

## Exploring patient safety climate of Ontario hospital pharmacies in Canada

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**Introduction:** A culture of safety is important for improving patient safety and patient care. Safety climate questionnaires, which provide a snapshot of safety culture, have not been reported in the literature for hospital pharmacy practice in Ontario, Canada. The objective of this study was to perform a descriptive, cross-sectional exploration of Ontario hospital pharmacy patient safety culture.

**Method:** This study was conducted using the Agency for Healthcare Research and Quality (AHRQ) Hospital Survey on Patient Safety Culture (HSOPSC) 2.0, consisting of 10 composite measures (from "Communication About Error" to "Teamwork"). An additional demographic section was added to the AHRQ HSOPSC 2.0 to reflect Ontario-specific demographic contexts. The online questionnaire was posted on LinkedIn, Facebook, and X, in March 2024, and engaged by the Ontario College of Pharmacists and the Canadian Society of Hospital Pharmacists Ontario Branch, on the same social media platforms, for hospital pharmacy professionals' anonymous and voluntary participation. Descriptive statistics were used to analyze quantitative data and thematic analysis was applied to free-text responses accordingly.

**Results:** Sixty-three responses (75% pharmacists, 25% pharmacy technicians) were received with majority (54%) from the Toronto Region. An overall positive patient safety culture was perceived by most pharmacy professional respondents (4.8% rated as excellent; 34.9% very good; 33.3% good; 17.5% fair; and 9.5% poor). Of the 10 composite measures, "Teamwork" and "Supervisor, Manager, or Clinical Leader Support for Patient Safety" were the top two, while "Handoffs and Information Exchange" was the lowest. Staffing, compensation, and ease of error reporting were identified from the free-text responses as important facilitators for advancing patient safety climate. From the Ontario-specific demographic subgroup analysis, it was found that pharmacy professionals with over 20 years of experience reported a more positive perception of patient safety culture when compared to colleagues with fewer number of years of practice in the profession.

**Conclusion:** Ontario hospital pharmacy patient safety culture was generally positively perceived by pharmacy professionals. Teamwork, peer, and leader collaboration could be leveraged to address patient safety gaps at transition points of care, such as handoffs. Extrapolation of findings from this study to the rest of Ontario was limited due to its small sample size and responses primarily from Toronto practitioners. Going forward, patient safety climate could be

explored using qualitative research methods for further insight, followed by development of potential interventions.

## Challenges in accessing difficult-to-source medicines

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**Introduction:** Shortages of medicines are experienced worldwide, with the cause being both supply and demand related. BREXIT heavily influenced the supply of medicines to some countries whilst COVID-19 led to challenges in accessibility to medicines. The development of long-term mitigation strategies contributes to delivering patients their required medicines, both critical medicines and others in a timely manner

The aim of this study was to conduct an evaluation of the situation in Malta regarding medicines shortages through feedback from community pharmacists, and to identify challenges in accessing difficult-to-source medicines.

**Method:** A semi-structured questionnaire consisting of 3 sections: Participant Details, Experience with medicine shortages and Case Studies, was developed. The impact a shortage had on both the patients and the pharmacists themselves, as well as the solutions implemented in each case were investigated. Following validation, the questionnaire was registered with the University Research Ethics Committee and dissemination to community pharmacists chosen by convenience sampling was carried out. After data collection and analysis, interviews with national health service pharmaceutical procurement officers were held to obtain further insight on difficult-to-source medications.

**Results:** A total of 125 pharmacists answered the questionnaire (35 male, 90 female). The greater part of respondents (n=85) experienced 6 to 8 shortages per month. Pharmacists listed 131 medications in the private sector and 44 medications in the national health service being in shortage. In cases of shortage of medicines, pharmacists either contacted the prescriber or else dispensed an alternative: same medication but of a different strength, same class or therapeutic indication of medicine but a different active pharmaceutical ingredient. An alternative medication was offered to 188 patients, 47 of which did not accept alternative due to concern to their wellbeing. Interviews held with procurement officers revealed 3 main challenges in sourcing medications: 1) Malta, being a small market. Suppliers many times prefer to supply medicines to other countries having a larger population. 2) By grouping small orders together, the supply would reach our country however at a delay. These 2 challenges cause short-term

shortages. BREXIT obliged wholesalers to outsource medications from other countries other than the UK. Certain medications are short in supply due to the lengthy process involved in engaging alternative suppliers willing to deliver to Malta. In justified health needs, medications with foreign labels are accepted by wholesalers. Having to add English labelling adds up to the cost of the medication, which is the third main challenge faced by procurement officers in Malta. Patients are also impacted since higher priced products are put on the market.

