

Establishment of Pharmaceutical Services within an Emergency Department

Graziella Portelli, Louise Grech, Lilian M. Azzopardi

Department of Pharmacy, Faculty of Medicine and Surgery, University of Malta, Msida, Malta

www.um.edu.mt/ms/pharmacy

email: graziella.portelli.10@um.edu.mt

SERVICE

The service was established to provide a **holistic pharmaceutical service** tailored to the needs of the emergency department. The service was provided within Adult Emergency Department (ED) in Mater Dei Acute General Hospital (MDH) by one appointed pharmacist, covering weekdays from 07:30 to 15:00.

ADAPTABILITY

- Observation of ED dynamics and completion of gap analysis tools were conducted for 25 hours
- Two validated questionnaires were completed by ED 55 physicians and 87 nurses on this pharmaceutical service
- Gold standard international guidelines were incorporated with these findings to delineate a blueprint for the holistic service (Figure 1).

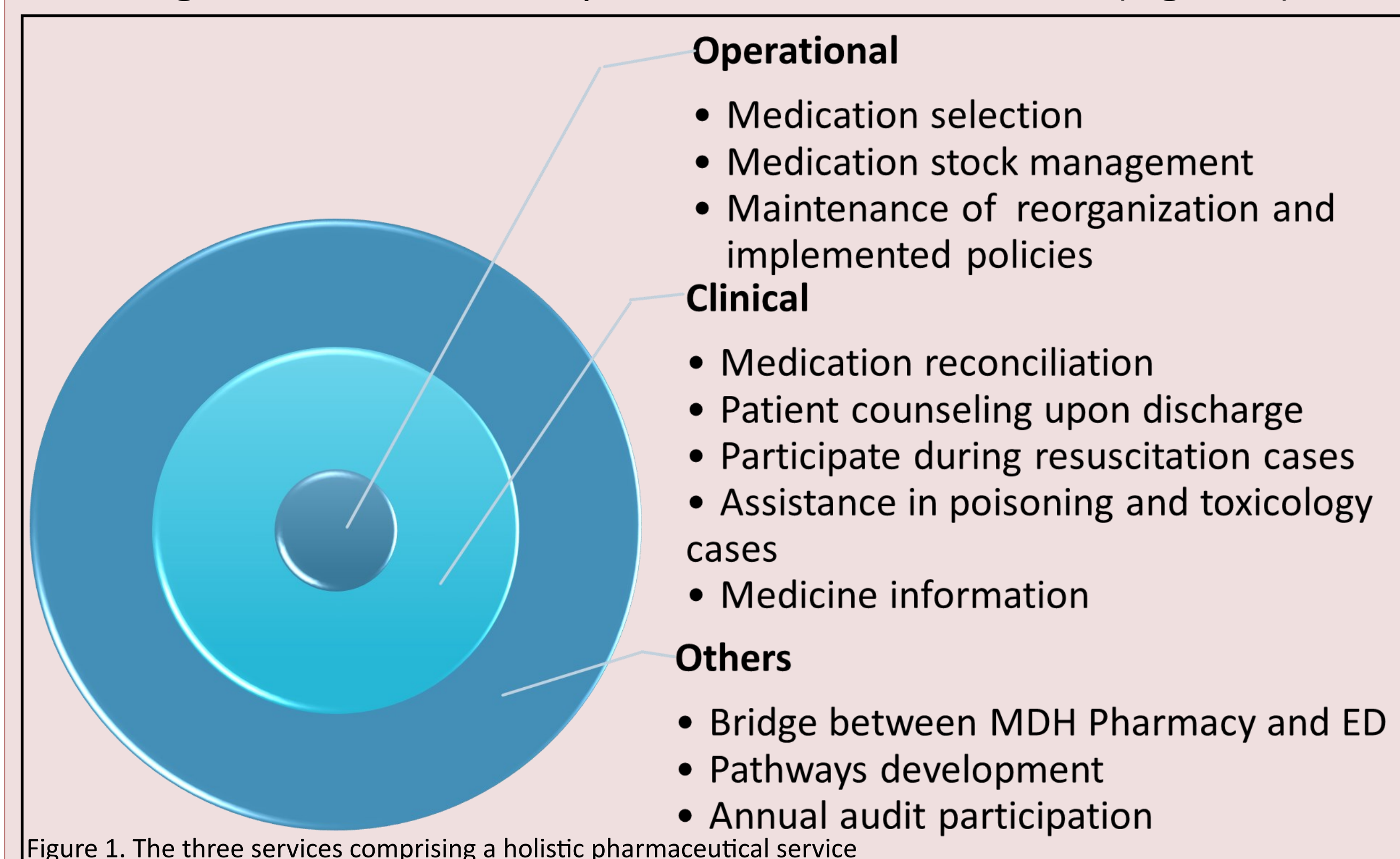


Figure 1. The three services comprising a holistic pharmaceutical service

- The pharmaceutical service necessitated both the clinical and operational services for effective delivery of patient-centred service.

Other services were also identified as necessary within the study setting and included:

- Issuing of 6 new departmental guidelines
- An antidote hazard exercise resulting in additions of antidotes to the official antidote list with formulary changes carried out
- Delivery of continuous education to nurses and overall medication selection process was over seen for 6 national events.

