AusHFG

Australasian
Health Facility Guidelines

Part B - Health Facility Briefing and Planning
0240 - Health Information Unit

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AHIA
australasian health infrastructure alliance
GOVERNMENTS COLLABORATING TO DELIVER QUALITY HEALTH FACILITIES

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01 INTRODUCTION

01.01 Preamble

This Health Planning Unit (HPU) has been developed by the Australasian Health Infrastructure Alliance following extensive consultation during 2014. This document is intended to support the planning and design process for the design team, project managers and end users.

01.02 Introduction

This HPU outlines the specific requirements for the planning and design of a Health Information Unit (HIU). This document should be read in conjunction with AusHFG generic requirements including:

- Part A: Introduction and Instructions for Use;
- Part B: Section 80 General Requirements and Section 90 Standard Components, Room Data and Room Layout Sheets;
- Part C: Design for Access, Mobility, OHS and Security;
- Part D: Infection Prevention and Control; and
- Part E: Building Services and Environmental Design.

Health information systems and their management are generally converting from paper-based health record systems to electronic health record systems. This transition though is dependent on the size and type of health facility served. This HPU will therefore detail the requirements for paper-based, digitised (scanned) and paperless systems.

01.03 Policy Framework

SPECIFIC POLICIES AND GUIDELINES
Before undertaking a project, planners and project personnel should familiarise themselves with individual jurisdiction plans, policies, service specific guidelines and reports. Information relating to jurisdictional policies and guidelines are listed in the Appendices in the Further Reading and References sections.

Australian Standards and policies detailing requirements for the management of health records include:

- National Archives of Australia, 2002, Storing to the Standard: Guidelines for Implementing the Standard for the Physical Storage of Commonwealth Records;
- National Archives of Australia, 2014, National Archives of Australia Standard for the storage of archival records (excluding digital records);
- Standards Australia, 2012, AS 2828.1:2012 Health records - Paper-based health records (SAI GLOBAL);
- Standards Australia, 2012, AS 2828.2(Int):2012 Health records - Digitized (scanned) health record system requirements (SAI GLOBAL); and
- Standards Australia, 2011, AS/NZS 1015:2011 Records management - Physical storage (SAI GLOBAL).

01.04 Description

DEFINITION OF HEALTH INFORMATION UNIT
The function of a HIU is the development and maintenance of health information systems involving:

- retrieval, assembly, sorting and distribution of health care records for use within inpatient units, emergency departments, outpatient services and any location where a patient is admitted and/or treated;

- medico-legal/release of health information duties with regard to subpoenas, release of information requests, adoption requests and other enquiries while maintaining the rights and confidentiality of patients and staff;
- maintenance of accurate, up-to-date information systems such as the Patient Master Index (PMI), Admissions, Transfers and Separations (ATS), Disease Index (DI) and any other Patient Administration System (PAS) related application;
- classification (clinical coding) of diseases and procedures for episodes such as inpatient admissions using data sets (e.g. International Classification of Diseases), generation of DRGs (diagnosis-related group) and provision of morbidity/mortality statistics;
- reporting of activity data to central agencies for monitoring, funding and performance management purposes;
- education and training of staff, and participation in undergraduate training from tertiary institutions; and
- secure storage including active and non-active storage that complies with jurisdictional regulations.

Additional services provided by a HIU may include:

- transcription / typing service for letters, discharge summaries and operation reports;
- data collection and analysis;
- management of other staff groups such as administration services staff;
- planning and development of computer information systems;
- financial management; and
- design of manual and computerised health care records.

DEFINITIONS
The definitions used throughout this HPU (as detailed below) have been obtained from AS2828.1 2012 Paper-based health records and 2:2012 Health Records – Part 2: Digitized (scanned) health record system requirements.

Health record
A health record is a "collection of data and information gathered or generated to record the clinical care and health status of an individual or group" produced for and used by a healthcare organisation or provider. This term can apply to paper-based health records, digitized health records and electronic health records.

Digitized health record
A health record produced by digitization (scanning) of a paper-based health record. A digitized health record is synonymous with a scanned health record.

Electronic health record
A health record with data structured and represented in a manner suited to computer calculation and presentation. In this context the reference is to a health record within an organisation rather than to a health record shared between service providers.

Hybrid health record
A health care record comprising paper, digitized (scanned) and / or electronic formats.
For further information see:

- Standards Australia, 2012, AS 2828.1:2012 Health records - Paper-based health records (SAI GLOBAL); and
- Standards Australia, 2012, AS 2828.2(Int):2012 Health records - Digitized (scanned) health record system requirements (SAI GLOBAL).

02 PLANNING

02.01 Operational Models

HOURS OF OPERATION
The HIU will operate routinely during business hours Monday to Friday with larger services operating seven days a week. After-hours, records will be retrieved by other authorised staff.
Tertiary services may operate a 24-hour service for retrieval of files primarily for the emergency department. Provision for 24-hour availability of health care records either by a computerised or manual system will be determined by the type and scale of the health service.

