

12.0 Clinical Information Unit

12.1 Introduction

12.1.1 Description

The function of the Clinical Information Unit is the development and maintenance of health information systems involving the following:

- Retrieval, assembly, sorting and distribution of records for and to the wards and other patient units
- Transcription/typing service for outpatient letters, discharge summaries and operation reports
- Classification (clinical coding) of diseases and procedures for inpatient admissions using an International Classification of Diseases
- Provision of information to management and other authorized staff for purposes such as planning, utilization review, quality assurance, case mix studies and research
- Quality assurance of the medical record to ensure standards are met.

The purpose of the Clinical Information Unit is to provide for the secure maintenance, storage and retrieval of confidential clinical records. Provision should be made for 24-hour availability of clinical records either by a computerized (EMR) or manual system.

A health facility must provide appropriate secure record storage and retrieval to ensure patient confidentiality at all times.

A health facility must store all patient related administrative, historical and medical records in a fire rated construction as indicated in local by-laws.

12.2 Planning

12.2.1 Operational Policies

General

Comprehensive examples of the issues on which unit decision-makers will be required to develop specific operational policies are listed below:

- A centralized record system should be maintained for all inpatient, emergency and outpatient/day patient attendances. Where a centralized system is not possible, the existence of a sub-file must be flagged to allow retrieval of the sub-file for patient care or medico-legal purposes
- A unit numbering system will be used which will provide a single identifying number for every patient who presents to the Hospital i. e. the Medical Record Number (MRN). The MRN will be issued at the time of first admission or attendance and will be used for all subsequent admissions and treatment. Patient identification/registration must comply with Patient Registration standards
- Accurate and up-to-date Patient Administration Systems will be maintained and information relating to patient movements will be updated as soon as the Department is notified
- Terminal digit filing will be used in both active storage and secondary storage
- Correctly completed requests for each record leaving the unit will be required. The tracking of medical records will be facilitated by the use of bar coding on the record folder
- Information will only be released to a third party with the patient's authority except if required for continuing patient care, or according to hospital operational policy
- Medico-legal reports and subpoenas will be prepared in accordance with the local authority confidentiality and legal requirements
- Medical records will be retrieved from secondary storage after-hours only if deemed clinically necessary and staff may be accompanied by a security officer if necessary
- A centralized dictating system utilizing the telephone system may be used
- Transcription of discharge summaries, operation reports and outpatient letters may be carried out in the Unit.

The record management system chosen will also require consideration of operational policies related to implementation of new technologies; cabling for departments; integration with existing communications systems; location of workstations; space and security requirements; air-conditioning requirements and the transition process to be utilized when moving from one system to another.

Electronic Medical Records

The Electronic Medical Record (EMR) is a computerized online record that tracks and details a patient's care during the time spent in hospital. The EMR enables staff to enter patient data at the point of care and allows authorized clinicians and access a patient's records from any online location, at any time, to make rapid assessments and coordinate care. In the future, as electronic systems are implemented, the EMR will begin to replace paper-based records by integrating patient information in a central system. As a result, the provisions for paper based systems may not be required if EMR is provided.

Storage

Medical records must be kept for at least 10–15 years after last attendance or official contact or access by or on behalf of patient, or until the patient attains the age of 25 years, depending on Peer Hospital Group category. If a commercial company is used to dispose of the records they should provide certification to confirm confidentiality. Records must be stored in a fire-rated construction as indicated in the local building bylaws. Note that sprinklers should NOT be installed. It is recommended that valuable paper items be stored in a clean dust free environment, at temperatures between 18 and 20°C and at relative humidity between 45 and 50 per cent.

Staffing Levels

The Staff Establishment in a Unit based on hard copy files will include the following:

- Health Information Managers – a Unit Head of Department and additional professional staff depending on size of Unit
- Clinical coders
- Medical typists
- Administrative staff.

12.2.2 *Planning Models*

Location

Location may depend on whether or not a pneumatic or mechanical automated records transport system is to be installed and the departments to which it is linked. The decision to include such a system will strongly influence the external functional relationships of the Unit with the Outpatients Clinic area, in particular and may reduce the importance of direct access to the Emergency Unit. It must be located to provide natural light and – if possible – views to staff who occupy the area during the working day. Planners must consider possible future uses of the unit envelope for such time as an electronic record system has evolved with consequent reduction in staff and diminishing storage needs. The Unit should be considered as 'soft' space into which an adjoining unit could expand or a new unit established. Secondary storage ideally will be readily accessible to minimize time wasted in access.

