

## SHPA Standards of Practice for the Distribution of Medicines in Australian Hospitals

*These are standards of professional practice and not standards prepared or endorsed by Standards Australia. They are not legally binding.*

### INTRODUCTION

These standards supersede the previous SHPA Drug Distribution Guidelines.<sup>1</sup> The hospital pharmacy service is usually responsible for procurement, warehousing and issuing of medicines in healthcare facilities. The term 'distribution services' is used to describe the numerous processes undertaken by the pharmacy service to ensure medicines are available when required.

Distribution services are one aspect of a comprehensive hospital pharmacy service. Clinical pharmacy services ensure that what is delivered through distribution services is appropriate and distribution services ensure that the clinical intent is delivered. The two services are inter-related and complementary and both are required to deliver the safe, effective and accountable use of medicines. This interplay is illustrated through the Medicines Management Pathway (Figure 1).<sup>2</sup>

These practice standards refer to the distribution of medicines in healthcare facilities only. They should be read as general principles and if a conflict exists with individual jurisdiction's legislative and policy requirements the latter should take precedence. Compliance with all legislation and documents relevant to the management and handling of medicines is assumed; for example, each jurisdiction's medical, nursing and pharmacy Acts and relevant Pharmacy Registering Authority guidelines.

The term medicine is used to include all prescription, investigational and clinical trial, over-the-counter and complementary medicines supplied to, purchased by or manufactured in the facility.

The practice standards detailed should apply where any aspect of the distribution of medicines is out-sourced or performed by staff outside the hospital pharmacy service. The standards on storage also apply to medicines patients may bring in from outside the facility.

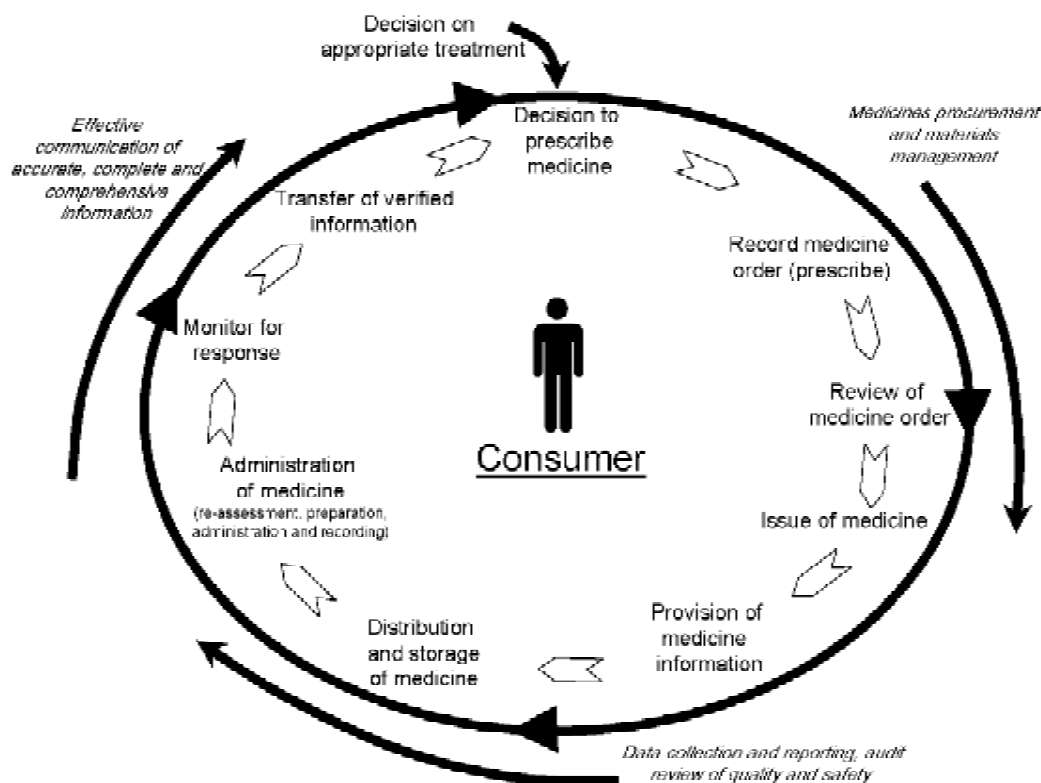


Figure 1. Overview of the medicines management pathway cycle (reproduced from *J Pharm Pract Res* 2004; 34: 294.)