PAPER-BASED RECORDS
Paper-based records will continue to exist in areas where digitized or electronic health records systems have not yet been adopted or where the scale of the facility and type of services provided does not warrant the time and cost. Some healthcare organisations may transition to a digitized health record for new presentations only. If retrospective scanning does not occur, the need for ongoing storage and management of paper-based records will remain.

DIGITIZED HEALTH RECORD
A digital record management system is achieved by scanning paper generated records to create digital images. The digitized record will facilitate improved access to health care records while dramatically reducing the physical space required to store paper-based records.
Even in a full electronic health record environment there may be an ongoing need for components of the record to be scanned e.g. external correspondence. Scanning is likely to be carried out in a dedicated area of the HIU using specialised equipment, although some health care organisations may carry out limited or low volume scanning locally in areas such as ambulatory care or emergency departments.
The process of scanning requires various staff to handle each individual sheet within the HIU. The scanning workflow routinely includes:

- pre-preparation area where each file is organised;
- preparation area where each page of the record is checked for patient ID, document ID, colour, size and damage. These workstations will require access to cutting mats and guillotines;
- scanning process through a desk-top unit;
- quality assurance check to certify that the scanning process has produced images of suitable quality;
- final validation involving a further quality check, verification of metadata (e.g. correct patient, correct document ID etc.) and uploading of the record onto the information system; and
- archiving of the hard copy record in a pre-destruction store. These records must be retained for up to three months before the record is removed and securely destroyed.

This workflow should be arranged so that records can move easily between processes without delay.
As scanning becomes standard practice, the space required for the active records store will remain static. Typical benchmarks for scanning images are outlined below although improvement in scanning equipment technology may result in increased throughputs. These figures will assist services to develop workforce and space requirements needed to accommodate this change in practice.
An image is a single-sided page. A double-sided page counts as two images.

Typical images scanned per day
Inpatient records: 1,000 images per FTE per day
Outpatient records: 720 images per FTE per day
Emergency records: 560 images per FTE per day

ELECTRONIC HEALTH RECORD (EHR)
An EHR system may still require other documents such as external correspondence to be scanned into the record.

The EHR provides a documented record of care readily available to support current and future care by clinicians, and provides a means of communication among the clinical staff thereby contributing to improved patient care, and a more efficient capture of legible and relevant clinical information.

02.02 Operational Policies

GENERAL

Operational policies have a major impact on design requirements as well as capital and recurrent costs for health care facilities. Operational policies should be established at the earliest stages in planning with consideration given to local jurisdiction policies.

Specific operational policies include:

- a centralised record system should be maintained for all inpatient, emergency and ambulatory care patient attendances. Where a centralised system is not possible, the existence of a satellite record must be cross-referenced to allow retrieval;
- a unit numbering system to be used in order to provide a single identifying number for every patient who presents to the health service i.e. the health care record number. This record number will be issued at first admission or attendance and used for all admissions and treatment thereafter;
- an accurate and up-to-date patient administration system will be maintained. Information relating to patient movements will be updated in real time or as soon as the clinical service is notified;
- tracking systems and procedures will be implemented ensuring the location of paper-based health care records is known e.g. by the use of bar coding on the record folder; and
- information and records will only be released to a third party with patient consent, if required for continuing patient care or in accordance with jurisdiction policies and legislation.

A list of general operational policies is available from AHIA, 2010, AusHFG Part B: Section 80 General Requirements.

STORAGE

Health care records must be retained in accordance with jurisdictional legislation and policies (i.e. Records Acts).

Where hard copy records are in use, or a hybrid system exists, records will be maintained in active and non-active stores. Active records are located in an active store within the HIU ensuring records can be easily accessed and returned. An active store will accommodate records for three to five years after discharge. An area within this store will be required to temporarily hold records awaiting relocation to the non-active store or waiting to be destroyed.

The non-active store will ideally be within the HIU but owing to physical constraints it may be in another location on the health facility site, or off-site.

The environment required to store records is detailed in clause 240.11.30 of this HPU.

FILING SYSTEMS FOR HARD COPY RECORDS

A filing system should be used in both active and non-active storage areas. Terminal digit filing is most commonly used however services may choose to adopt a middle digit filing system.

Terminal digit filing is an arrangement of numeric files that orders records by the last two digits, the middle two digits and finally in numerical order by the remaining digits.

Middle digit filing spreads the usage of the filing area across the whole record store reducing the congestion when accessing the most recently allocated numbers.

PUBLIC ACCESS TO HEALTH CARE RECORDS

Members of the public may apply to view or access their health care records through release of information provisions. The public may visit the HIU to view their records under direct supervision of staff, or they may elect to receive a printed copy. Depending on the size of the Unit, a small meeting/record viewing room with a computer may be required adjacent to the entry/ reception/ waiting area to accommodate this activity.