Building Design

If a ground level location cannot be achieved, structural engineers must be consulted to calculate the weight of the records in order to ensure appropriate floor reinforcement.

12.2.3 Functional Areas

Rooms, areas, or offices for the following personnel and/or functions shall be provided:

- Medical Records Administrator/coding personnel
- Review and Dictation
- Sorting and Recording
- Microfilming of records, if applicable
- Record Storage, active and archived.

Entry/Reception/Administration

A single controlled point of entry to the Clinical Information Unit for the reception of visitors and staff. A temporary storage area will be required for returned files or files awaiting delivery to departments. A small amount of waiting will be required. The optimum location for the offices for medico-legal staff is the Reception area with dual access from the Waiting Area and from inside the Unit. Entry doors should have a buzzer and key card or similar for secure access for authorized staff. For units that run a 24-hour service, a peep hole in the door and/or a camera/intercom is required for after-hours access. Access will be required within this area to Dictating/Research Cubicles so that visiting staff do not have to traverse the Unit.

Transcription

This area will provide the medical transcription service. Staff should be located in a quieter area of the unit but within close proximity to the dictating and general assembly/sorting area. Consideration should be given to the acoustic treatment of this area as staff need to listen to transcription machines, however staff should not be totally separated from the other department activities.

Clinical Coding

Coding requires an even greater degree of concentration to ensure accuracy so a quiet area is essential. Each coder will need a filing bay to store files awaiting attention plus storage for coding and reference manuals.

Offices

The staff side of the Reception Desk is a convenient location for offices for Health Information Managers to allow easy access for visitors to the Unit.

Photocopying and Printing

Dedicated, acoustically-treated and ventilated space is required. This space may also be used for generating bar code labels etc. This may also include stationery storage. Locate with ready access to the medico-legal offices that generate a large amount of photocopying.

Assembly and Sorting

An open plan area used for the processing activities associated with the filing and preparation of the medical records for clinics, admissions etc. including workstations and sorting tables. Each records officer will need a records storage bay and a trolley at or in close proximity to their workstation. Storage will be required for:

- Records awaiting sorting and assembly
- Records awaiting filing
- Newly assembled records
- Note that records awaiting medico-legal attention will be stored in the Medico-Legal Office.

As this area will be the major activity area of the Unit, it should have natural daylight. This area should be located with direct access to the filing storage areas and Photocopy and Stationery Store.

Shelving and Aisles

The most common and suitable method to file active medical records is on fixed metal shelving units (bays). Archived files may be stored in a compactus but a compactus is not recommended for active files as it can be dangerous and inconvenient if a number of staff wish to access files at the same time. Standard bays are usually 900mm wide and 400mm deep.

Regardless of the number of shelves in each bay (may be seven), the highest shelf should be accessible by a short member of staff using a library stool – usually six levels of shelving. Step ladders are not recommended. Maximum height should be 2175mm. A minimum width of 750mm per aisle between facing bays must be provided; however for efficient retrieval of records, 900mm is recommended as it allows space for trolleys, library stools and for staff to pass each other in the aisles. The main access aisles should be at least 1500mm wide to allow for trolleys passing each other and for exit in the event of fire.

12.2.4 Functional Relationships

General

In a traditional, 'hard copy' environment, the critical relationship is with the Emergency Department for immediate record retrieval. Less critical is the relationship with Ambulatory Care/Outpatient Unit/s as files are usually pulled and delivered to the Units prior to clinic sessions. However, distances for transport of heavy records do need to be considered.

It is also useful to locate the Unit to encourage medical staff access to unwritten discharge summaries and for ease of access for record review etc. In a paperless environment, there will probably be no critical relationships except for staff wanting to access records still in hard copy for research purposes etc.

Archive File Store

All the records requiring storage should meet the statutory requirements beyond the five year active storage period. There are a number of advantages for keeping non-active medical records readily accessible and available. Two of these are:

- Time saving for staff
- Easy access for refileing.

If storage space is a problem and microfilming or scanning of inactive records is being considered, a special room for microfilming will need to be planned. The optimum solution is to locate the archival store within the Unit itself or directly underneath connected by a stairway. It is not often practical to include the space for all the records in a prime clinical area. Consideration should be given to locating the records in a low activity area of the hospital and at the same time remain secure, dry and free from vermin and other insects likely to attack the paper. Fire sprinklers should NOT be installed. Records storage areas must be temperature and humidity controlled for preservation of records.

