

Opioid related clinical incidents: The truth can be painful

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Background

Medication errors remain a persistent issue in hospitals. Opioids are a high-risk class of medication and are known to cause harm when prescribed or administered inappropriately. Opioid-related clinical incidents were identified as the most common high-risk medication class (defined by APINCH) contributing to medication-related incidents when reviewed in 2016.

Aim

To identify common themes within opioid-related clinical incidents and suggest improvement strategies to support safer opioid use.

Methods

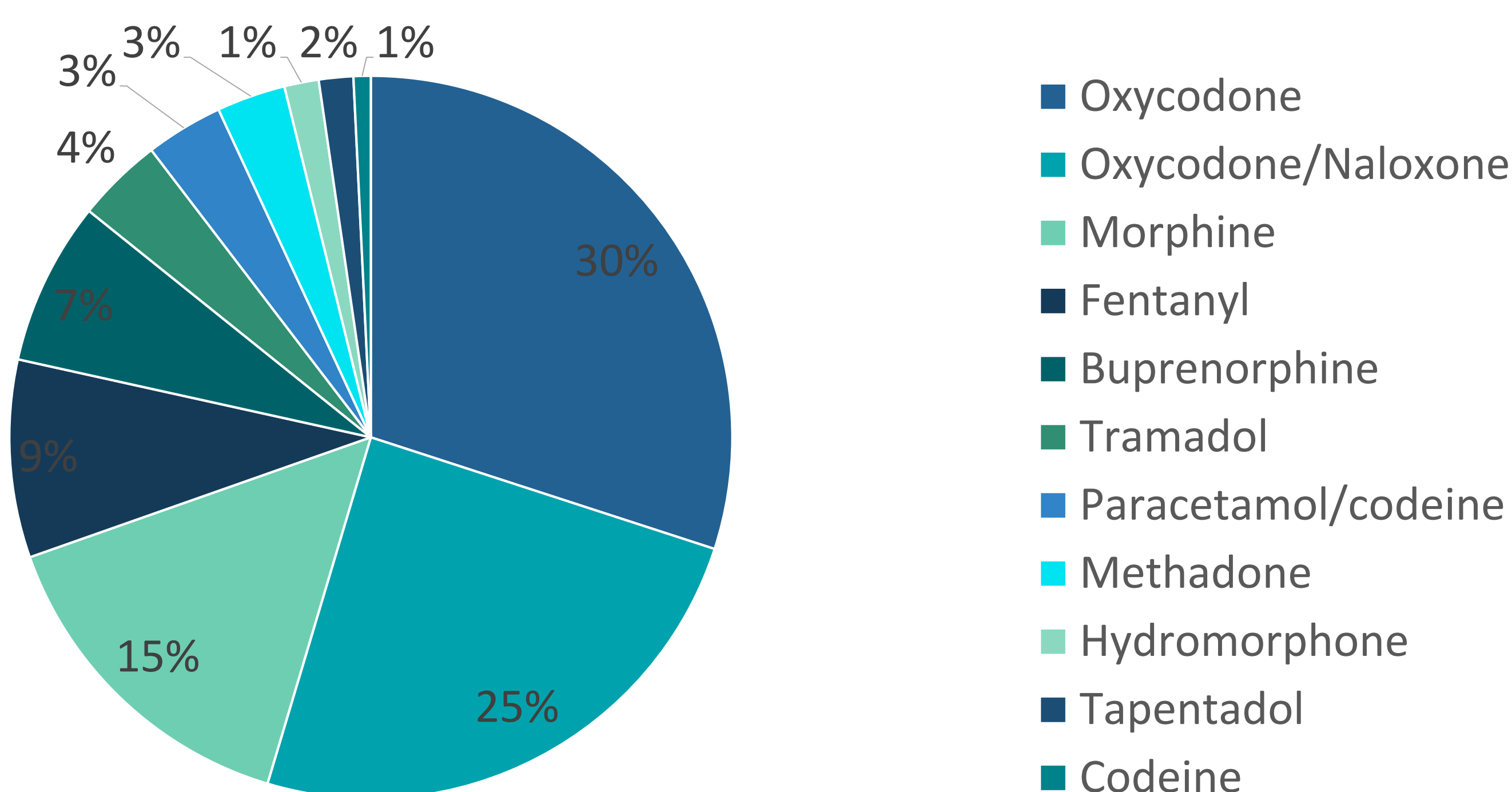
All opioid-related clinical incidents entered into the clinical incidents reporting system (PRIME) which occurred at a tertiary referral, metropolitan hospital over a 2 year time period (January 2016 to December 2017) were reviewed and analysed. Thematic analysis of each incident was performed by pharmacists to clearly classify incidents and target interventions for improvement.

Results

There were 260 opioid-related incidents reported which represents 11.9% of all medication incidents reported (total number of medication incidents = 2183). 240 of the reported opioid incidents resulted in no harm to the patient (SAC-3), 18 resulted in minimal harm (SAC-3) and 2 resulted in temporary harm (SAC-2).

Two-thirds of opioid-related clinical incidents resulted in deviation from intended patient care. Most incidents occurred with oral administration; the majority occurring with oxycodone and oxycodone/naloxone. This is likely a reflection of prescriber preferences.