RESEARCH AND QUALITY ASSURANCE ACTIVITIES

Staff, students and other authorised individuals will require access to health care records for research and other quality assurance activities. In small Units a small meeting room will be used. In large Units a carrel type system may be used to provide workspace and access to the IT network.

WASTE MANAGEMENT

Confidential waste may be generated through activities such as the destruction of duplicate copies (where only the original needs to be retained), and from the destruction of records no longer required. Adequate storage space is required within the HIU for secure bins. Bin placement/storage should facilitate easy removal by environmental services staff or external contractors.

STAFFING LEVELS

The staff working in a HIU may include:

- health information managers - a Head of Department and additional professional staff depending on size of Unit;
- clinical coders;
- medico-legal officers;
- medical typists; and
- administrative staff.

The staff mix will vary between services using paper based, digitized or electronic health record systems. Local arrangements will dictate which processes are undertaken and collocated within a HIU, for example, medical typing may be located in another administrative area or be outsourced.

02.03 Planning Models

LOCATION

The location of the HIU will be dependent on the operational model (e.g. paper-based records, digital or an EHR system) and the availability of distribution systems where paper-based health records are in use e.g. availability of a pneumatic or mechanical automated records transport system.

A Unit storing paper-based records should be located with direct access to the emergency department and with easy access to all other clinical services. As services progress from paper-based to scanned records the requirement for direct association with the emergency unit will reduce. The location of a HIU is more flexible when using a full EHR.

BUILDING DESIGN

In health care facilities where paper-based records are retained and 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.

02.04 Functional Areas

FUNCTIONAL ZONES

Functional zones in the Unit include:

- entry / reception/ waiting;
- assembly, sorting and scanning;
- file store/s;
- staff offices; and
- staff amenities.

ENTRY / RECEPTION / WAITING

The HIU will require a single controlled entry point for the reception of visitors and staff. The counter should be designed to prevent unauthorised access into the Unit. A small waiting space is required in this area for visitors. Units operating over extended hours will require a video intercom for after-hours access.

A temporary storage area should be provided for paper-based health records awaiting delivery to clinical departments or upon their return. Direct access is required to a photocopy / stationery store for reception and general staff.

A small meeting and/or research room may be required in larger units for members of the public to view files or visiting staff undertaking research. The room should be located so that staff can enter the room from the Unit side while members of the public, or visiting staff, access the room from the reception area.

ASSEMBLY, SORTING AND SCANNING AREA

This open plan area is required for the processing activities associated with filing and preparation of the paper-based health care records for clinics, admissions etc. The area should accommodate a combination of 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 is required for:

- records awaiting sorting and assembly;
- records awaiting filing, including returned records;
- records being dispatched to areas such as ambulatory care and inpatient units;
- newly assembled records; and
- consumables associated with records such as covers and dividers.

This area is the major activity area of a Unit using paper-based files. Access to natural light is preferable. Direct access to the file store and the photocopy / stationery store is also required from this area.

In Units where records are scanned, the arrangement of space will be dictated by the workflow as described in clause 240.005.015.

FILE STORE

The most common and suitable method to file active paper-based health care records is on fixed metal shelving units (bays). Archived files, stored in a non-active file store may be filed in a compactus. This approach is not recommended in active file store areas as it can introduce manual handling risks.

The file store will be accessed primarily by staff working in the assembly/ sorting and scanning area so these two zones should be adjacent.

Detail regarding shelving and aisles is described in the Design section of this HPU, clause 240.15.10.

STAFF OFFICES

A range of staff including health care records managers, clinical coders, medico-legal staff, medical typists etc. will be accommodated in this area. The number of staff is determined by the size of the Unit and the healthcare facility it supports. Group functions may be separated into zones so work flows can be achieved in an environment that suits the work being undertaken.

If collocated, medical typists should be located in a quieter area within this staff office area but within close proximity to the general assembly/sorting area.

The medico-legal team should be located adjacent to the reception area as staff will require ready access for meetings with visitors.

A quiet area is essential for clinical coding as it requires a high degree of concentration to ensure work accuracy. Where paper-based records are used, each coder will need a filing bay to store files awaiting attention plus storage for coding and reference manuals.

Staff workspaces should be provided in accordance with local jurisdictional policies. All staff work spaces, including offices should be in a staff only area.

STAFF AMENITIES

A secure staff property bay with lockers (for staff not allocated a workstation), toilets and a beverage bay is required. This area will be located within easy access of all areas of the Unit.

02.05 Functional Relationships

EXTERNAL

Where paper-based health records are used, the relationship of the HIU with the emergency department is critical for immediate record retrieval.

Less critical is the relationship with ambulatory care unit/s as files are usually retrieved and delivered prior to clinic sessions, however, distances for transport of heavy records needs to be considered.

