Responsible Provider:
The provider signed in at the first glucose recheck or first administration of dextrose. If neither occurred, then the responsible provider is the one signed in 90 minutes after the low glucose measurement.

Risk Adjustment (for outcome measures):
Not applicable.

References: