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Problem Definition

Hospital admission medication lists often contain errors despite best efforts by hospital staff to correct them. A systematic review of medication history research reveals that over a quarter of inpatient prescribing errors can be attributed to medication history errors with a wide range of clinical importance[1]. Anecdotal feedback to Jefferson pharmacists from outside providers suggests that these errors might also lead to unnecessary readmissions. Poor medication histories lead to a "garbage in, garbage out" phenomenon, perpetuating erroneous medication lists that persist upon discharge. Ultimately, this poses a patient safety issue.

Problem Analysis
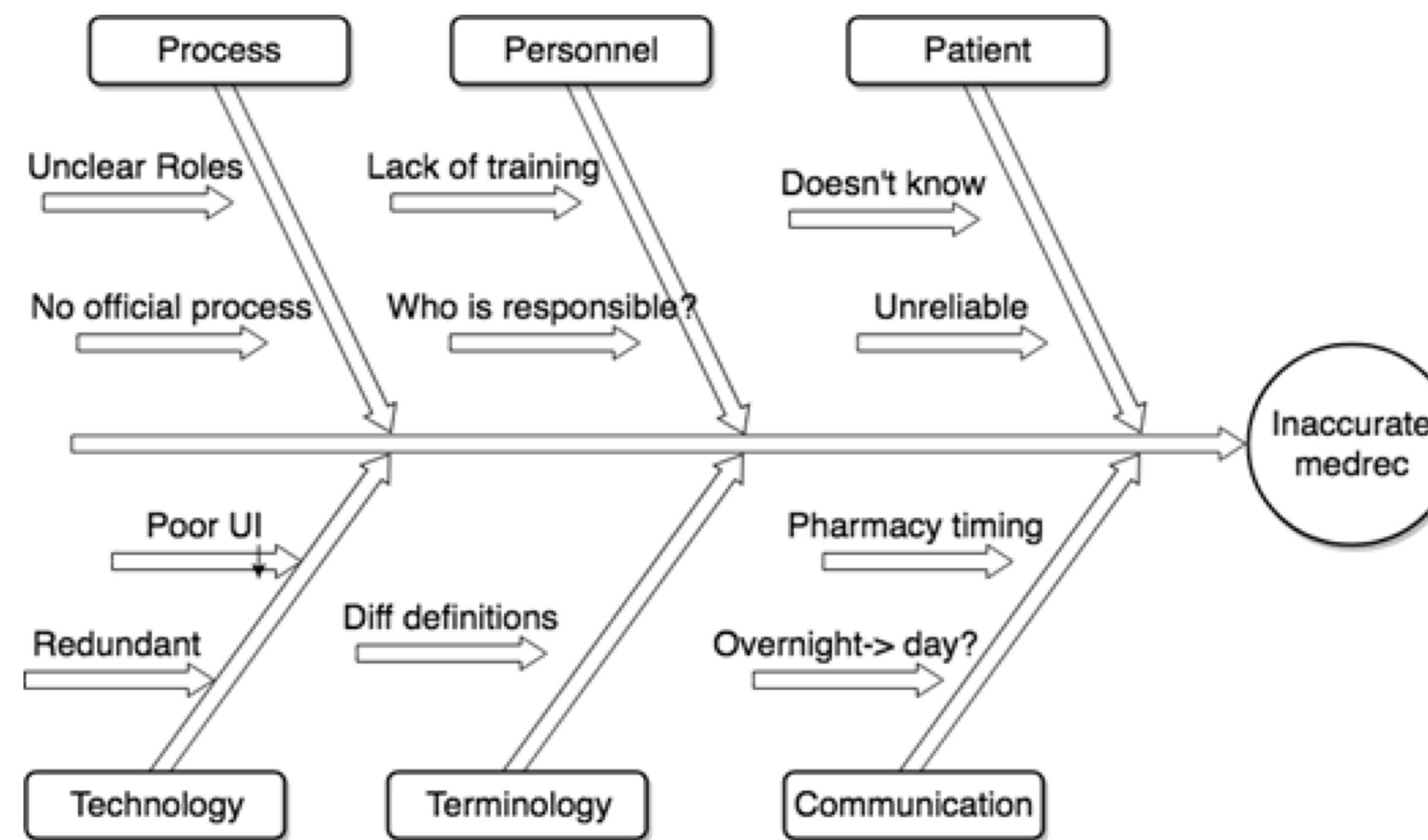
Planned Intervention & Next Steps

Phase 1 (8/1/2020 – 10/1/2020): primarily data collection. When a new patient is admitted to a Green 3 medicine service (excluding in-hospital service transfers), the admitting resident will complete a medication history and reconciliation per normal practice. Once marked "complete" in EPIC, a pharmacy team member will thoroughly audit the data and collect the number of additions, deletions and modifications to the medication list. This will serve as the "gold standard" for an accurate record. Discrepancies will be quantified, and we will also collect the average time required by the pharmacist to conduct these audits.

Phase 2 (10/1/2020 – 12/1/2020): design the intervention. Based upon the data and lessons learned from Phase 1, the investigation team will then design a standardized approach for conducting a medication history and reconciliation.

Phase 3 (12/01/2020 – 02/01/2021): Instruct residents how to implement a comprehensive medication history and reconciliation (lessons from Phase 2) and then re-audit and quantify medication discrepancies to assess improvement and reduction of errors.

Aims For Improvement

For patients admitted between August 2020 and February 2021 to a general medicine service, we will reduce the number of home medication list inaccuracies by 25% within 48 hours of admission in order to improve transitions of care upon discharge.

Measurement and Results

We will measure the number of clinically relevant medication history errors including errors of omission, commission, dose, frequency and drug name

1. Tam VC, Knowles SR, Cornish PL, Fine N, Marchesano R, Etchells EE. Frequency, type and clinical importance of medication history errors at admission to hospital: a systematic review. CMAJ. 2005 Aug 30;173(5):510-5. doi: 10.1503/cmaj.045311. Review. PubMed PMID: 16129874; PubMed Central PMCID: PMC1188190.
2. Phan H, Williams M, McElroy K, Burton B, Fu D, Khandoobhai A. Implementation of a student pharmacist-driven medication history service for ambulatory oncology patients in a large academic medical center. J Oncol Pharm Pract. 2019 Sep;25(6):1419-1424. doi: 10.1177/1078155219831066. Epub 2019 Feb 26. PubMed PMID: 30808276.