In a digitized or electronic health records environment, the operational model will determine required relationships e.g. when and where records are scanned, transport/delivery procedures of paper files from clinical departments, and staff accessibility to records for research purposes etc.

03 DESIGN

03.01 Accessibility

A single entrance will be provided for the Unit for use by visiting staff, students and the public. In larger Units staff, consumables, records and waste may enter and exit via an alternative access point.

03.02 Parking

This clause is not applicable, but has been included for consistent HPU clause numbering.

03.03 Disaster Planning

This clause is not applicable, but has been included for consistent HPU clause numbering.

03.04 Infection Control

This clause is not applicable, but has been included for consistent HPU clause numbering.

03.05 Environmental Considerations

ACOUSTICS
For information refer to;

- Part C: Section 710, Space Standards and Dimensions; and
- Australian/New Zealand Standards, 2000, AS/NZS 2107:2000 Acoustics - Recommended design sound levels and reverberation times for building interiors (SAI Global).

NATURAL LIGHT
Natural light is preferable in general work areas. However, natural light should not be provided in paper-based records storage areas.

RECORDS STORAGE REQUIREMENTS
Records should be stored in an environment suitable to their format and retention period. These conditions include:

- stable temperature of 23 degrees celcius (+/- 2 degrees) and a relative humidity level between 30% and 70%. These temperature and humidity requirements are usually achieved by the normal air conditioning equipment;
- protecting records from direct sunlight and not illuminating storage areas more than is necessary for retrieval and replacement;
- good ventilation; and
- integrated pest management systems.

Records must be stored in a fire-rated construction as indicated in the Building Code of Australia and local jurisdiction Records Acts.
Ideally, records should not be stored in close proximity to plumbing, water pipes or sprinklers.
For further information refer to:

- National Archives of Australia, 2002, Storing to the Standard: Guidelines for Implementing the Standard for the Physical Storage of Commonwealth Records;
- National Archives of Australia, 2014, National Archives of Australia Standard for the storage of archival records (excluding digital records); and
- Standards Australia, 2012, AS 2828.1:2012 Health records - Paper-based health records (SAI GLOBAL).

03.06 Space Standards and Components

ERGONOMICS
For information refer to clause 730.12.00 Ergonomics of Part C: Section 730, Human Engineering.

HUMAN ENGINEERING
For information refer to Part C: Section 730, Human Engineering.

ACCESS AND MOBILITY
For information refer to Part C: Section 730, Human Engineering.

DOORS, WINDOWS AND CORRIDORS
Window coverings should be used in work areas to reduce glare, increase comfort and for staff security.
A minimum aisle width of 750mm must be provided between facing record storage bays. The aisle must allow for trolleys, library stools and staff to pass each other safely.
The main access aisle/s should be at least 1500mm wide to allow trolley passing and exit in the event of fire. Planners must ensure the length of a row of bays between main aisles complies with BCA codes for fire egress.
For more information refer to Part C: Section 710, Space Standards and Dimensions.

03.07 Safety and Security

SAFETY
Shelving and workbenches must meet Occupational Health and Safety (OHS) Standards.
For more information refer to Comcare, 2008, Officewise - A guide to health and safety in the office.

SECURITY
The Unit should be secure to prevent unauthorised access at all times, and to protect records against loss or damage.
Access to the Unit will be limited to a single entry equipped with access control (either keyed or electronic). All other egress points should be locked and / or locally alarmed, capable of being overridden in the event of an emergency/ fire alarm activation. Well signed, local alarms are a strong deterrent to unauthorised entry. Visitors will not be able to access the department proper without the authority of a nominated staff member / receptionist. The HIU counter should be designed to prevent unauthorised access, and include a duress alarm.

03.08 Finishes

WALL PROTECTION
Wall and corner guard protection is required to protect areas where trolleys travel and where they are stored.
For further details refer to Part C: Section 710, Space Standards and Dimensions.

FLOOR FINISHES
Vinyl flooring should be used in areas where trolleys are used to move records.
Refer to Part C: Section 710, Space Standards and Dimensions.

CEILING FINISHES
Refer to Part C: Section 710, Space Standards and Dimensions.

03.09 Fixtures, Fittings & Equipment

Refer to the Room Data Sheets (RDS) and Room Layout Sheets (RLS) for further detailed information and to:

- Part C: Design for Access, Mobility, OHS and Security, Space Standards and Dimensions; and
- Part F: Section 680 Furniture Fittings and Equipment.

RECORDS SHELVING

Standard shelving bays are usually 900mm wide and 300mm deep. Regardless of the number of shelves in each bay the maximum height should be 2175mm; usually six levels of shelving is adequate. The highest shelf should be accessible by a short member of staff using a library stool. Step ladders are not recommended.

