

Turning Incident Reports into Insights: Leveraging Medication Error Reports in a Cardiac Care Unit

Brooke Hilderbrand¹, Kalpesh Patel², Ellen Schellhase¹, Michelle Sullivan², Monica L. Miller¹

¹ St. Bartholomew's Hospital, London, England

² Purdue University, West Lafayette, Indiana USA

INTRODUCTION & OBJECTIVES

- Medication errors remain a leading cause of preventable patient harm, particularly in high-risk specialties such as cardiology.
- Hospitalised patients receiving cardiac care can experience rapid medication adjustments, increasing their risk for prescribing, administration, and monitoring errors.
- Incident-reporting systems such as DATIX, which is widely used across the National Health Service (NHS), capture medication-related safety events and support organizational learning.
- Incident-report data review is critical for identification of error patterns, contributing factors, and opportunities for system-level improvement.

Gain insight into questions such as:

- What are the most common types of errors made within cardiac wards of the hospital?
- Is there a specific area within the hospital these errors occur most often?
- Is there a specific medication that is commonly associated with these errors?
- What is the level of harm associated with these errors?

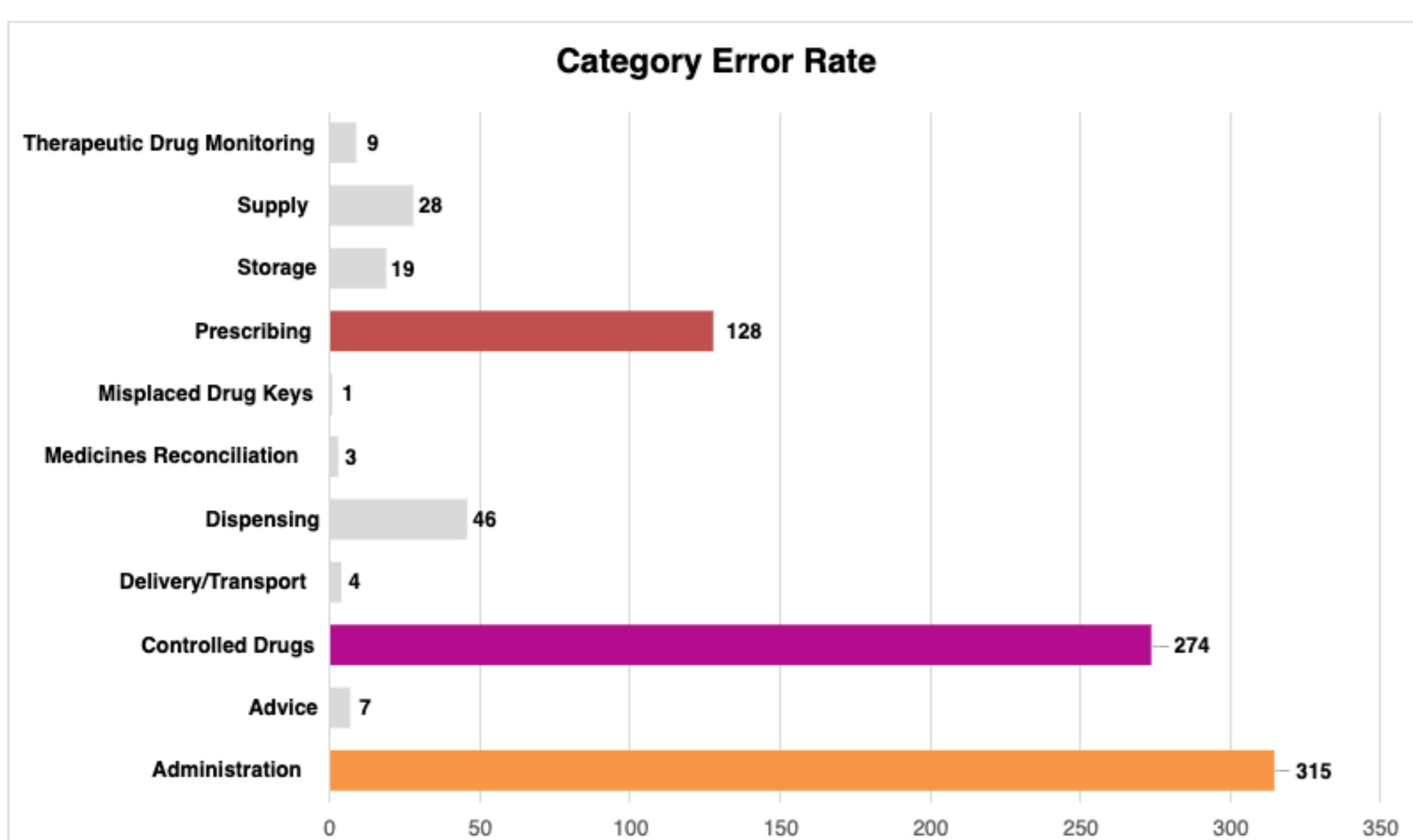
Objective: Analyze cardiology-related medication errors, assess harm levels, and utilize thematic analysis to suggest data-driven solutions to enhance medication safety.

