Expanded List of Triggers Used to Detect Adverse Events

Triggers from the Institute for Healthcare Improvement Global Trigger Tool		
Abrupt Drop in Hemoglobin (>25%)	Fall	Rapid Response Team Activation
Anti-emetic Use	Glucagon or Dextrose (D50W) Administration	Readmission to Hospital Within 30 days
New *Clostridium difficile* Infection	Hypoglycemia (Blood Glucose < 3 mmol/l)	Restraint Use
Blood Culture Positive	INR > 4	Transfer to Higher Level of Care (e.g., Intensive Care)
Blood Transfusion	MRSA Positive Status Newly Acquired	Troponin Elevation (>1.0 μg/L)
Code Blue Called	Naloxone Administration	Unplanned Medication Stop
Creatinine increase by 100 μmol/L from baseline or double	Pneumonia (hospital-acquired)	Urea increase by 10 mmol/L from baseline or double
Delirium	Pressure Ulcer	Urine Culture Positive
Deep Vein Thrombosis or Pulmonary Embolism Following Admission	Procedural Complication	Vitamin K Administration
Electrolyte Abnormality (Na < 120 mmol/L or 150 mmol/L, K < 2.5 mmol/L or 6.5 mmol/L)		VRE Positive Status Newly Acquired

New Triggers Added to Enhance the Trigger Tool*			
Abnormal Vital Signs (Heart rate > 120 beats per minute or < 40 beats per minute; Systolic blood pressure < 80 mmHg or > 200 mmHg; Temperature > 38°C or < 35°C; Oxygen saturation < 88%)	Concern brought forward by healthcare team member otherwise undiscoverable by medical record review (loss of mobility, constipation, decrease oral intake, family concern, missed issue on handover, difficulty reaching physician)	Enema or Suppository (new order)	PRN Antipsychotic Medication Administration
Abdominal X-Ray	Chest X-Ray	Foley Catheter Insertion (re-inserted or new)	PRN Psycotropic Medication Order (Benzodiazepine or Antipsychotic)
Alternate Level of Care (ALC) conversion back to acute status	Consult to a Non Medical Service (48 hr after admission and beyond)	Intravenous Fluid (Re)-initiated	Rehabilitation, Palliative Care or Long-Term Care Application
Antibiotic Initiation during admission (greater than 12 hours after admission)	Diet Texture Downgrade	New antidepressant administration	Safety Report
Arterial Blood Gas Performed	Dietary Supplement (new order)	New Isolation Status	Unanticipated Death (nothing about the severity of illness that made the death expected)
AST / ALT increase x 3 or > 500 U/L	Dietician or SLP referral	NPO > 2 days	Urinary retention

Bicarbonate level < 15 mmol/L	Electrocardiogram Performed	Pharmacy Medication Clarification	White Blood Cell > 12 x 10^9/L

Abbreviations: NPO – nil per os (nothing by mouth), MRSA – methicillin resistant *Staphylococcus aureus*, INR – International normalized ratio, VRE – vancomycin resistant *Enterococcus*, AST - Aspartate Aminotransferase, ALT - Alanine Aminotransferase, SLP – speech language pathologist, PRN – *pro re nata* (as needed),

* We piloted new triggers and adjusted them to balance feasibility of detection with likelihood of uncovering actual events. For example, when developing the new trigger to detect in-hospital malnutrition, we initially used “suboptimal oral intake documented in the medical record for greater than 72 hours” and “team concern about patient’s oral intake” as triggers, but quickly discovered that front-line staff inconsistently documented dietary intake in the medical record. However, we noticed that physicians often “ordered nutritional supplements” and made “referrals to the dietician” for patients with poor oral intake, and so we eventually used these triggers in our study.