03.10 Building Service Requirements

INFORMATION COMMUNICATIONS TECHNOLOGY (ICT)

IT architects should consult unit managers and users to determine the requirements for the facility. As modern units are highly ICT dependent, options for eliminating single points of failure should be considered (e.g. different network paths for alternate workstations). Due to the increasing migration from paper-based to electronic record systems, operational requirements will change over the life of the building so it is desirable that flexibility, in relation to cabling and options such as wireless networks, be considered. Workspaces will need to cater for multiple large displays.

All HIUs are operationally dependent on information technology, including connectivity to other organisations and this should be taken into consideration in the design of the Unit.

In addition to the usual hospital communication systems, the HIU has particular needs including:

- remote dictating from administrative and clinical areas to a central dictating unit; and
- administration of PAS and other clinical systems.

Communication systems may include:

- office phones;
- two-way intercom between designated staff areas or a public address system in large units; and
- a phone between the archival and main unit, if archives are located off-site or not immediately adjacent to the main HIU.

DURESS ALARM SYSTEM

A discreet duress alarm to be located at reception.

LIGHTING

Overhead lighting in the records store must run parallel with 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.
Refer also to National Archives of Australia, 2014, National Archives of Australia Standard for the storage of archival records (excluding digital records).

04 COMPONENTS OF THE UNIT

04.01 Standard Components

Rooms / spaces are defined as:

- *standard components* (SC) which refer to rooms / spaces for which room data sheets, room layout sheets (drawings) and textual description have been developed;

- *standard components – derived rooms* are rooms, based on a SC but they vary in size. In these instances, the standard component will form the broad room 'brief' and room size and contents will be scaled to meet the service requirement;

- *non-standard components* which are unique rooms that are usually service-specific and not common.

The standard component types are listed in the attached Schedule of Accommodation.

The current Standard Components can be found at: www.healthfacilityguidelines.com.au/standard-components

04.02 Non-Standard Components

Non-standard components are unit-specific and provided in accordance with specific operational policies and service demand. These non-standard components for HIUs are detailed below.

ASSEMBLY AND SORTING
Description and Function
Assembly and sorting comprises of an open plan area used for the processing activities associated with the filing and preparation of health care records for clinics, admissions etc. This area will need to incorporate parking for paper-based medical record transport trolleys and additional photocopiers. The number and dimensions will need to be ascertained during the planning process.
This area will comprise of workstations and sorting tables. The design may incorporate zones for assembled files ready for issue, and for records waiting to be refiled.

Location and 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 Unit.

ASSEMBLY / SORTING/ SCANNING AREA
Description and Function
The assembly, sorting and scanning area should be designed as an open plan area used for processing and scanning paper-based records for clinics, admissions etc. The area will incorporate parking for medical record transport trolleys. Trolley number and dimensions will need to be ascertained.
The workflow for scanning is described in clause 240.005.015.
In addition to workstations where staff sort, assemble, scan and check records, the area will also contain:

- records waiting to be scanned;
- records waiting to be destroyed; and
- bays for photocopiers.

Location and Relationships
This area should have direct access to consumables store areas, and to stores of files waiting for destruction.

Considerations

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

The records waiting to be destroyed may be held in an identifiable area within the active file store.

RESEARCH ROOM

Description and Function

The room will be used by clinical staff and others to view and research health care records. The completion of discharge summaries and dictation may also occur here.

Location and Relationships

Research cubicles should be located in a single room on the perimeter of the Unit adjacent to the reception area.

Considerations

The number of cubicles will depend on usage. Cubicles may be self-contained or in an open plan office with individual cubicle partitions. Paper-based records being accessed may be stored on shelving above each cubicle or stored within the room on fixed metal shelving bays.

AX APPENDICES

AX.01 Schedule of Accommodation

A Generic Schedule of Accommodation for a Health Information Unit is outlined below.

In the NSW Health - Guide to the Role Delineation of Health Care Facilities (Third Edition 2002), health information service units are not defined by level of service, unlike other clinical support services such as pharmacy.

The purpose of developing an HIU schedule of accommodation incorporating levels 3/4 and 5/6, is to ensure the provision of an adequate and appropriate health information service to the associated health care facility.

The schedule of accommodation assumes that support rooms (e.g. a cleaner's room and disposal room) will be shared with an adjacent service.

The 'Room/ Space' column describes each room or space within the Unit. Some rooms are identified as 'Standard Components' (SC) or as having a corresponding room which can be derived from a SC. These rooms are described as 'Standard Components –Derived' (SC-D). The 'SD/SD-C' column identifies these rooms and relevant room codes and names are provided.

All other rooms are non-standard and will need to be briefed using relevant functional and operational information provided in this HPU.

In some cases, Room/ Spaces are described as 'Optional' or 'o'. Inclusion of this Room/ Space will be dependent on a range of factors such as operational policies or clinical services planning.

