

MEDICATION SAFETY ALERTS DURING A GP VISIT: DO THEY LEAD TO IMPROVED CARE?

Collaboration between Bond University and GCPHN
Group research project by Bond Business School students (Applied Data Analytics Project), 2022

Background

Clinical decision support systems are an important tool for improving medication safety in general practice. Primary Sense delivers real-time medication safety alerts at the point of prescribing to support safer clinical decision-making. This study focused on the effectiveness of one of the medication safety alerts in Primary Sense, advising GPs of the potential risk related to prescribing hormonal contraceptives to patients with a history of migraine (a known risk factor for ischaemic stroke).

Aims

- To assess GP responses to a selected Primary Sense medication alert.
- To determine whether recorded responses reflect actual prescribing behaviour.

Methods

Design: Retrospective observational analysis

Setting: General practices across the Gold Coast

Data source: Primary Sense

Alert type: Combined hormonal contraceptive prescribed to patients with a history of migraine

Sample: 365 alerts triggered between 2020 and 2022

Key Results

GP responses to the Primary Sense alert:

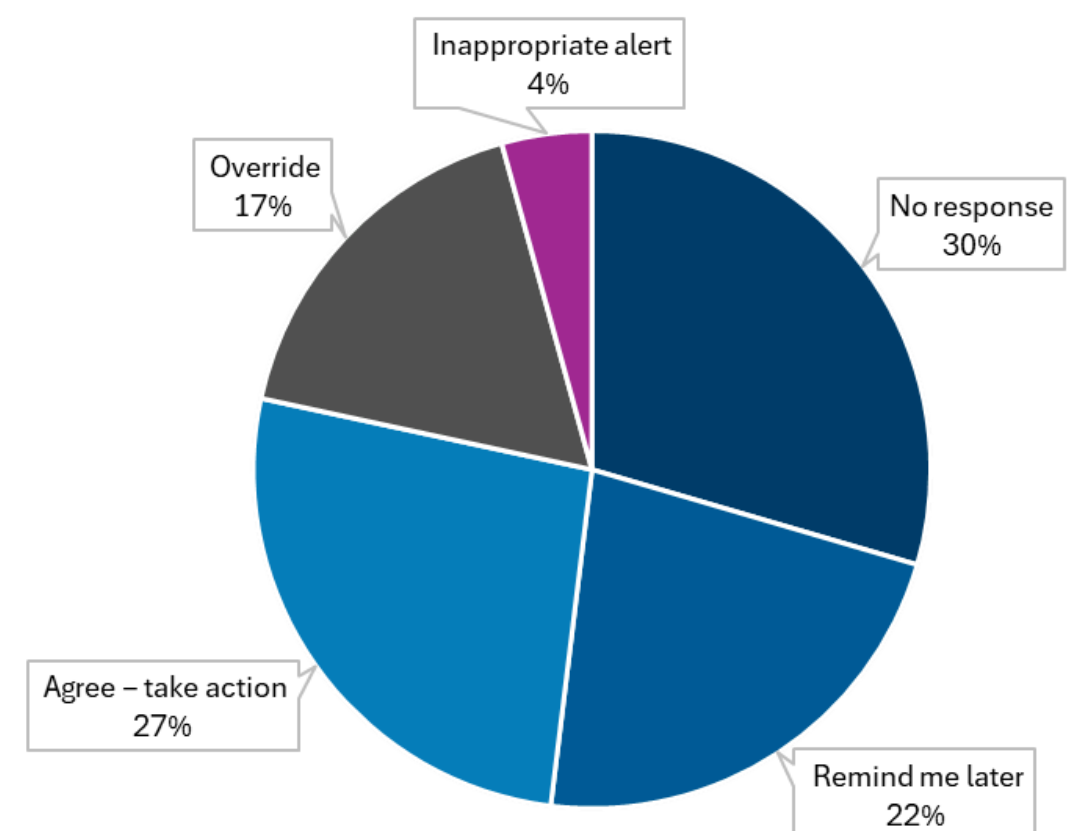
- o No response: 29.5%
- o Remind me later: 22.4%
- o Agree–take action: 26.4%
- o Override: 17.3%
- o Inappropriate alert: 4.3%

Over two-thirds of alerts (69.2%) resulted in GPs indicating no immediate action, which is consistent with findings from similar studies.

The low rate of “Inappropriate alert” responses supports the clinical accuracy of the system.

Alignment between responses and prescribing behaviour

- Of GPs who selected “Agree–take action”, 35.2% continued to prescribe the alert-triggering medication, demonstrating that stated intent does not always reflect final prescribing.
- Conversely, a substantial proportion of GPs who selected “Override” or “Remind me later” ultimately did not prescribe the alert-triggering medication.
- Approximately two-thirds of “Remind me later” responses and over half of “Override” responses were associated with non-prescribing.



Conclusions

Results of this study suggest that alert responses are not definitive indicators of prescribing outcomes and can influence decision-making even when GPs don't explicitly state they will take the recommended action.