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### OBJECTIVES

The objective of distribution services is that the right patient receives the right medicine, in the right presentation that will deliver the prescribed treatment in the right dose at the right time with the least potential for error at the lowest cost. The effectiveness of the

distribution of medicines may be described in terms of accuracy, appropriateness and efficiency. Benefits are also related to the level of accountability and data generated on the use of medicines collected.

The system used to distribute medicines in a healthcare facility should:

- provide medicines in a timely manner to patients as they are needed;
- carry the lowest possible medication error rate (i.e. be the safest system) for the resources available;
- minimise the cost of medicines stored throughout the facility;
- minimise wastage;
- minimise opportunities for medicines diversion;
- provide data on medicines utilisation, preferably to the level of the individual patient; and
- identify unusual medicines usage patterns.

The Australian Council for Safety and Quality in Health Care lists a number of initiatives known to improve medication safety, including individual patient medication supply where medicines are labelled, supplied and stored for each individual patient.<sup>3</sup> Individual patient-based distribution systems are associated with minimum error rates and, although many other factors also impinge on the chance that error will occur, it is recommended that wherever possible these systems are chosen.

#### **EXTENT AND OPERATION**

The following methodologies should be considered when choosing and designing a distribution system for medicines. Patient safety is linked to the number and range of medicines available through individual patient-based systems and those issued to patient care areas. Although labour intensive, in terms of patient safety, unit-dose systems are the preferred method of distribution as:

- administration error rates associated with these systems are generally below 5%;<sup>4,5</sup>
- these systems facilitate drug utilisation review and financial analysis of medicines use at the level of the individual patient;
- the opportunity for medicines diversion is minimised;
- audits of doses supplied versus doses administered are possible; and
- the cost of distributed inventory and medicines wastage are reduced.

Distributing medicines to patient care areas is less labour intensive for the pharmacy service however these systems have been associated with medication error rates as high as 16 to 18%.<sup>4,7</sup> In addition:

- it is not possible to link the usage of a medicine to an individual patient, nor a clinical unit;
- audits of supply versus usage are difficult;
- there is a higher cost of distributed inventory and medicines wastage;
- it is more labour intensive for nursing staff; and
- medicines diversion is harder to detect.

Individual patient-based distribution systems are required to support the self-administration of medicines by patients. The facility should have written policies relating to the self-administration of medicines by patients and the facility's Drug and Therapeutics Committee should approve these policies and procedures.

In practice most facilities use a hybrid distribution model for inpatient medications.<sup>8</sup> Individual patient-based systems are often used for medicines with a narrow therapeutic index or a high potential for error, medicines

that must be manufactured for individual patients or those with a high acquisition cost. The remaining medicines are usually issued to patient care area.

Medicines diversion is a potentially serious issue, particularly with medicines scheduled 4 and 8.<sup>9</sup> All authorised staff need to understand and accept the obligations and responsibilities that accompany their authority to possess, prescribe, store, distribute or administer medicines.

The healthcare facility should have written policies and procedures, in line with relevant legislation, relating to the appropriate handling, distribution and usage of medicines, including medicines brought in by patients from outside the facility.

Independent of the distribution method, an audit of medicines supplied versus doses administered should be possible. There is a need to detect any unusual usage pattern in real time and act accordingly.

Procedures must be in place to ensure stock rotation and the removal of expired medicines or those no longer required. This minimises the accumulation of excessive quantities or range of medicines in any one patient care area. Pharmacy procedures should ensure the regular inspection of all areas where medicines are used and stored.

#### **Individual Patient-Based Distribution Systems**

##### *Unit Dose*

Unit dose is a system of packaging whereby each dosage unit is separately packed in a protectively sealed unit and labelled with the name of the medicine, strength, dose contained within the pack, batch number and expiry date. The presentation should minimise or eliminate the preparation required for the medicine to be administered. Unit dose packaging should be consistent with requirements of the SHPA Drug Design and Presentation Guidelines.<sup>10</sup>

The system is dependent upon access to the medicines for each patient being labelled for that patient, stored separately in the patient care area and the storage unit must be lockable with either an unique key or accessible via unique user identifiable code, e.g. bedside medication drawers. Access to these keys or codes must be restricted to authorised staff in that patient care area.

The advantage of a unit dose system is that each dosage unit is identifiable up to the point of administration. Dosage integrity minimises wastage as unused doses may be reissued.

##### *Daily Dose System*

The daily dose system is predicated on individual dose packaging for a 24-hour cycle that minimises or eliminates the preparation required for the medicine to be administered. Again the system is dependent upon access to the medicines for each patient being labelled for that patient and stored separately in the patient care area.

##### *Automated medication distribution systems (AMDS)*

AMDS are computer controlled decentralised distribution systems. Their use as an individual patient-based system, rather than an automated imprest system, requires that an accurate electronic version of each patient's current medication profile is available to drive the system. To achieve the goals of individual patient-based systems AMDS technology should be implemented in a manner to achieve maximum financial and patient safety benefits. This includes:

- setting objectives regarding patient safety, accuracy standards and resources required for implementation;
- ensuring that all members of the multidisciplinary team (medical, nursing, pharmacy, finance, information technology) are involved in the planning and implementation process;
- integration with current processes and technologies including electronic prescribing, dispensing, administration and patient management systems and clinical decision-support technologies;
- developing policies and procedures to ensure patient safety is optimised;
- provision of medicines in a form that minimises or eliminates the preparation required for the medicine to be administered;
- providing appropriate training for all staff involved; and
- ongoing monitoring of the system and auditing of data produced through the system.

#### *Individual Patient Cards*

These systems (e.g. Webster system) provide the advantages of daily dose dispensing for long-term care. They usually employ individual patient medicine cards containing multiple days supply. The policies and procedures developed for the use of individual patient cards should comply with relevant Nursing Board and Pharmacy Registering Authority guidelines in each jurisdiction.

#### *Unit-of-Use*

This distribution system is based on dispensing individual patient supplies for a short period in a presentation that minimises or eliminates the preparation required for the medicine to be administered. Medicines are usually dispensed in unit dose packs or in individually labelled containers. The amount of medicine dispensed should be determined by hospital policy; three to seven days is commonly used in acute care facilities. The medicines must be appropriately stored in patient care areas, including medication trolleys with individual patient drawers and bedside medication drawers.

#### **Stock Issued to Patient Care Areas**

Medicines are issued to patient care areas under two systems: imprest or through requisitions based on the needs of individual patients. Both result in medicines being available to be accessed for all patients in the patient care area and one error in supplying medicines through these systems has the potential to impact on many patients. Therefore, it is important that decisions on the range and volume of medicines made available through imprest and requisition systems and decisions on the substitution of medicines not available at the time of request should be made by the pharmacist responsible for these services.

By definition, these medicines are not dispensed to any one patient and this makes it less labour intensive than individual patient-based systems. However, details on the usage of the medicine are not captured in the pharmacy service's records and these systems are associated with higher administration error rates.

Records of all medicines supplied to patient care areas should be maintained to allow for drug use evaluations and the review of medicines to be distributed through imprest systems.

#### *Imprest*

Imprest systems involve the regular restocking of a specified range of medicines to a predetermined level. In terms of patient safety, individual patient-based systems are the preferred model for the distribution of medicines. Imprest systems are viewed as an appropriate distribution method for non-scheduled medicines, intravenous fluids, irrigation solutions and, with additional accountability processes, schedule 8 medicines.

The range of medicines and minimum and maximum stock levels should be routinely reviewed to reflect the current casemix of the patient care area. In principle, the amount of each medicine stored in the patient care area should be the minimum required. The quantity of each medicine stored in the patient care area should relate to the average usage of the medicine and the frequency that the stock levels are checked. There should be regular audits of the usage of medicines.

#### *Requisitions*

Medicines are usually supplied by requisition when they are infrequently used and therefore are unsuitable for inclusion on the imprest list. Requisition medicines are usually supplied on request by appropriately qualified staff, i.e. medical officers and nursing staff. Requests for these medicines and the quantity requested should be checked for their suitability given the current casemix of the patient care area.

#### **Dispensed Medicines**

The dispensing process includes:

- receiving the prescription and ensuring that it contains sufficient information for the safe dispensing of the medicine;
- determining the prescriber's intention;
- making full records according to the requirements of the law;
- reviewing the medication history of the patient to ensure that the medicine is safe and proper for the patient to use;
- selecting (this should be supported by a bar-code scanner software system used as an independent and additional checking tool) and preparing the medicine and placing it in a suitable container;
- clearly labelling the container as detailed below;
- a checking and rechecking process;
- ensuring that all information required to use the medicine safely and effectively is delivered to the person administering the medicine;
- the pharmacist accepting responsibility for the medicine dispensed by recording their initials or signature in the prescription record and endorsing the prescription in line with relevant legislation. These records must be retained and be able to be retrieved in line with relevant legislation; and
- counselling the patient sufficiently to allow the patient to use the medicine safely and effectively.

Pharmacists are required to use their professional judgement to assess each prescription; this includes consideration of:

- appropriateness of the dosage;
- drug-drug interactions;
- drug-food interactions;
- unintended dosage changes;
- duplication of medicines;
- inappropriate medicine therapy;

- contraindicated medicines;
- unusual usage;
- possible misuse or abuse of the medicine;
- obligation relating to legislation and professional guidelines; and
- any other matter that may adversely affect the patient.

When medicines are supplied for patients on their discharge from hospital particular care should be taken to:

- provide a sufficient supply of the medicines required and information about how to obtain further supplies of medicines;
- determine the medicines already in the patient's possession to minimise the duplication of generic medicines and prevent the use of medicines no longer required by the patient;
- ensure that the patient's own medicines brought into the healthcare facility are either returned to the patient or handled in line with the facility's policies. For the medicines to be returned to the patient they should have been: checked and the contents verified on receipt (unidentifiable or loose medicines or part used liquids and topical preparations should be discarded); stored appropriately in a sealed and labelled container; and the appropriateness of the medicine should be assessed in line with the patient's medicine requirements on discharge and the integrity of the medicines;
- liaise with community-based health professionals involved in the patient's care to facilitate the quality use of medicines across the continuum of care; and
- provide the patient or their carer with sufficient information for them to safely and effectively use the medicines.

### **Packaging and Labelling**

Packaging should assure hygiene, ensure medicine stability, prevent cross contamination of the medicine and where appropriate protect persons handling the medicine. However packaged, the medicine should be protected from contamination, moisture, light and excessive temperature. The label should include:

- full name and location of the patient;
- date of dispensing;
- name, address and telephone number of the pharmacy;
- directions for the correct use of the medicine as prescribed by the prescriber, including the route of administration and any directions for the preparation of the medicine;
- directions for storage (where appropriate), an expiry date of the medicine and quantity supplied;
- generic, brand name, strength and form of the medicine;
- prescriber's name; and
- appropriate ancillary labels.

The wording used on labels should be in plain English. The medicine should only be labelled in another language, as well English, if the pharmacist is satisfied that the translation is accurate and that the patient will understand these instructions. Labels should be placed on the container in such a way as to leave visible all relevant information on the manufacturer's container, for example the batch number, expiry date and bar code. Where more than one container is required each immediate container should be labelled.

### **Transportation**

Once prepared, the medicine must be transported to the patient care area. Whatever system is used it should protect the medicine from breakage, spoilage or pilferage.

Special procedures should exist for:

- schedule 8 medicines;<sup>9</sup>
- investigational and clinical trial medicines;
- intravenous admixtures;
- cytotoxic medicines;<sup>11,12,13</sup> and
- radiopharmaceuticals.

### **Return of Unused Medicines**

The return and recycling of medicines is time consuming and resource intensive. Wherever possible, medicines should be purchased and supplied in quantities that minimise this activity, and packaged and stored in a manner that protects the product and allows the ready identification of the medicine.

Pharmacists should be responsible for deciding if any medicine can be reused. Medicines should only be reused when the integrity of the product can be assured and the suitability of its reuse is appropriate. For example, refrigerated items should be discarded unless the 'cold chain' can be assured and medicines that have been brought into the facility by a patient should not be recycled. Unidentifiable products, loose tablets or capsules and part-used liquids, inhalers and topical preparations should be discarded. The SHPA standards relating to cytotoxic medicines and investigational and clinical trial medicines should also be considered.<sup>11,12,14</sup>

### **After-Hours Supply**

Access to medicines must be assured outside the normal working hours of the pharmacy service. This may be achieved through an on-call pharmacy service and/or a separate supply of medicines for after-hours supply. This supply should contain medicines that could reasonably be expected to be required and held in a secure area large enough to contain all necessary items under appropriate storage conditions. Individual jurisdiction's legislative and policy requirements should be followed.