ENTRY/RECEPTION / WAITING AREAS

AusHFG Room Code	Room / Space	SC / SC-D	Qty x m2 Levels 3/4	Qty x m2 Levels 5/6	Remarks
RECL-10	Reception / Clerical, 10m2	Yes	1 x 10	1 x 10	
WAIT-10	Waiting, 10m2	Yes	1 x 4	1 x 6	
MEET-9	Meeting Room, 9m2	Yes	1 x 12	1 x 9	Interviews/ research
STPS-8	Store - Photocopy / Stationery, 8m2	Yes	1 x 8	1 x 8	
	Research Room		-	1 x 20	Size dependent on research activities
BMEQ-4	Bay - Mobile Equipment, 4m2	Yes	1 x 4	3 x 4	Trolleys
	Discounted Circulation %		15%	15%	

ASSEMBLY / SORTING / SCANNING

AusHFG Room Code	Room / Space	SC / SC-D	Qty x m2 Levels 3/4	Qty x m2 Levels 5/6	Remarks
	Assembly and Sorting		15	25	Option A
	Assembly / Sorting / Scanning		1 x 50	1 x 80	Option B
BS-4	Bay - Storage, 4m2	Yes	1 x 4	2 x 4	Some storage for records that have been scanned and to be retained for 3- 6 months.
STGN-8	Store - General, 8m2	Yes	1 x 8	1 x 9	Consumables
	Discounted Circulation %		15%	15%	

Space requirements will vary depending on the process used; hard copy (Option A) and scanning (Option B) processes are detailed below. Only one of these spaces is required, depending on the service model adopted.

FILE STORE

AusHFG Room Code	Room / Space	SC / SC-D	Qty x m2 Levels 3/4	Qty x m2 Levels 5/6	Remarks
	Records Store - Active		Project specific	Project specific	Space allocation needs to include circulation between aisles. Alternatively, increase the internal circulation rate to 30%. Refer to Calculation of Active Records Storage. May also include the bulk of records that have been scanned and need to be held for between 3 – 6 months.
	Records Store – Non-active		Project specific	Project specific	Not usually collocated with the HIU.
	Records Store - Active		Project specific	Project specific	Space allocation needs to include circulation between aisles. Alternatively, increase the internal circulation rate to 30%. Refer to Calculation of Active Records Storage. May also include the bulk of records that have been scanned and need to be held for between 3 – 6 months.
	Records Store – Non-active		Project specific	Project specific	Not usually collocated with the HIU.
	Discounted Circulation %		15%	15%	

STAFF OFFICES

AusHFG Room Code	Room / Space	SC / SC-D	Qty x m2 Levels 3/4	Qty x m2 Levels 5/6	Remarks
OFF-S12	Office - Single Person, 12m2	Yes		1 x 12	Department Manager
OFF-S9	Office - Single Person, 9m2	Yes	1 x 9	1 x 9	Department Manager/ Deputy Manager
	Office – Workstation, 5.5m2		5.5	5.5	For example for Health Information Managers, support and administrative staff. No. determined by staff establishment and operational policy.
OFF-2P	Office – 2 Person Shared, 12m2	Yes	1 x 9	1 x 12	Medico-legal staff; 12m2 assumes 2 staff
	Office – Workstation, 5.5m2		1 x 5.5	5.5	Quiet environment. No. determined by staff establishment and operational policy.
STPS-8	Store - Photocopy / Stationery, 8m2	Yes	-	1 x 8	
MEET-L-20	Meeting Room, 20m2	Yes		1 x 20	Unit meetings. In smaller units, the meeting room will be shared with an adjacent service. No. to be determined through service planning.
	Discounted Circulation %		15%	15%	

The provision of staff work space should be based on the staffing profile and jurisdictional policies. Staff described above are indicative only.

STAFF AMENITIES

AusHFG Room Code	Room / Space	SC / SC-D	Qty x m2 Levels 3/4	Qty x m2 Levels 5/6	Remarks
PROP-2	Property Bay - Staff	Yes	1 x 2	1 x 3	
BBEV-OP	Bay - Beverage, Open Plan, 4m2	Yes	1 x 3	1 x 4	A staff room may be considered depending on local jurisdiction policies.
WCST	Toilet - Staff, 3m2	Yes	1 x 3	3	No. dependent on staff establishment.
	Discounted Circulation %		15%	15%	

