Innovations in Inpatient Diabetes Care: It Takes A Diabetes Specialist

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Disclosure to Participants

• Notice of Requirements For Successful Completion
  – Please refer to learning goals and objectives
  – Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours
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Objectives

• Discuss several ways to improve insulin safety in the hospital setting
• List some key hospital policies that can improve quality & safety
• Describe several transitional care strategies that help prevent readmission
Improving Insulin Safety

Preventing Insulin Errors

Types of Insulin Errors

Table. Predominant Medication Error Event Types Associated with the Use of Insulin (N = 2,027, 76.6%), January 2008 to June 6, 2009

<table>
<thead>
<tr>
<th>EVENT TYPE</th>
<th>NUMBER</th>
<th>% OF TOTAL REPORTS (N = 2,685)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose omission</td>
<td>662</td>
<td>24.7%</td>
</tr>
<tr>
<td>Wrong drug</td>
<td>374</td>
<td>13.9%</td>
</tr>
<tr>
<td>Wrong dose/overdosage</td>
<td>348</td>
<td>13%</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>309</td>
<td>11.5%</td>
</tr>
<tr>
<td>Extra dose</td>
<td>227</td>
<td>8.5%</td>
</tr>
<tr>
<td>Wrong dose/underdosage</td>
<td>137</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

* Sum of percentages exceeds 76.6% due to rounding.
Basal Insulin Safety Net for Patients with T1DM

Insulin Administration: Reducing Common Errors

Huddle Message

Do not hold insulin dose without a prescriber order.
If you think the dose is too high or is not needed when a patient is NPO, not eating or BG is <100 mg/dL, consult the primary team to consider a dose change and get an order.
RN: Do NOT adjust or hold any insulin doses without an order. This is out of scope for nursing practice.

Juggling BGs, Insulin & Room Service Meals
NYP Policy: Coordinating BG, Insulin & Meals

- Check BG 30 mins before meal (Must be < 60 mins)
- Administer prandial insulin +/- 15 mins of first bite
- Monitor carb intake: Controlled carb menu lists grams of carb to assist with insulin dosing & meal substitutions. Contact primary team if pt is eating more/less than ordered
- Download calorie king APP to assist with carb counting outside food or available on infonet

RN Survey: Best Practices for Room Service

1) When caring for patients with orders for BG monitoring, would it be easier for you to coordinate the timing of the BG check & insulin with the meal if:___meals were delivered at fixed times (current state)___meal times were flexible and staggered throughout the day based on patient preference (future state)doesn’t matter, either can work

2) a) When your unit has (had) flexible meal times, were you receiving alerts that the tray was on the unit for patients with BGM orders? Yes/No
   b) If yes, were the alerts through (Circle yes or no)
      mobile heartbeat (MHB)? yes/no
      Verbal? yes/no
      sometimes MHB, sometimes verbal? Yes/no
   c) What do you think is the best way to communicate to the RN that the tray is on the unit?

3) Would bundling care by performing BGM and administering insulin (if needed) at the same time:
   a) improve the coordinated timing of BGM, insulin administration and start of meal? yes/no
   b) be helpful to your workflow? yes/no

Room Service Communication Process

Please Wait for Nurse Before You Eat
“Wait 4 Lispro” Huddle Message

BACKGROUND:
• Coordinating the timing of glucose monitoring, insulin administration and meal delivery is always a challenge in the inpatient setting. To minimize the risk of hypoglycemia around meals in patients taking insulin, the Inpatient Glycemic Management Team at Weill Cornell in partnership with the Departments of Nursing and Food and Nutrition are recommending the following best practices:
  • RNs should administer prandial insulin (lispro) +/- 15 minutes of the start of the meal
  • Before administering lispro, the RN will check what time the prior dose was given. If it is less than 4 hours, RN will contact the primary team to ask for a dose reduction OR change in administration time to prevent insulin “stacking”.

ACTION PLAN:
• Before administering lispro, RN checks time of prior dose
  • If > 4 hours, RN should proceed with dose
  • If < 4 hours, RN should contact the primary team to ask for an order for a dose reduction OR change in administration time

Audience Question
• Edna, 72 y.o., is admitted with chest pain & has T2DM taking 2 oral agents at home. Her current BG is 183 mg/dL and she is about to eat lunch (60 gm CHO). She has a poor appetite and does not like what she received on her tray. Her bolus insulin order is: 4 units, intended to cover the meal & to correct hyperglycemia.

The RN should:
1. Hold the dose
2. Administer ½ the dose
3. Administer the full dose
4. Consult with the primary team
Preventing Diabetes Medication Errors & Improving Quality of Care

**KEY STRATEGIES For Diabetes Educators**
- Establish Unit Based Diabetes Champions
- Review Unit BG DATA from POCT Lab Database (RALS)
- Review Med Error Reports from Pharmacy
- Provide targeted education based on unit rates of hypo/hyperglycemia & insulin error data

Diabetes Educator Role in Discharge Planning
- Diabetes Survival Skills Education for Complex Patients
- Individualize Diabetes Discharge Regimen with primary Team
- Medication Reconciliation & Checking RXs

Bedside Clinician Role in Diabetes Self-Management Education

**Promote EARLY Diabetes Education**
- Educate *high-risk* patients as soon as patient is ready to learn to allow time for practice: e.g. patients with high A1c, elderly, public insurance, going home on insulin or more complex regimen for 1st time
- Use scheduled BG monitoring, insulin administration & meal trays as teachable moments
- Provide access to diabetes self-management tools such as teaching guides, practice pens, home blood glucose meters
Diabetes Teaching Resources at NYP/Weill Cornell Campuses

Teaching Kits  Practice Pens  Free Meters  Handouts in Multiple Languages

Transitioning Diabetes Medication Regimens at Time of Discharge

Promoting Revised Discharge Insulin Algorithm

Choose a Discharge Regimen Based on A1C

<table>
<thead>
<tr>
<th>A1C &lt; 8%</th>
<th>A1C 8%-10%</th>
<th>A1C &gt;10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-start outpatient treatment regimen (oral agents and/or insulin)</td>
<td>Re-start outpatient oral agents and keep glargine once daily at 50% of hospital dose</td>
<td>D/C on basal/bolus at same hospital dose. Alternative: Re-start oral agents, keep glargine once daily at 80% of hospital dose</td>
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</tbody>
</table>

IN CONCLUSION

- Diabetes Educators play key role in identifying & preventing insulin errors and malglycemia
- Bedside RN/RD/RPhs are in the best position to teach Diabetes Survival Skills Education and practice skills with patient. The diabetes educator should be reserved for pts with barriers to self care and to assist with glycemic management & discharge planning
- Unit & service line based Diabetes Champions can be influential in leading diabetes education and management strategies and mentoring colleagues
- Patient & clinician resources for ongoing diabetes education and support should be readily available

Weill Cornell Diabetes Educators & Champions Working Together

Selected References