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Understanding the nature and quality of medication error related incident reports in two English prisons: a retrospective evaluation over a two year period

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Outline

- Background
  - Medicines management and safety in prisons
  - Medication error reporting
- Study aim
- Methods
- Key findings
- Summary and implications

Medication management and safety in prisons

- **Medicines management in prison settings**
  - Variable medicines reconciliation and pharmacy team activity
  - Electronic prescribing and patient health care records
  - Dispensing may be carried out by external companies
  - In possession (IP) and not in possession (not-IP) medication for administration
  - Partial adoption of electronic medicines administration

- **No published studies of medication errors in prisons**
  - Existing studies of medicines use focusing on mental health[1,2]
  - New Royal Pharmaceutical Society (RPS) Standards[3] and NICE Guidance[4]
  - Royal College of General Practitioners/RPS Safer Prescribing Guidance[5]

Medication error reporting

- **Various studies indicate deficiencies with reporting**
  - Feedback/learning/sharing not sufficient, including between countries
  - Reporting behaviours, professional and institutional level
  - UK data indicates[6]
    - Few reports from primary care/mental health
    - 822 severe/death reports: mean words 89 for description, 62.5% neither causes/actions
- **NHS England Alert 2014[7]**
  - Improve medication error reporting volume, quality, accountability and feedback
  - Large organisations: Board-floor approach, MSO, Meds Safety Committee
  - Smaller organisations: Processes, Medicines Safety Champions
- **Unclear picture in prison settings**

Study aim and objectives

To retrospectively evaluate the nature and quality of inpatient medication errors reported by staff in two English prisons over a two year period in order to develop recommendations for improvement in medication safety.

- Characterise inpatient medication errors reported; including the type, severity, and medicines involved,
- Evaluate emerging themes and trends, including error cause(s) and lessons learned,
- Assess content of reports to evaluate overall quality, and
- Synthesize learning to direct recommendations for learning and improvement.

Methods

- Extraction of anonymised medication incident reports from DATIX
- Reports made by health care staff from two English Male prisons
- Inclusive period July 2014 – June 2016

- Medication incidents reviewed independently by RNK and PP to determine whether they were medication errors
  - *"A medication error is any **preventable event** that may cause or lead to **inappropriate medication use or patient harm** while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including **prescribing, order communication, product labeling, packaging, and nomenclature, compounding, dispensing, distribution, administration, education, monitoring, and use**."* National Co-ordinating Council for Medication Error Reporting and Prevention.[8]

Methods

- Data analysis
  - Data collection tool developed based on pilot work and literature review
  - Coded data entered into MS Excel
  - Descriptive statistics used for medication errors
    - Proportion of different types of medication error and subtypes (e.g. wrong dose)
    - Proportion of different severities and medications involved
    - Location and time period of reporting
  - Quality of medication error reports assessed descriptively using existing approach[3]
    - Focus on incident description, apparent causes and lessons learned
    - Number of words to describe incident
    - Boxes left blank
- Study received NHS trust audit committee approval
- Undergraduate pharmacy student summer project

Key findings – medication errors

- A total 118 medication related incident reports extracted and analysed
- **74** considered as medication errors using NCCMERP definition
  - 87 if including delivery/storage incidents
  - **Significant under-reporting present?**
- 85.1% were from the larger prison site
- 59.5% were reported in first year (2014-15)
  - Reduction in reporting over time for larger site, increase for smaller site

Administration and Prescribing errors most common

Wrong dose > omission > wrong patient

Key findings – medication errors

Most errors reached the patient
Some patients informed of error
Major severity (n=4), moderate (n=14), minor (n=56)

Larger site: Analgesics (n=22), Psychotropics (n=21)
Smaller site: Opioids (n=8), BZD (n=1)