METHOD

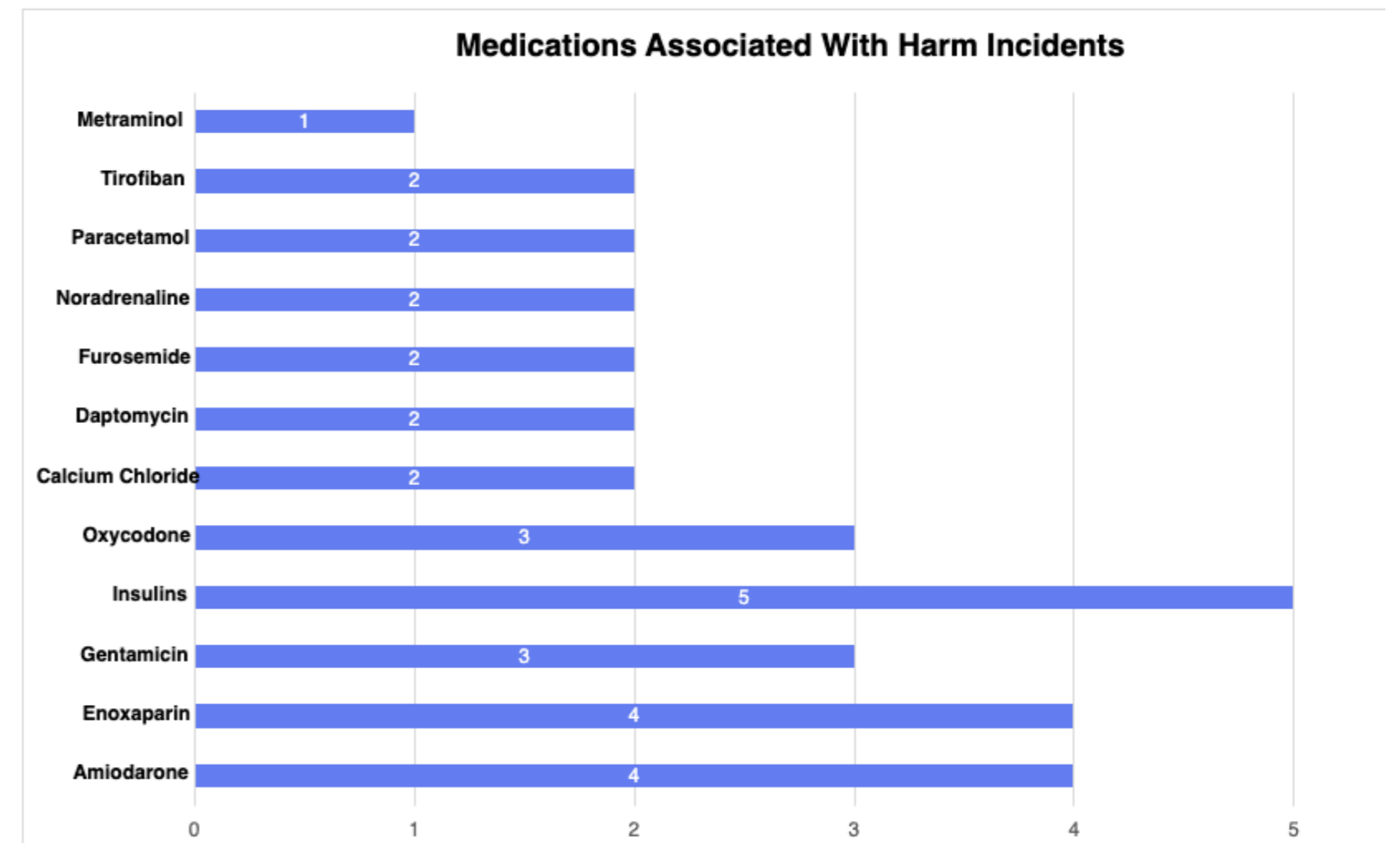
- Retrospective analysis of an electronic incident report system (DATIX) from all inpatient cardiology wards at a major cardiac centre within the National Health Service in London, England.
- All DATIX reports over a 20-month period (January 2024-September 2025) were included.
- After removing duplicates and incomplete entries, 834 reports were analyzed for: error type, category subtypes, harm severity and medications involved.
- Descriptive statistics were used for analysis