AX.02 Functional Relationships / Diagrams

The following diagram sets out the key functional relationships in a Health Information Unit.
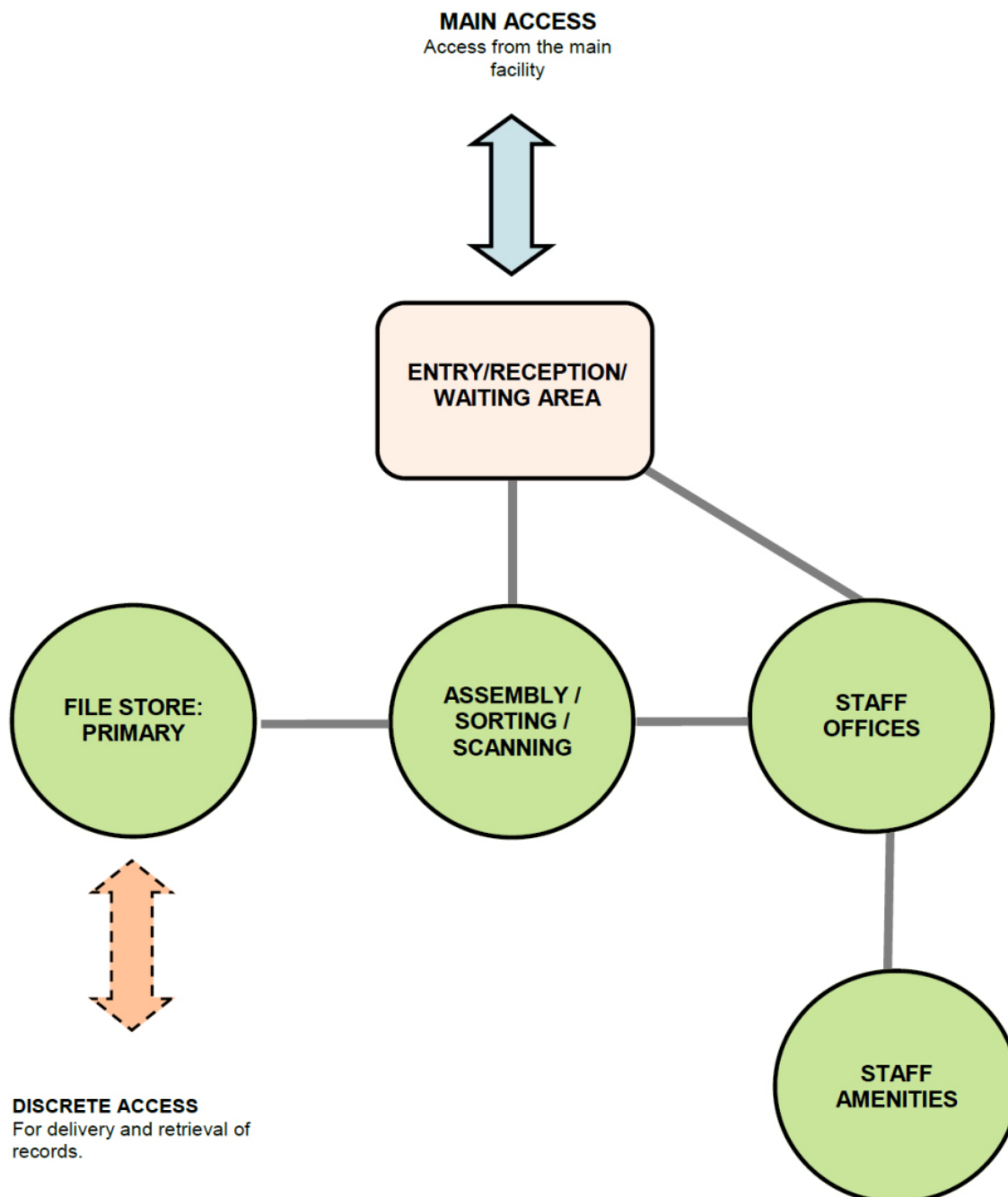
AX.03 Checklists

A Security Checklist is appended to this document. For general requirements refer also to AHIA, 2010, AusHFG Part C: Design for Access, Mobility, OHS and Security, Space Standards and Dimensions http://healthfacilityguidelines.com.au/AusHFG_Documents/Guidelines/%5bC-0710%5d%20Space%20Standards%20and%20Dimensions.pdf

