PINCER 2018-19

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Introduction

- Prescribing errors in general practice (GP) are an important and preventable cause of illness, hospitalisation and deaths.

- PINCER is a pharmacist-led intervention tool used to reduce prescribing errors and optimise the use of medicines in primary care settings.[1]

- The tool allows monitoring and feedback to GPs on their performance against a set of nationally-agreed safety indicators

- Educational outreach and root cause analysis techniques are then used to effect quality improvement

- West Hampshire Clinical Commissioning Group (WHCCG) Medicines Optimisation Team (MOT) incentivised practices to run the tool in all 49 practices in 2018/2019

Aims and Objectives

To improve the quality and safety of prescribing in west Hampshire following implementation of PINCER in its member practices.

Methods

Baseline data: using PINCER, the MOT ran searches in March 2018 to identify potentially hazardous prescribing

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Detail searching of patients' records to identify genuine risks of hazardous prescribing. Pharmacy technicians assist.

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Evidence-based recommendations made to GPs by pharmacists Changes made to individual patient prescriptions.

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Following improvement work, PINCER re-run by MOT in December 2018 to compare data to baseline.

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Root Cause Analysis (RCA) work in May 2019 and Continuous Quality Improvement in 2019/ 2020

Results
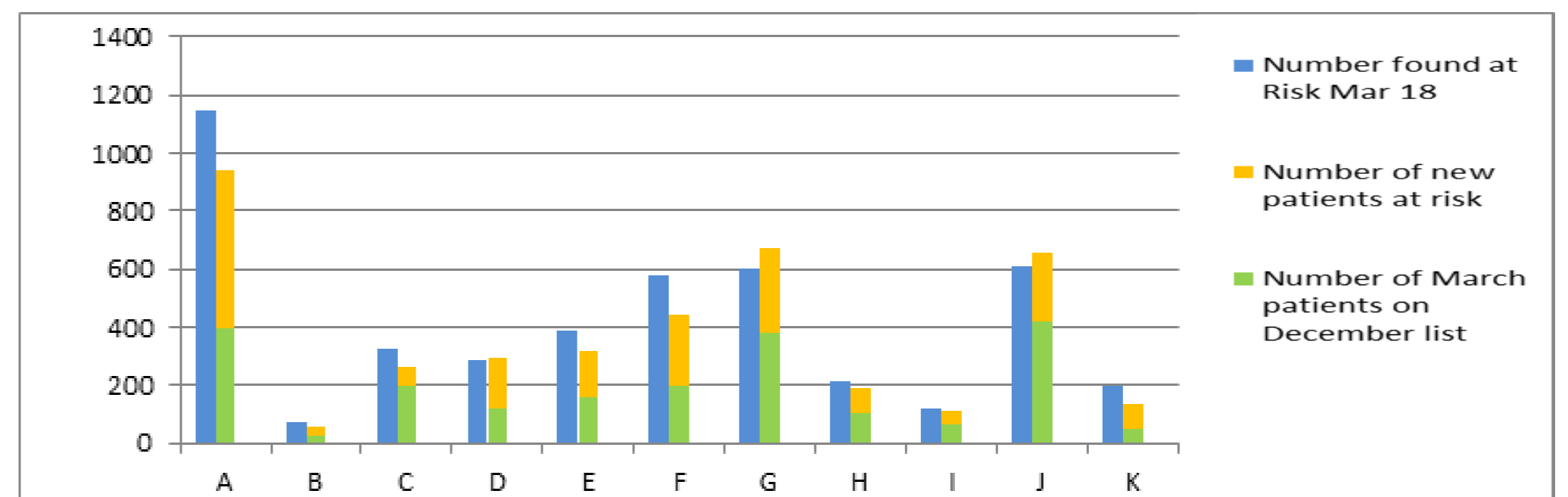
A: Patient ≥65 years oral NSAID without ulcer-healing drug (UHD)
B: Oral NSAID, without UHD, with a history of peptic ulceration
C: Antiplatelet drug with previous peptic ulcer or GI bleed without UHD
D: Warfarin or DOAC in combination with an oral NSAID
E: Warfarin or DOAC and an antiplatelet in combination without UHD
F: Aspirin in combination with another antiplatelet drug without UHD
G: Non-selective beta-blocker to a patient with asthma
H: Long-acting beta-2 agonist inhaler in asthma not also prescribed an ICS
I: Oral NSAID to a patient with heart failure
J: Antipsychotics for >6weeks in a patient aged ≥65 years with dementia but not psychosis
K: Oral NSAID to a patient with chronic renal failure with an eGFR < 45

- Of the original cohort of patients studied, significantly fewer were at risk from their medicines after the improvement work.

- However, a new group of patients appeared in each category swelling the total numbers of patients at risk in each category.

- For a couple of indicators, numbers of at-risk patients were greater in December 18 than at the March 2018 baseline.

Discussion

- CCG composite value for GI bleed risk (indicators A-F) fell after the improvement work was carried out (3.6 CCG average vs 4.13 national average per 1000 population).

- Numbers of patients on other high-risk prescriptions in indicators G-K (non-selective beta-blockers in asthma; not prescribed inhaled corticosteroids; prescribed antipsychotics for behavioural symptoms of dementia; prescribed NSAIDs in heart failure and/or renal failure) also fell after the interventions.

- In order to reduce the chances of the same errors occurring in new patients, a RCA of the errors was required. Plans were made to re-run PINCER in 19/20.

Conclusions

- PINCER is an effective tool in reducing prescribing errors for patients prescribed high-risk combinations.

- To prevent further patients being put at risk in the future, root cause analysis to understand why the errors are occurring and take action on risk avoidance is essential.

- Plans to minimise the opportunity for errors need to be made at local and national health economy level

Acknowledgements

References

1. Avery, A., Rodgers, S., Cantrill, J., et al. (2012). A pharmacist-led information technology intervention for medication errors (PINCER): a multicentre, cluster randomised, controlled trial and cost-effectiveness analysis. The Lancet, 379(9823), pp.1310-1319.

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