RESULTS & DISCUSSION

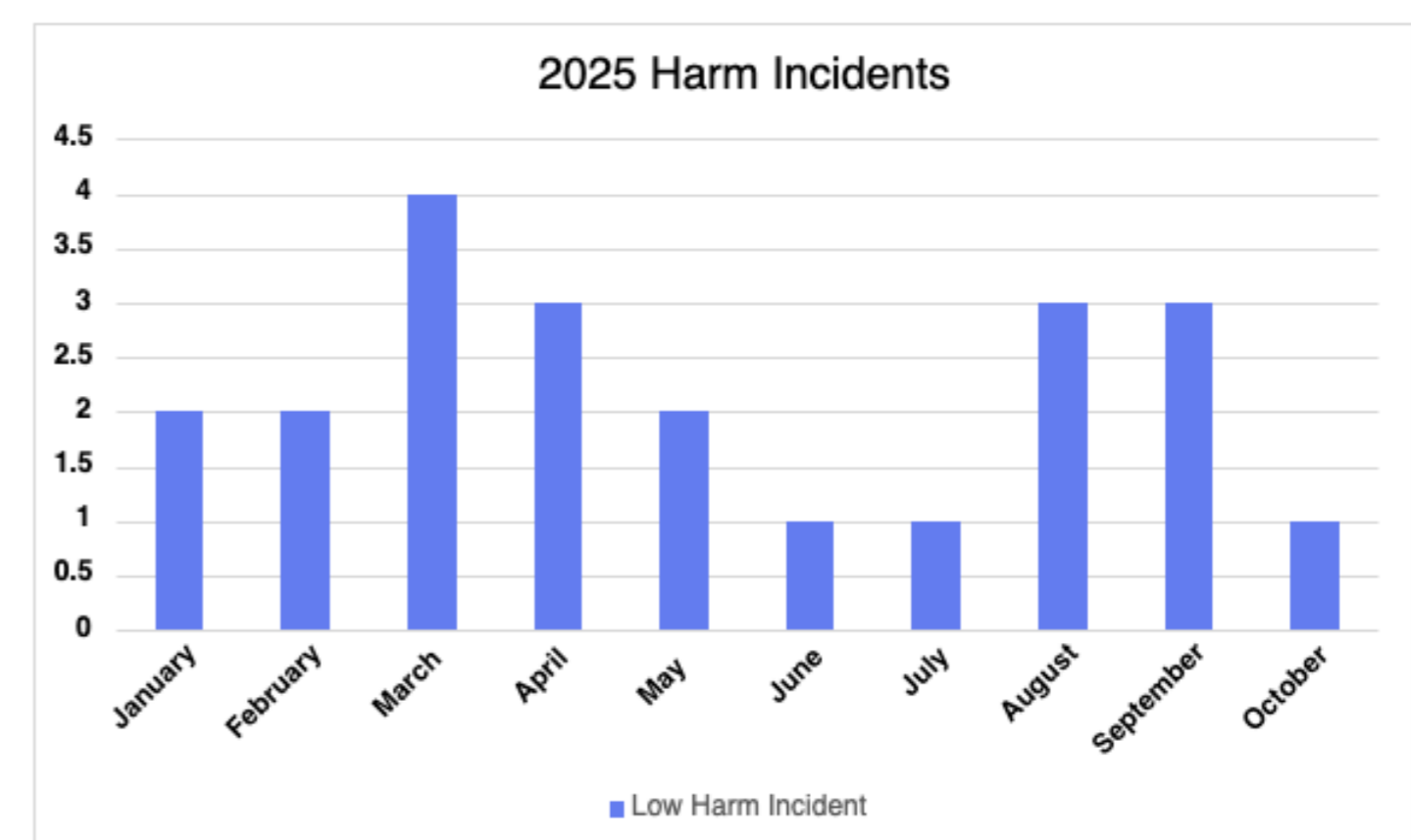
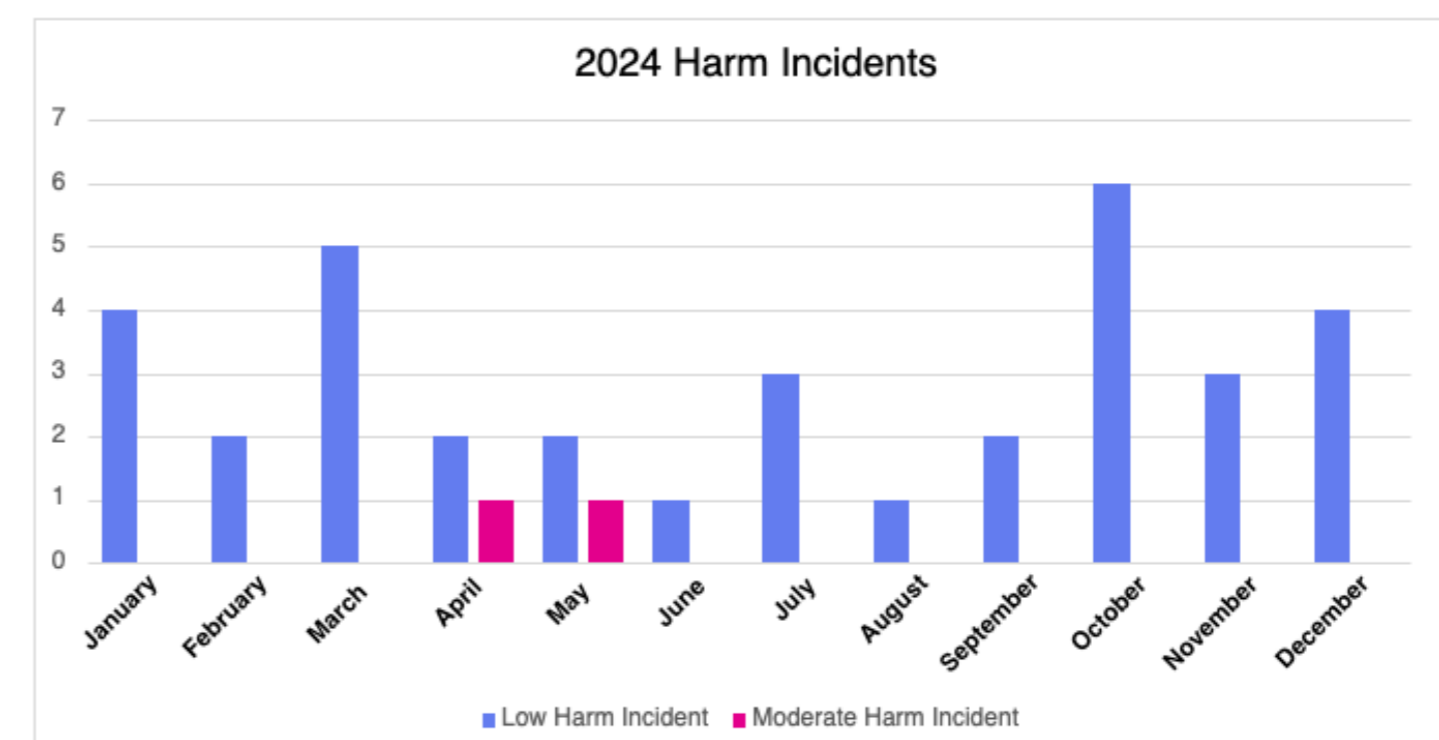
- Administration errors were the most frequent 315 (38%), followed by controlled drug errors 274 (33%) and prescribing errors 128 (15%).
- Common subcategories included incorrect documentation, omitted doses, and wrong drug or dose.



- Insulins (15.6%), enoxaparin (12.5%), and amiodarone (12.5%) were most associated with harm incidents.



- Only 59 (7%) harm events were reported and of those, 57 were categorized as low harm and two as moderate harm.
- Patterns revealed systemic vulnerabilities such as unclear prescriptions and incorrect pump settings.



- Most errors occurred in the inpatient dispensary (n=100), the ICU rehabilitation (n=80), and ICU/ECMO service (n=78)
- Most harm incidents were reports in the and the CCU (n=8)

CONCLUSION

- Intentional review, analyze, and summarization of incident reports provides actionable insights for improving medication safety.

Solutions being implemented include:

- Reinforcing transparency in error reporting
- Standardizing documentation
- Integrating digital tools and decision support to reduce human error

By balancing transparency with innovation, this cardiac care centre is taking steps to *strengthen workflows, reduce medications errors and advance patient-centered care*