Supplementary Online Content

Starmer AJ, Sectish TC, Simon DW, et al. Rates of medical errors and preventable adverse events among hospitalized children following implementation of a resident handoff bundle. *JAMA*. doi:10.1001/jama.2013.281961

eAppendix 1. Medical Error and Adverse Event Definitions and Representative Examples

eAppendix 2. The National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) Index For Categorizing ErrorsSearch strategy for EMBASE (using Embase.com)

This supplementary material has been provided by the authors to give readers additional information about their work.

eAppendix 1. Medical Error and Adverse Event Definitions and Representative Examples

Error Category	Definition	Representative Example from Study*
Preventable adverse event	Injury or harm to a patient that resulted from an error in the medical care delivery process.	19 year old with genetic syndrome and abdominal pain. Patient was receiving hydromorphone for pain. Written by intern for hydromorphone every four hours at twice the recommended dose. Patient received five doses and was found to be somnolent, required oxygen and was transferred to the ICU where she received a narcotic reversal agent and recovered.
Non-intercepted potential adverse event	Medical error that has the potential to cause injury but failed to do so even though the medical intervention reached the patient	Seven year old male with seizure disorder on a ketogenic diet. He receives continuous feeds overnight of Ketocal and water. At 4AM the feeding bag was changed by the Clinical Assistant who added Ketocal and Pedialyte (which contains sugar). The patient received this for one hour before the problem was recognized and corrected, with no ill effect.
Intercepted potential adverse event	Error that had the potential to cause injury but did not reach the patient due to an intercept by someone within the medical delivery process that prevented the error from reaching the patient	6 year old female with neurological impairment, fed via gastrostomy tube due to longstanding problems with aspiration, recurrent aspiration pneumonias. Resident wrote an order for a multivitamin 1mL by mouth. This error was caught before the patient was given the vitamin.
Error with little potential for harm	Medical errors that are failures in process of care but do not lead or have the potential to cause patient harm	14 year old male status post kidney transplant admitted secondary to rising creatinine levels. Intern wrote patient for Sevelamer (a phosphate binding agent) 200mg by mouth with all snacks and 400mg by mouth with all meals. Dose written was half the patient's usual home dose. The original order was discontinued and corrected within an hour and a half.
Non-preventable adverse event	Injury or harm resulting from a medical intervention with no error in the	Four week old admitted with hypercalcemia. Patient was receiving intravenous fluids (D5W 1/2 Normal Saline with 5mEq of KCl per 500ml). Upon hourly PIV check, the RN noticed

	medical care delivery process	the right foot to be edematous and erythematous. Fluids were stopped and the intravenous line was removed.
Exclusion	Suspected potential incidents reported by research nurse that physician reviewers felt did not meet medical error or adverse event criteria or did not occur on the study unit; includes circumstances or events that have the capacity to cause error yet no error occurred	10 year old male with history of autism on 500mg valproic acid at home who was admitted following a syncopal episode. While in emergency department, he was erroneously given an additional 250mg of valproic acid by mouth times one. [*excluded because error occurred while patient was in the Emergency room rather than after admission to the study unit*]

*some clinical details modified slightly in order to ensure patient confidentiality

eAppendix 2. The National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) Index For Categorizing Errors

Category	Description
Category A*	Circumstances or events that have the capacity to cause error
Category B	An error that did not reach the patient
Category C	An error that reached the patient but did not cause harm
Category D	An error that reached the patient and required monitoring or intervention to confirm it resulted in no harm to the patient
Category E	Temporary harm to the patient and required intervention
Category F	Temporary harm to the patient and required initial or prolonged hospitalization
Category G	Permanent patient harm
Category H	Intervention required to sustain life
Category I	Patient death

*not included in this study / considered exclusions