A list of the items available for after-hours supply should be widely available throughout the facility. Access to medicines should be restricted to senior, suitably qualified staff and a record should be kept of all items accessed after hours.

### **Drug Recalls**

A procedure must exist for the prompt retrieval of any medicine recalled by a supplier, manufacturer or medicines manufactured or re-packaged within the facility. Recalled medicines should be immediately removed from the pharmacy store and working areas to ensure no further issues of the medicine. All patient care areas should then be checked and all recalled stock should be quarantined.

If necessary, all patients that may have received the medicine should be identified. The prescriber and patient should be notified so that appropriate action can be taken.

Documentation of the recall should be kept, including evidence that all appropriate areas have been checked. Recalled medicines should be disposed of in line with instructions detailed in the recall notice. The stock should then be replaced or credited.

### **Storage of Medicines Outside the Pharmacy Department**

All medicines stored outside the pharmacy department should remain in the containers supplied until the time of their use. Systems should be in place to ensure that each medicine is stored in the most appropriate manner (e.g. refrigerated items are stored in a refrigerator) that minimises opportunities for medicines diversion. The Melbourne Teaching Hospitals' Drug Usage Group (now known as VicTAG) has produced recommendations on the security and custody of medicines within public hospitals in response to documented incidences of medicines diversion.<sup>9</sup>

Generally, medicines should be stored in generic name order. All stock held should be checked at regular intervals by the hospital pharmacy service to ensure suitable storage, stock rotation and monitoring of the expiry date of the medicines.

All areas allocated to the storage of medicines (rooms, cupboards, trolleys, patient drawers or lockers, refrigerators) must be kept locked at all times other than when access to medicines is required by authorised persons. The keys, access cards or codes should be limited in number and there must be a system in place to ensure accountability. Some storage areas have specific requirements:

- **Medicines rooms** should be solely dedicated to the storage and/or preparation and administration of medicines and no other goods should be stored in the area. Access to the room should be limited. The room should be secure, well lit, fitted with a water supply and refrigerated storage.
- **Medication drawers and trolleys**—medicines supplied through individual patient-based systems should be stored separately from medicines for other patients and these medicines should be used exclusively for that patient. Redundant medicines should not be left in the medication drawer or trolley, they should be returned to the storage area of the pharmacy department.
- **Refrigerated storage**—the refrigerator should be solely dedicated to the storage of medicines and no other goods should be stored in the refrigerator. It should be lockable, secure and the temperature monitored.
- **Schedule 8 medicines**—the quantity of these medicines stored in patient care areas should be minimal. These medicines should be stored and distributed according to relevant legislative requirements.

### **POLICIES AND PROCEDURES**

Policies and procedures relating to the distribution of medicines should be closely linked to the facility's policies regarding patient care and the use of medicines.

#### **Procurement of Medicines**

Facility wide policies and procedures should be in place for the procurement of medicines and related products. As hospital pharmacists exert considerable control over the utilisation of medicines, the expenditure on medicines and related products and have a legal responsibility to possess and dispense prescription medicines the procurement of medicines through the hospital pharmacy service is a logical and cost-efficient methodology.

The pharmacist in charge of the hospital pharmacy service should be responsible for ensuring that medicines of the highest possible quality and safety are obtained at the lowest possible cost. The healthcare facility's financial investment in the medicines inventory should be minimised within agreed safety limits; each medicine on the facility formulary should be available when it is needed.

#### **Medicines Formulary**

The medicines approved for use in a healthcare facility constitute the medicines formulary for that facility. The formulary should be continually revised to be responsive to current clinical judgement, through the auspice of the facility's Drug and Therapeutics Committee. This committee should be responsible for the selection of new medicines for the formulary, review of the current content of the formulary, authorisation of medicines outside the formulary and monitoring of medicines use throughout the facility.

