Abstract citation ID: riae013.049

Established and emerging theatre pharmacy services: a scoping review

A. McGowan¹, E. Deasy¹, M. Coyle¹, J. O’Connell²

¹ Pharmacy Department, Tallaght University Hospital, Dublin, Ireland, ² School of Pharmacy and Pharmaceutical Sciences, Trinity College, Dublin, Ireland

Introduction: Guidelines recommend that pharmacists contribute to perioperative patient care.¹,² Expansion of perioperative pharmacy services was considered in Tallaght University Hospital following the appointment of a Critical Care & Anaesthesia Chief II Pharmacist. Preliminary research indicated that activities at surgical pre-assessment clinics, in critical care and on inpatient wards are well-documented, while theatre pharmacy services appear comparatively under-developed. Pharmacists are well-placed to promote the safe and
cost-effective use of medicines in this high-risk environment. An understanding of the evidence base could provide a foundation on which pharmacy departments seeking to expand their clinical services can build.

**Aim:** To determine the range, extent and nature of theatre pharmacy services internationally, and to describe any reported outcomes of these services.

**Methods:** This scoping review was conducted and reported as per the Joanna Briggs Institute methodology for scoping reviews and the PRISMA-ScR checklist. The review protocol was registered on Open Science Framework. A search was conducted across electronic (Ovid® MEDLINE, Embase, CINAHL and PsycInfo) and grey literature databases (Google Scholar, BASE, CADTH, and Google) without limitations on date of publication, study type or language (where English translation available). A manual search of the citation lists of all included publications supplemented the electronic search. One reviewer screened titles and abstracts and carried out data extraction, with a 10% sample screened by a second reviewer. Two reviewers evaluated full texts. Critical appraisal was performed using the Mixed Methods Appraisal Tool where appropriate. A narrative approach to evidence synthesis was employed. Extracted data about the type of pharmacy service(s) and associated outcomes were studied to inform development of key concepts through which results were presented.

**Results:** Ninety-two publications were included from 3924 results. Fifty-seven were primary research articles. Most publications were descriptive in nature. Over half of the included publications described services in the United States; the remainder were from Australia, several European countries, Egypt, Morocco, Japan, China and Taiwan. The majority of theatre pharmacy services involved medication management, i.e. procurement, spending, storage, formulary development and distribution of medicines. Clinical services incorporated provision of medicines information, protocol and guideline development, antimicrobial stewardship, education and training of healthcare professionals, engagement with health informatics and medication safety projects, practice-based research and intraoperative emergency support. Reported outcomes included financial savings, improved accountability of controlled substances, improved patient safety and staff satisfaction with the service. Many publications highlighted improved inter-departmental relationships between pharmacy and anaesthesiology. Of the 57 primary research articles, 48 lacked a clear research question and so did not satisfy the MMAT screening criteria. Of the nine assessed, adherence to quality criteria ranged from 40-100%.

**Conclusion:** Evidence for theatre pharmacy services is extensive and varied. Empirical research of high methodological quality is required to assess the outcomes of these services. Strengths of this review include the use of reporting guidelines and quality appraisal of the evidence. This review may have been limited by the exclusion of non-English language publications. This review collates practical guidance on the development of theatre pharmacy services and highlights facilitators of successful service establishment.

**References**
