

# Medicine Safety and Quality Use of Medicines during Medicine Shortages

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## BACKGROUND

- ❖ Major shortages of frequently used and/or essential medicines in Australia have continued to be a source of significant concern and uncertainty for many patients, community pharmacists, hospital pharmacy departments and prescribers.
- ❖ SHPA's 2017 report *Medicine shortages in Australia: A snapshot of shortages in Australian hospitals* prompted regulatory reform in 2019 through Mandatory reporting of medicine shortages by pharmaceutical companies
- ❖ Since then, pharmacists have reported no improvement in the prevalence of medicine shortages, management and coordination by government, timely communication of shortages, and negative impacts on patient care.

## METHOD

In 2021, a profession-wide survey was conducted to investigate:

- ❖ the impact of medicine shortages on patients
- ❖ pharmacists' views on medicine shortages

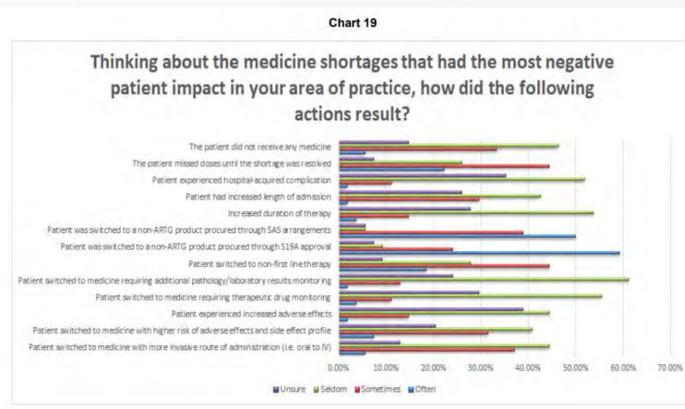
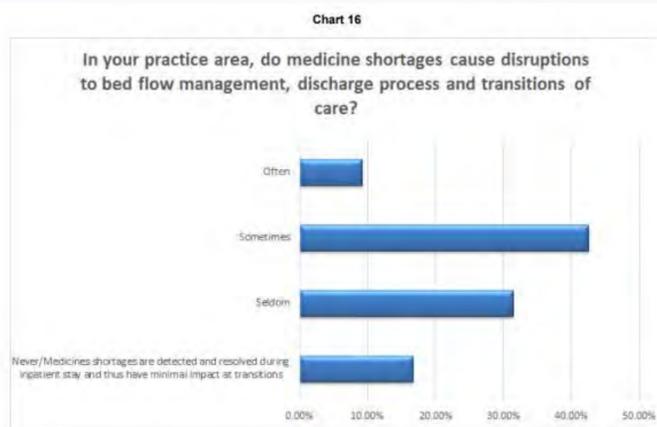
The survey results formulated the basis of the **Medicine Shortages in Pharmacy: A Snapshot of Shortages in Australia Report** and highlighted gaps in Australia's response to medicine shortages across both primary and acute care.

## RESULTS

- ❖ 230 responses were gathered from pharmacists across both pharmacy sectors, 25% were hospital respondents and 75% were community respondents.
- ❖ 62% of respondents practised in metropolitan locations.
- ❖ Over 98% of respondents said they had experienced a medicine shortage in the preceding seven days (Appendix B: Chart 3).
- ❖ Pharmacists reported an average of 30 medicine shortages of prescription medicine items over the preceding seven days, with some reporting up to 600 (Appendix B Chart 3).
- ❖ Pharmacists reported that an average of five hours of pharmacist time and four and a half hours of non-pharmacist staff time per week were spent in investigating and addressing medicine shortage issues (Appendix B Chart 4)



- ❖ Medicines that pharmacists reported had been most frequently in shortage in hospital pharmacy departments included **propofol**, **suxamethonium** and **ranitidine**.
- ❖ Across all respondents, **sertraline**, **hormone replacement therapies**, **angiotensin II receptor blockers**, **carbimazole** and **metformin** were identified as the medicine shortages that caused the most negative impact and disruption to quality and timely patient care over the preceding 12 months (Appendix C).
- ❖ Of the 136 medicines identified to be in shortage in the preceding 12 months, 71% were reported on the TGA's Medicine Shortages Information Initiative (MSII) website (now referred to as the medicine shortage reports database) at the relevant time (Appendix C).