12.3 Design

12.3.1 General

One main entry and exit for all staff and records is required to ensure the security and confidentiality of the unit and the medical record is maintained.

12.3.2 Environmental Considerations

Acoustics

Refer to Part C of these Guidelines.

Natural Light

Essential in general work areas.

12.3.3 *Space Standards and Components*

Ergonomics

Refer to Part C of these Guidelines.

12.3.4 *Safety and Security*

Shelving and workbenches must meet Occupational Safety and Health Standards.

Due to the confidential nature of the documents being handled in the Unit, careful consideration must be given to the security of the unit. The unit should be secure at all times to protect the records against loss, damage or use by unauthorized personnel. There must also be adequate security for staff and visitors should not be able to enter the department proper without being let in by the receptionist. The counter should be designed so that it would be difficult/impossible to climb over. The required level of security can be achieved by limiting Unit entry/exit points to one (1) equipped with access control – keyed or electronic. All other egress points should be locked and/or locally alarmed. Well signed, local alarms are a strong deterrent to unauthorized egress but the system must be overridden in the case of fire alarm activation in the area. Hospital policy may require a security officer to accompany non-medical records staff in the department where records are required after-hours.

Optical Disk Security

Once a document is scanned, it cannot be lost or tampered with. By storing the original set of disks and using duplicates as working copies, complete sets of records are maintained at all times. The second issue is security of access to the confidential records on the optical disk system. If a full system is implemented, terminals would be located throughout the Hospital. This could pose problems for security of the information being accessed and displayed on these terminals. This means that safeguards must be put in place to prevent viewing of images by unauthorized persons. System access and security systems must have multi-dimensional passwords that can avoid unauthorized intrusion into the system and particular records.

12.3.5 *Finishes*

Wall Protection

Provide wall protection to all areas where trolleys are in use.
Refer also to Part C of these Guidelines.

Ceiling and Floor Finishes

Refer also to Part C of these Guidelines.

12.3.6 *Fixtures and Fittings*

Refer to Part C of these Guidelines and to the Room Data Sheets (RDS) and Room Layout Sheets (RLS) for further detailed information

12.3.7 *Infection Control*

Refer to Part D of these Guidelines for further information.

12.3.8 *Building Service Requirements*

Information Technology/Communications

In addition to the usual hospital communication systems, the Clinical Information Unit has particular needs. These include the need for remote dictating from the administrative and clinical areas to a central dictating unit. Communication systems may include:

- Office phones
- Two-way intercom between designated staff areas or public address system in large units
- phone between the archival and main unit (if archives located off site or not adjacent to the main Medical Record Unit)
- Computer networking systems associated with the Medical Record technology.

Duress Alarm System

Locate duress alarms at Reception.

Lighting

Overhead lighting in the records store must run parallel to the direction of the filing bays to ensure adequate lighting of each aisle.

Floor Loading

Structural engineers must be consulted to calculate the weight of the records in order to ensure appropriate floor reinforcement if a ground level location cannot be provided.

12.4 Components of the Unit

The Clinical Information Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

12.4.1 *Non-Standard Components*

Record Processing Area

Description and Function

An open plan area used for the processing activities associated with the filing and preparation of medical records for clinics, admissions etc. It will incorporate parking for medical record transport trolleys. (Number and dimensions will need to be ascertained). This area may have 'zones' for assembled files ready for issue and records waiting to be refilled. The area will need workstations and sorting tables. Records may also be scanned in this area for digital storage.

Location and Functional Relationships

This area should have direct access to the filing storage areas.

Considerations

At least part of this area should have access to natural light as it will be the major activity area of the department.

Dictation Cubicles

Description and Function

The dictating area will be used by medical staff and others to view and research medical records as well as dictating and completing the discharge summaries.

Location and Functional Relationships

The cubicles should be located on the perimeter of the unit adjacent to but inside the reception area.

Considerations

The number of cubicles will depend on usage and the cubicles may be self-contained or in an open plan office in which case cubicle partitions will be required. The auditory separation of personnel is preferred as extraneous noise will be distracting to the person dictating.

12.5 Schedule of Accommodation

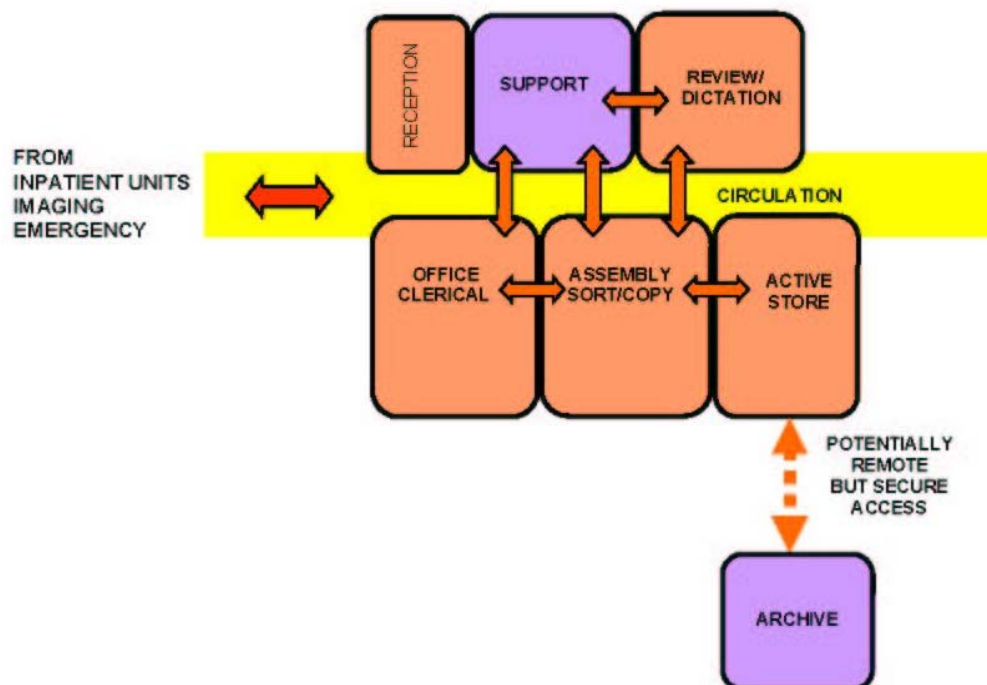
Typical Clinical Information Unit at levels 3 to 6

ROOM/SPACE	Standard Component				Level 3/4 Qty x m ²	Level 5/6 Qty x m ²	Remarks
Entry Reception							
Reception/Clerical	RECL-10-SJ				1 x 10	1 x 10	
Waiting	WAIT-10-SJ Similar				2 x 5	2 x 5	Separate area for female waiting
Interview/Meeting Room	MEET-9-SJ				1 x 9	1 x 9	
Operational Areas							
Office – Manager	OFF-S9-SJ Similar				1 x 12	1 x 12	
Office – 2-Person	OFF-2P-SJ				1 x 12	3 x 12	Medico-legal, administrative staff
Office – Workstation	OFF-WS-SJ				5 x 5.5	12 x 5.5	Data analysis, coders, administrative support, according to staffing numbers
Review/Dictation Cubicles					2 x 4	5 x 4	
Bay – Pneumatic Tube					1 x 1	1 x 1	Optional; Depends on operational policy
Sorting						1 x 15	
Record Processing/Scanning					1 x 50	1 x 70	Dependant on operational policies
Store – Photocopy/Stationery	STPS-8-SJ				1 x 8	1 x 8	
Store – Records (Active)	STRS-80-SJ Similar				1 x 100	1 x 250	Size dependant on number of records to be stored
Store – Records (Archived)	STRS-60-SJ Similar					1 x 250	Size dependant on number of records to be stored
Store – General	STGN-8-SJ Similar				1 x 8	1 x 12	
Bay Mobile Equipment	BMEQ-4-SJ				1 x 4	2 x 4	Trolley parking
Staff Areas							
Meeting Room – Medium	MEET-L-15-SJ				shared	1 x 15	Meetings, education
Property Bay – Staff	PROP-3-SJ					2 x 3	
Staff Room	SRM-15-SJ					1 x 15	
Toilet – Staff	WCST-SJ					2 x 6	May share common staff facilities if located close
Net Department					259.5	825	
Circulation %					15	15	
Grand Total					298.4	948.8	

Notes:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the Service Plan and the Operational Policies of the Unit
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit
- Office areas are to be provided according to the Unit role delineation and staffing establishment; Executives and Managers may be responsible for more than one area but should have only one office assigned within the campus
- Staff and support rooms may be shared between Functional Planning Units dependent on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

12.6 Functional Relationship Diagram



12.7 Further Reading

- Australasian Health Infrastructure Alliance (Aus.). 'Australasian Health Facility Guidelines'. Retrieved from website: www.healthfacilityguidelines.co.au 2014
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