SIGNIFICANCE

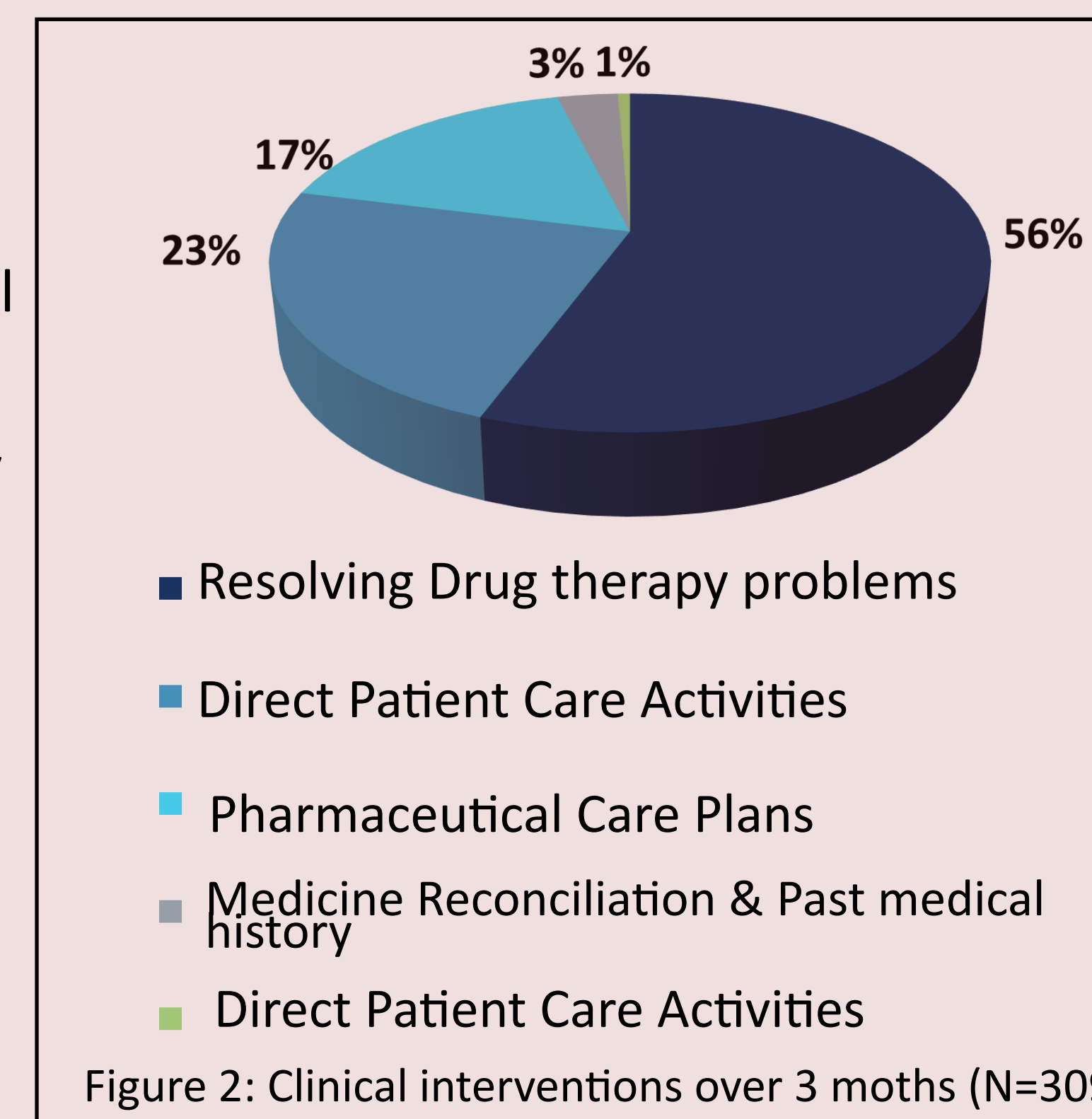
Operational services involved standardisation of ED medication centralised floor-stock pharmacy model.

- **Reorganisation** of medication cabinets in accordance to formulation, identification and segregation of **high alert drugs**
- Labelling in generic name using *Tall-Man lettering* to minimise look-a-like and sound-a-like risk of medication errors with strategic colouring for faster identification of drug classes (Red for high alert, yellow for antibiotics, green for suppositories and blue for nebulisers)
- Identification of **light sensitive drugs** to ensure correct storage and minimise inadvertent stock wastage including room temperature control
- **Medication stock control** resulted in drug additions to in-patient setting: parenteral lorazepam, levetiracetam and 20% intralipid, oral ibuprofen.

Clinical services amounted to a total of 309 interventions documented for the 3-month data collection period for clinical services (figure 2).

The majority of interventions by the pharmacist related to resolving individual patient's drug therapy problems.

Nurses requested 90% of dilution instructions whilst physicians requested 80% of medicine information interventions.



CONCLUSION

As part of the **ED multidisciplinary team**, the pharmacist improved the safety and quality in the overall medication use process within this fast paced setting. The characteristic of this established service was that the service focused on contributing to the clinical setting by focusing on clinical services, operational aspects related to medication stock management and other administrative care tasks. This approach was strategic for the ED physicians and ED nurses to view the pharmacist contribution as an added value contributing to safe, rational and

JUSTIFICATION

The essential role of the pharmacist as part of the ED multidisciplinary team has been documented to support the delivery of safe and effective medication use processes within this fast pace clinical setting governed by high decision density taken promptly for the critical patient (Cohen, 2009). Prior to this study, this service was absent within ED MDH, the main and only ED within Malta.

REFERENCES

Cohen V. Safe and Effective Medication Use in the Emergency Department. Bethesda: American Society of Health-System Pharmacists, 2009.