Solutions offered include actively searching for alternative suppliers, making and maintaining relationships with procurement officers worldwide and having at least a 6-month buffer stock for the projected consumption.

**Conclusions:** Results highlight the need of long-term mitigation strategies, in view that even when a replacement is available, patients do not always accept an alternative. Challenges must be overcome. Developing guidelines and a clear-cut crisis management plan is a way forward.

### Internet pharmacies serving the international community

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**Introduction:** The rise of internet pharmacies has significantly transformed the pharmaceutical industry, offering convenient access to medications while presenting challenges in regulation, safety, and quality control. Although online pharmacies enhance affordability, accessibility, and privacy, they also contribute to public health risks, including counterfeit medicines, lack of pharmacist intervention, and unauthorized sales of prescription drugs. Regulatory frameworks for internet pharmacies vary globally, creating inconsistencies in patient safety measures and enforcement. Understanding the benefits, risks, and regulatory gaps is crucial to ensuring the safe and effective use of internet pharmacies worldwide. This study aimed to evaluate the impact of internet pharmacies on healthcare, focusing on consumer accessibility, regulatory challenges, and risks of counterfeit medications. The research identifies differences in national regulatory approaches and assesses the effectiveness of existing frameworks in safeguarding public health.

**Method:** A systematic literature review was conducted following the PRISMA protocol, analyzing studies from HyDi, PubMed, and Medline. The research focused on eight countries (Germany, Hungary, Jordan, Malta, Saudi Arabia, United Arab Emirates, United Kingdom and United States of America) to provide a global perspective. Studies were selected based on their relevance to internet pharmacy

accessibility, regulatory frameworks, and public health risks. Key areas of analysis included medication affordability, counterfeit drug prevalence, pharmacist oversight, and illegal online pharmacy operations.

**Results:** The initial search identified 198 studies, of which 36 met the inclusion criteria after screening and full-text analysis. Findings indicate significant differences in public perception and regulatory enforcement across countries. Internet pharmacies are widely accepted in Saudi Arabia and the UK, whereas traditional pharmacies remain dominant in Hungary, Malta, and Jordan. Additionally, 43% of US-based and 95% of UK-based online pharmacies were found to be operating illegally. Consumers cited cost savings, convenience, and privacy as major reasons for purchasing medications online. Key risks included exposure to counterfeit drugs, incorrect labeling, absence of pharmacist consultation, and the sale of restricted medications without prescriptions. Regulatory approaches varied widely: A voluntary logo scheme enhances consumer trust and safety (United Kingdom); a Pharmacy Seal enforces strict national regulations (Germany); Developing a regulatory framework to control online medicine sales (Jordan); Only brick-and-mortar pharmacies can legally sell medications online (Hungary); Online medicine purchases are limited to personal use (Malta); Only licensed pharmacies can operate online under government supervision (United Arab Emirates); Electronic prescriptions are mandatory under strict regulations (Saudi Arabia); Verified Internet Pharmacy Practice Sites accreditation ensures compliance with federal and state laws (United States of America).

**Conclusion:** The absence of global regulatory consistency increases the potential for illegal drug sales and counterfeit medicines. Stronger international collaborations, improved pharmacist involvement, and stricter online verification processes are necessary to mitigate these risks. Governments and healthcare professionals must work together to enhance regulatory oversight, educate consumers, and implement advanced safety measures.

### Pharmaceutical policies and social participation in health: The role of official health conferences in Brazil

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**Introduction:** Social participation plays a pivotal role in the development of public health policies in Brazil. Health Conferences serve as key moments of public consultation and social mobilization, occurring every four years and progressing from local to municipal, state, and national levels, where the discussions address the current health context and its connection to the Unified Health System (SUS). These