Figure 1: Opioid classes reported in incidents



Medication omission was the most commonly reported incident for oxycodone/naloxone which is likely due to usage patterns. Medication overdose was the most commonly reported incident for immediate release oxycodone, morphine, fentanyl and buprenorphine.

Opioid-related incidents were classified according to stage: administration, transcription, dispensing/supply, prescription/ordering. The highest proportion of reported incidents occurred during the administration phase (75.8%, n=197).

The overall increase in reported opioid incidents over the audit period correlates with increased activity (see figure 2).

Figure 2: Opioid Incidents (January 2016 – December 2017)

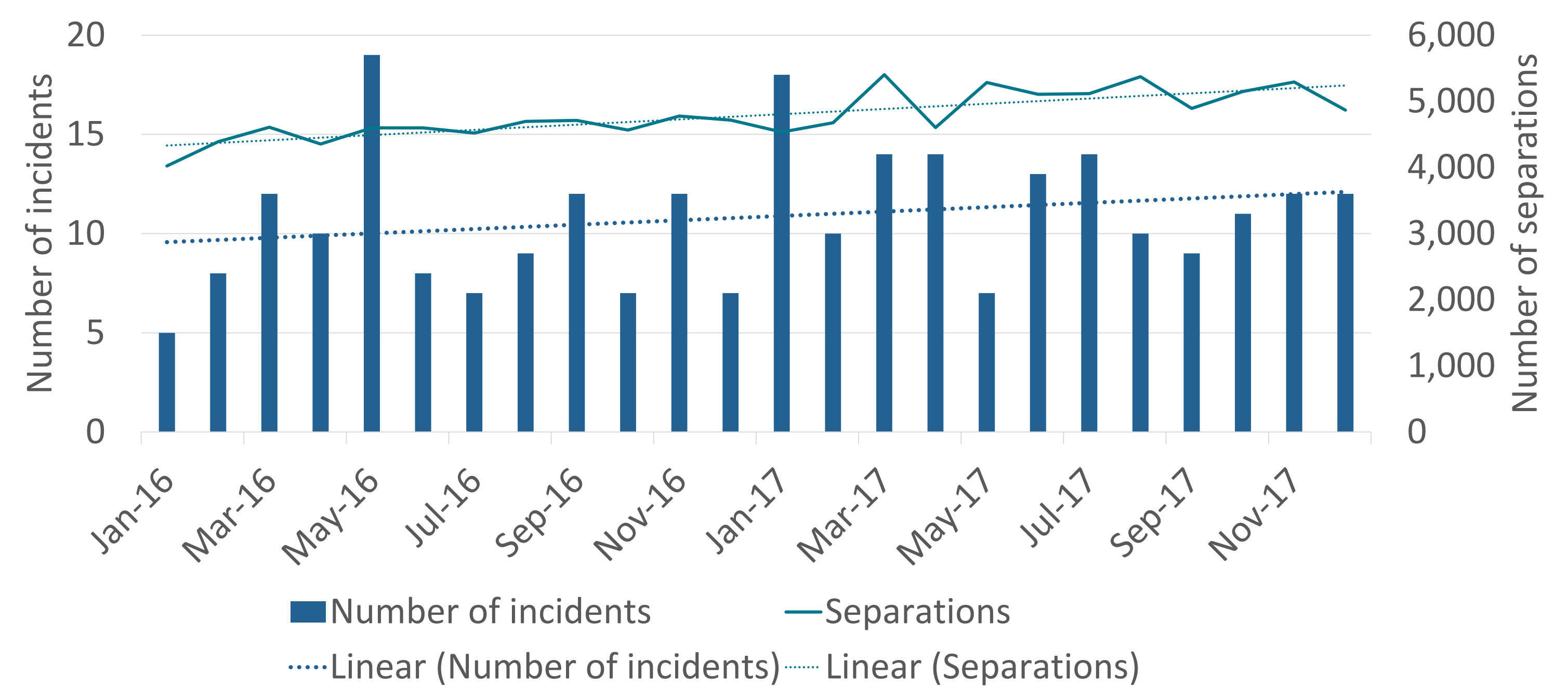


Table 2: Most common error types after thematic analysis by a Pharmacist

Error type	n	%
Omission of medication	34	13.08%
CD book documentation error	26	10.00%
Administration error - incorrect formulation	12	4.62%
Administration error - incorrect medicine	11	4.23%
Administration error - incorrect time - regular medicine - resulting in overdose	11	4.23%
CD's not securely stored	11	4.23%
Administration error - overdose - infusion pump programming	10	3.85%
Administration error - overdose - regular medicine	9	3.46%
Administration error - overdose - patch not removed	7	2.69%
Administration error - overdose - PRN - dose administered too high	7	2.69%
Administration error - overdose - PRN - order administered too frequently	7	2.69%
CD found/lost in bed area	7	2.69%
Other	108	41.42%

Improvement Opportunities

Opioid decision support chart to increase opioid familiarity

Generic in-service presentation to increase awareness

Implement Patients Own Medicine Controlled Drugs register across hospital

Opioid case included in annual nursing competency

Review of current quantities and products in ward controlled drug safes

Reduction in opioid incidents

Conclusion

Opioid related clinical incidents account for the largest number of high-risk medication incidents reported at a tertiary referral, metropolitan hospital. We propose additional decision support and multidisciplinary education to improve familiarity with agents and formulations.

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