Unclear whether person reporting made the error

Causes rarely mentioned, variety noted, little detail provided

Key findings – quality appraisal

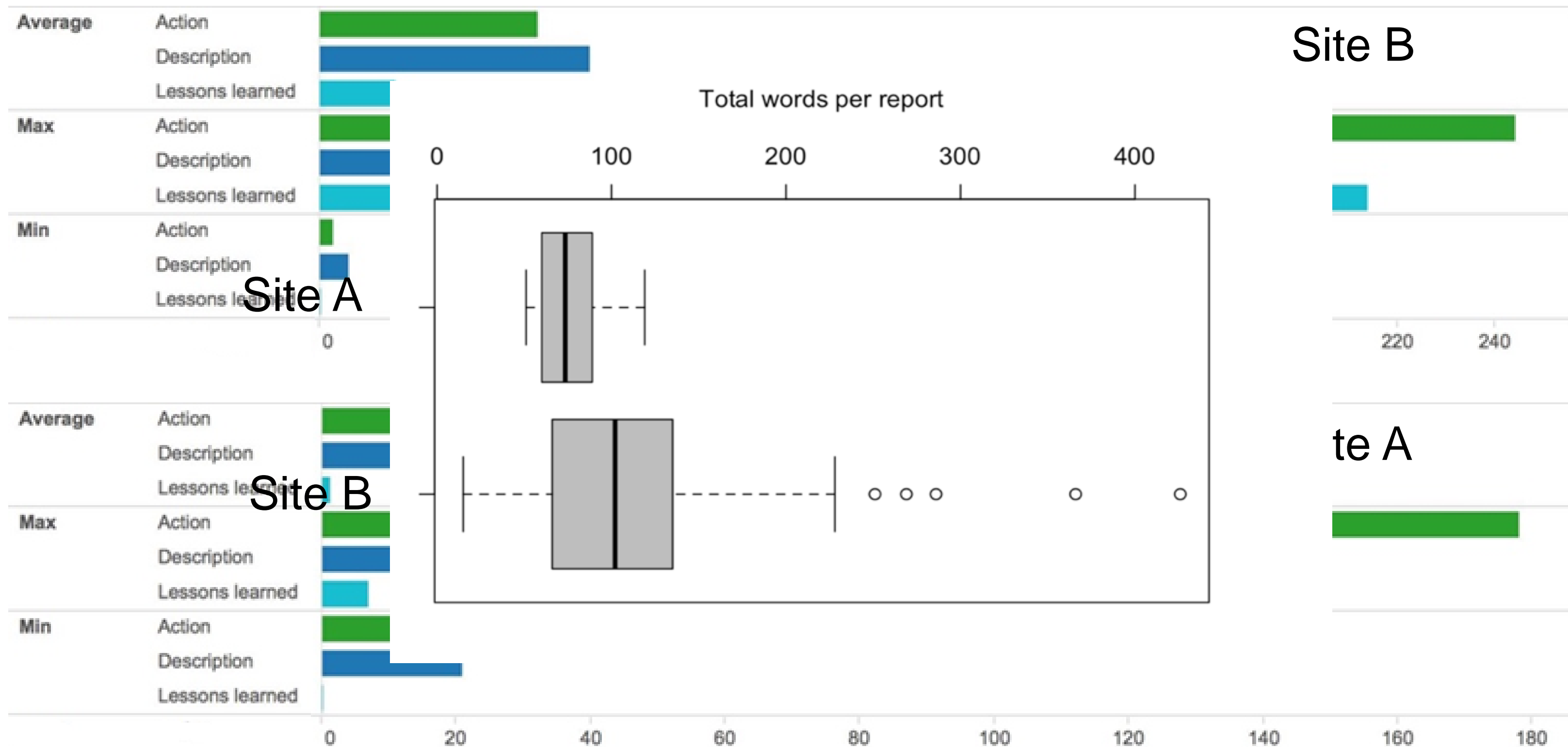
Lessons learned mentioned in 70.3% of cases

Reason for error mentioned in 45.9% of cases

Blank boxes
Zero blank boxes (n=28, 37.8%)
1-3 blank boxes (n=30, 40.5%)
4+ blank boxes (n=16, 21.6%)

Key findings – quality appraisal

- Number of words



Key findings – recommendations

Future practice

- Awareness of incident reporting systems and what errors are
  - Training programmes, advertising, standard guidelines, highlight good/bad practice
- Improving incident reporting process
  - Mandatory fields, less time consuming, clarity on what to report, emphasis on detail
- Understanding and addressing reporting culture
  - ‘Board to shop floor’ endorsement, ‘fair blame’ culture, reward reporters
- Incorporate recommendations from RPS/NHS England
  - Medication Safety Officers/Committees, Board responsibility, focus on improvement
- Target centrally acting agents
- Involve prisoners/patients in above processes

Key findings – recommendations

Research

- Understanding medication errors in secure settings
  - Reporting and learning culture
  - High risk drugs / processes
  - National risks
  - National strategy

- Building health services research capacity in the sector
  - Culture change
  - Training
  - Funding
  - Co-operation

Summary

- First study to highlight different types of medication errors reported in English prisons
  - Under-reporting an important concern, declining activity at one prison
  - Important emerging areas of risk identified
  - Limitations: small sample size, lack of statistical analysis, re-grading of reports
- Few reports offering enough for meaningful learning and improvement
- Strategies for future research / practice improvement identified
- Future work should align with current medicines optimisation standards

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