The healthcare facility's formulary is central to the management of medicines in the facility. It should include the generic or approved name of the medicine, dosage forms and strengths and list any restrictions on the use of the medicine including information on approved prescribing criteria, the safety and efficacy of the medicine and the appropriate administration of the medicine.

#### **Distribution Systems**

Distribution services for medicines operate to provide medicines for patient care:

- that are in the required potency;
- that are in a presentation suitable for administration. Medicines should be provided in a form requiring minimum manipulation by the person administering the medicine; this is particularly important for parenteral medicines; and
- to provide a system for the safe administration of the medicine.

Distribution services for medicines should be adequate for the casemix and acuity of the healthcare facility and ensure that quality standards for the use and administration of medicines are met 24 hours per day, every day. Whichever distribution methodology is chosen, the healthcare facility should never be left without recourse to pharmacy services for unexpected or urgent access to medicines.

#### **Patient's Own Medicines**

Patient's own medicines need to be stored securely and appropriately during their admission, separately from ward stock. Systems should be in place to return medicines to patients where this is appropriate. That is, the medicine is assessed in line with the patient's medicine requirements on discharge, and when the integrity of the product can be assured.

#### **Transfer of Medicines Within the Facility**

Systems need to be in place regarding the transport of medicines within the facility when a patient is transferred between patient care areas.

### Repacked Medicines

Medicines are frequently repacked in advance for use in the hospital. Written policies and procedures, including the maintenance of quality control records, should be in place for repacking. *The Standard for the Preparation of Pharmaceuticals in Australian Hospital Pharmacy Departments* should be followed where applicable.<sup>15</sup> The use of security or tamper proof seals may be appropriate for specific medicines, or for distribution to specific patient care areas. Every repacked medicine should be labelled with:

- name address and telephone number of the pharmacy;
- name, strength and form of the medicine;
- directions for storage (where appropriate);
- expiry date and date of repacking;
- quantity;
- batch number of the product; and
- appropriate ancillary labels.

### Cytotoxic Medicines

The handling, preparation, dispensing and transportation of cytotoxic medicines should be in line with the SHPA standards on cytotoxic medicines and oncology pharmacy services and other guidelines such as the Medication Alert for Vincristine.<sup>11-13</sup>

### Medicine Administration Devices

A medicine administration device provides the medicine in a form ready to be administered to the patient. Pharmacists should advise on the choice of medicine administrative devices used in the facility, particularly in relation to medicine-device compatibility and stability issues. It is recommended that wherever possible the pharmacy service provides medicines prepared and loaded in the chosen delivery device. The final packaging and labelling should consider the intended mode of access and administration and should maximise patient safety and minimise the risk of contamination or adverse events.

### Dose Administration Containers

Medicines should only be removed from the original packaging and supplied in dose administration containers where the advantage of their use (maximising compliance) outweighs the problems inherent with their use (e.g. stability of the medicine) and that the patient or carer is able to physically and cognitively manage the dose administration container. The use of dose administration containers should comply with local guidelines (if developed) or with the Pharmaceutical Society of Australia's Professional Practice Standards regarding dose administration aids.<sup>16</sup> These include standards on the process that should be used to fill the dose administration container, labelling and recording requirements

### Emergency Protocols and Disaster Plans

A range of medicines used in emergency hospital situations (e.g. cardiac arrest, toxic medicine extravasation, anaphylaxis) should be readily available in all patient care areas. A system should be in place to ensure that these medicines and associated items (e.g. extravasation kits, cytotoxic spill kits) are maintained for availability and currency. Usage should be regularly reviewed and the range and quantity of items should be adjusted accordingly.

The hospital pharmacy service should be involved in the healthcare facility's disaster plan. A system should be in place to ensure a suitable range of medicines is readily available for immediate use in the case of disaster and include a plan to source further supplies if more than the initial emergency supply is required. Where medicines are stored separately, a system should be in place to ensure that medicines are available within their expiry date and that there is prompt replacement of items both during and after the disaster.