- ❖ 12% of community pharmacist respondents referred their patients to hospital emergency departments for management of the medicine shortage
- ❖ 31% of hospital pharmacy respondents indicated that medicine shortages had often/sometimes led to increased length of admission for patients.
- ❖ 88% of hospital pharmacy respondents claimed that some of the medicine shortages often/sometimes resulted in patients missing doses until the shortage was resolved
- ❖ 39% indicated that patients were switched to a medicine with a higher risk of adverse effects and side effects profile, and 17% experienced increased adverse effects

## DISCUSSION

- ❖ Medicine shortages remain a substantial problem for pharmacists across Australia with significant implications for patient care, staff resourcing and expenditure.
- ❖ Whilst the pharmacy sector appreciates the improved awareness and reporting of shortages, this does not mitigate the burden experienced by pharmacists and more importantly, the impact on patient care. This experience was reported consistently by pharmacists across the hospital and community sectors.
- ❖ It is accepted that medicine shortages cannot be eliminated completely. However, in the interests of timely supply of medicines, continuity of patient care and seamless delivery of health care, pharmacists believe efficient and innovative ways to minimise or address shortages must be developed.
- ❖ Early identification and notification of medicine shortages are fundamental to ensuring a resilient and responsive healthcare system, particularly as more medicines are expected to become available over the next decades.

## Significant impact on clinical care

- ❖ 63% of hospital pharmacists who responded to the survey noted that patients prescribed medicines that were unavailable due to shortages were often or sometimes switched to non-first line therapies.
- ❖ Using a less efficacious medicine means taking more time to treat the same condition, thus potentially increasing the length of a hospital admission and subsequent cost.
- ❖ Using less efficacious medicines may expose patients to a greater risk of adverse effects, which will also incur extra costs to monitor and treat.
- ❖ A key principle of medication safety is to always use the least invasive route of administration, as the invasive nature of injectable medicines carry a further risk of infection.
- ❖ Switching patients to intravenous therapy due to shortages of oral medicines is a significant quality use of medicines and medication safety risk.

## Impact on health professionals

- ❖ Pharmacists are medication experts and are integral in leading and facilitating the safe and high-quality use of medicines wherever and whenever they are used, to prevent inappropriate medicines use resulting in medication-related harm.
- ❖ An average of five hours of pharmacist time per week is spent sorting medicine shortage issues. This is time taken from delivering clinical and professional pharmacy services and providing direct patient care.

## Impact on the health system

- ❖ Medicine shortages can result in increased hospital presentations as well as increased length of hospital admissions.
- ❖ 52% of hospital pharmacy respondents reported that medicine shortages often/sometimes disrupt bed flow management, discharge processes and transitions of care.
- ❖ Whilst negatively impacting on patient care during these high-risk discharges and transitions of care, disruptions to bed flow also result in additional pressure on the resources of an already overstretched hospital system.

## CONCLUSION

Significant impacts to patient care and the quality use of medicines can occur as a result of medicine shortages.

While medicine shortages are often unavoidable and have a range of causes, it is important that effective strategies are in place to reduce the risk of an adverse event for patients and ensure therapy is uninterrupted.

There continues to be problems with how medicine shortages are managed and that further reforms are required to alleviate the stress placed on pharmacists, prescribers and patients.

## RECOMMENDATIONS

1. The Therapeutic Goods Administration's medicine shortage reports database should accurately reflect the availability of medicines that can be purchased through wholesaler ordering portals.
2. The Australian Government should engage and partner with key pharmacy organisations in a proactive and timely fashion to improve the management and coordination of medicine shortages.
3. Manufacturers/sponsors of medicines should improve the accuracy, timeliness and consistency of information being communicated to pharmacists, prescribers and patients on issues relating to medicine shortages.