

1 Problem

What
When

| | |
|----------------------------|--|
| Problem(s) | Nonketotic hyperosmolar coma |
| Date | Proactive |
| Different, unusual, unique | Poor glycemic control not present on admission; each additional chronic condition increased odds of poor glycemic control by 12%; increased staffing in non-teaching hospitals significantly reduced odds of poor glycemic control |
| Where | Inpatient hospital |
| Task being performed | Inpatient care |

Impact to the Goals

| | | |
|------------------|---|---------------|
| Patient Safety | Increased risk of patient death (16 vs 9% when emergencies not present) | |
| Employee Impact | Second victim | |
| Compliance | "No-pay" hospital acquired condition | |
| Organization | Cost of nonketotic hyperosmolar coma | \$35,215 |
| Patient Services | Increased length of stay (14 vs 7 days) | |
| Labor, Time | Increased treatment requirements | |
| | Per incident | \$35,215 |
| Frequency | 3,248 cases in 2007 of nonketotic hyperosmolar coma (per CMS) | |
| | Annualized Cost | \$114,378,320 |

NONKETOTIC HYPEROSMOLAR COMA

Cause Map

Manifestation of Poor Glycemic Control Part 1

Nonketotic hyperosmolar coma resulting from poor glycemic control within a hospital setting is now considered a hospital-acquired condition by Medicare & Medicaid, meaning that hospitals will not receive additional payment for cases when this condition is acquired during hospitalization.

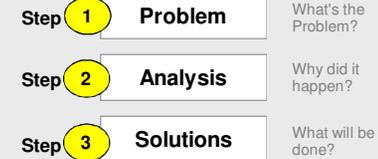
"The inpatient management of blood glucose among patients with diabetes is time- and cost-intensive work fraught with many difficulties and potential perils."

From "Risk factors for hospital-acquired 'poor glycemic control': a case-control study" by Mchugh, et al.

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING

Problem Solving • Incident Investigation • Root Cause Analysis

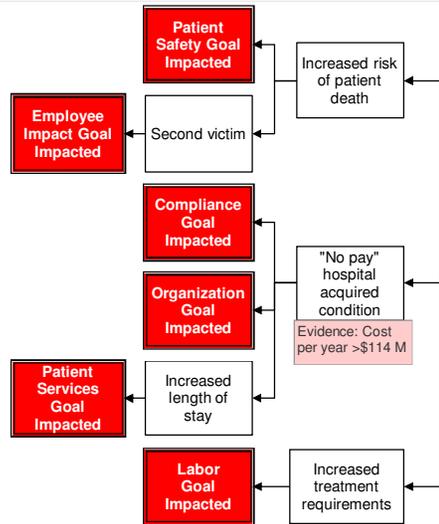
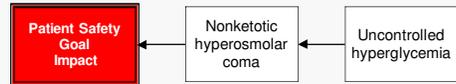


2 Analysis

Basic Level Cause Map - Start with simple Why questions.

Basic Cause-and-Effect

Uncontrolled hyperglycemia (high blood glucose) can result in nonketotic hyperosmolar coma, increasing risk of patient death, length of patient stay and treatment requirements. The costs associated with nonketotic hyperosmolar coma (greater than \$114 million in the US in 2007, according to CMS) are no longer reimbursable when the condition is acquired in the hospital.



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Houston, Texas 281-412-7766 ThinkReliability.com

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More Detailed Cause Map

Add detail as information becomes available.