### RESOURCES

The premises used by the pharmacy service must be approved by the relevant Pharmacy Board with attention to published criteria for:

- design of pharmacies and pharmacy departments;
- counselling areas;
- computer systems and data that must be recorded/accessible (National Minimum Standard: Dispensary Computers in Australia 1999 [*Standard 99*])<sup>17</sup>
- use of tools such as bar code scanners, measures and dispensary scales;
- lighting, ventilation, control of temperature and humidity;
- unpacking and storage areas;
- controlled temperature storage an storage of schedule 8 medicines; and
- access to the pharmacy and security.

Consideration must be given to occupational health and safety issues. Where unit dose packing equipment is used, this should be located in an area physically separate from other distribution operations. *The Standard for the Preparation of Pharmaceuticals in Australian Hospital Pharmacy Departments* should be followed where applicable.<sup>15</sup>

### STAFFING STRUCTURE AND LEVELS

Staff should understand the impact of the various distribution methods on cost-efficiency, safety and patient outcomes and work to ensure that systems are maintained and effective. Sufficient staff must be provided to safely deliver the services required without compromising patient safety and achieve the aim of the facility's chosen medicines distribution method. There must be sufficient staff to meet relevant Pharmacy Board guidelines on workload (e.g. number of dispensed items per hour) and the appropriate number of pharmacists to supervise non-pharmacists. It should be noted that the role of hospital pharmacy technicians or assistants is limited to functions that do not require the exercise of professional pharmaceutical judgement and that they are required to work under the personal supervision of a pharmacist at all times.

### TRAINING AND EDUCATION OF STAFF

All pharmacy staff should have a full understanding of the aims of the facility's chosen medicines distribution method(s) and receive training towards this end. They must have full understanding of their obligations under the relevant legislation and pharmacists must comply with all relevant Pharmacy Board guidelines.

### QUALITY

#### Performance Indicators

The following indicators may be measured.

### *Medicines Formulary*

- Number of products standardised (reduction in range of products held on inventory within a pharmacological group).<sup>18</sup>
- Non-impresst listed medicines in ward stock inventory.
- Non-formulary medicine use.

### *Procurement*

- Incidence of occasions where contractors are unavailable or unable to supply required medications.<sup>19</sup>
- Percentage of non-central pharmacy purchases.<sup>19</sup>
- Percentage of selected high cost items purchased at best available price.<sup>20</sup>
- Percentage of orders that are delivered in full, on time and to specification.<sup>18</sup>
- Number of orders returned to vendor: wrong products, oversupply, damaged goods.<sup>18</sup>
- Number of overdue orders per month.<sup>18</sup>
- Number of part delivered orders.<sup>18</sup>

### *Materials Management*

- Percentage of stock expired.<sup>21</sup>
- Percentage stock discrepancy valuation (stock variation).<sup>21</sup>
- Incidents of narcotics—loss, destruction, standing orders.<sup>19</sup>
- Number of stockouts.<sup>18</sup>
- Percentage of store personnel attending lifting / back care education sessions.<sup>19</sup>
- Audit of medicine storage areas throughout the facility.

### **Distribution Methods**

#### *Individual Patient-Based systems*

- Are medication charts designed to be reviewed and rewritten at least every 7 days or as determined by the drug and therapeutics committee (or equivalent)?<sup>22</sup>
- Medication error rates, reported and those uncovered during periodic observer studies.
- The percentage of patients attending the pharmacy who wait longer than the agreed acceptable time.<sup>22</sup>
- Incidence of unavailability of medications on admission.<sup>19</sup>
- Incidence of omitted medications due to unavailability.<sup>19</sup>
- Percentage of prescriptions prepared by support personnel.<sup>21</sup>

#### *Stock Issued to Patient Care Areas*

- Impresst picking accuracy, percentage picking accuracy.<sup>20</sup>
- Out-of-date medicines in ward stock.

### **DOCUMENTATION**

Policy and procedures must be documented for the following:

- procurement of medicines;
- medicines formulary;
- appropriateness and use of the various distribution methods used in the facility with specific procedures for each distribution method used;
- packaging and labelling;
- transportation of medicines within the facility;
- transfer of medicines when patients are transferred within the facility;

- stock rotation;
- return of unused medicines;
- storage and return of patient's own medicines;
- after hours supply;
- drug recalls;
- repacking of medicines;
- use of medicine administrative devices and dose administration containers;
- storage of medicines outside the pharmacy department; and
- training of pharmacy staff and other staff involved in the use of medicines in the facility.

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