AX.04 References

- AHIA, 2010, AusHFG Part C: Design for Access, Mobility, OHS and Security, Space Standards and Dimensions, Australasian Health Facility Guidelines, Australasian Health Infrastructure Alliance (AHIA), Sydney, NSW http://healthfacilityguidelines.com.au/AusHFG_Documents/Guidelines/%5bC-0710%5d%20Space%20Standards%20and%20Dimensions.pdf
- AHIA, 2010, AusHFG Part B: Section 80 General Requirements, Australasian Health Facility Guidelines, Australasian Health Infrastructure Alliance (AHIA), Sydney NSW http://healthfacilityguidelines.com.au/AusHFG_Documents/Guidelines/%5bB-0080%5d%20General%20Requirements.pdf
- AHIA, 2010, AusHFG Part C: Section 730, Human Engineering, Australasian Health Facility Guidelines, Australasian Health Infrastructure Alliance (AHIA), Sydney, NSW http://healthfacilityguidelines.com.au/AusHFG_Documents/Guidelines/%5bC-0730%5d%20Human%20Engineering.pdf
- AHIA, 2010, AusHFG Part C: Section 710, Space Standards and Dimensions, Australasian Health Infrastructure Alliance (AHIA), Sydney, NSW http://healthfacilityguidelines.com.au/AusHFG_Documents/Guidelines/%5bC-0710%5d%20Space%20Standards%20and%20Dimensions.pdf
- AHIA, 2010, AusHFG Part F: Section 680 Furniture Fittings and Equipment, Australasian Health Facility Guidelines, Australasian Health Infrastructure Alliance (AHIA), Sydney, NSW http://healthfacilityguidelines.com.au/AusHFG_Documents/Guidelines/%5bF-0680%5d%20Furniture%20Fittings%20and%20Equipment.pdf
- Australian/New Zealand Standards, 2000, AS/NZS 2107:2000 Acoustics - Recommended design sound levels and reverberation times for building interiors (SAI Global), Standards Australia, Sydney NSW http://infostore.saiglobal.com/store/details.aspx?ProductID=363589
- Comcare, 2008, Officewise - A guide to health and safety in the office, Commonwealth of Australia, Canberra ACT http://www.comcare.gov.au/__data/assets/pdf_file/0006/39570/Officewise_OHS1_Apr_10.pdf
- National Archives of Australia, 2002, Storing to the Standard: Guidelines for Implementing the Standard for the Physical Storage of Commonwealth Records, Commonwealth of Australia, Canberra ACT http://www.naa.gov.au/Images/guidelines_tcm16-47307.pdf
- National Archives of Australia, 2014, National Archives of Australia Standard for the storage of archival records (excluding digital records), Commonwealth of Australia, Canberra ACT http://www.naa.gov.au/Images/Storage-Standard_tcm16-47305.pdf
- Standards Australia, 2012, AS 2828.1:2012 Health records - Paper-based health records (SAI GLOBAL), Standards Australia, Sydney, NSW http://infostore.saiglobal.com/store/Details.aspx?productID=1533730
- Standards Australia, 2012, AS 2828.2(Int):2012 Health records - Digitized (scanned) health record system requirements (SAI GLOBAL), Standards Australia, Sydney, NSW http://infostore.saiglobal.com/store/details.aspx?ProductID=1533731
- Standards Australia, 2011, AS/NZS 1015:2011 Records management - Physical storage (SAI GLOBAL), Standards Australia, Sydney, NSW http://infostore.saiglobal.com/store/details.aspx?ProductID=1491989

AX.05 Further Reading

- Australian Standard ISO 15489-2002 Records Management; (contains complementary principles around physical storage and consideration of alternative options for location of records where appropriate);
- Holmes, L. Digitised health records standards are now in publication, HIM – Interchange, Vol 2, No. 3, 2012;
- NSW Government, Solutions for storage: guidelines on the physical storage of State records, Guideline 11, 2012;
- NSW Health, PD2012_069 Health Care Records – Documentation and Management, 21 December 2012;
- NSW Health, IB2009_064_General Retention and Disposal Authority – Imaged Records (GA36), 18 November, 2009;

- NSW Health, Patient Matters Manual for Public Health Organisations (Chapter 9), 1 January 2008
  http://www.health.nsw.gov.au/audit/manuals/patient_matters_toc.html
- New Zealand Government. Health (Retention of Health information) Regulations 1996;
- New Zealand Government. Health Information Privacy Code 1994;
- Queensland Government Public Records Act 2002;
- Queensland Government Enterprise Architecture Framework;
- Information Standard 40: Recordkeeping;
- Information Standard 31: Retention and Disposal of Public Records;
- Information Standard 18: Security;
- Queensland Government Information Security Classification Framework (2013);
- Queensland Government Information Privacy Act 2009;
- Queensland Government, Information Standards 42 (General) and 42A (Health); and
- Victorian Government, Health Records Act 2001.

AX.06 Calculations of Active Records Storage

A schedule detailing the process for calculating the required storage for active records is attached.

CALCULATION OF ACTIVE RECORDS STORAGE

Step 1 – Estimate number of health records required to be stored per annum

Determine the current records to be stored per annum as follows:

- **Annual Admitted Patient Separations + Annual New Non-Admitted (Outpatient and ED) Patient Registrations = Total number of records per annum**
  Note: These figures do not allow for number of actual records as separations will include readmissions. However, these are more appropriate figures to use for admitted patients than new MRNs (registrations) issued per year (which would provide actual number of records) as it allowed for the expansion of the file with each readmissions. Should the service store active community health records, these will need to be included in the overall record numbers. Registration (new patient) figures, not attendance, are used for non-admitted record calculations as each attendance is usually only one piece of paper (or less) and thus does not greatly impact on the thickness of the record.

As well as determining what will meet current needs, future needs also need to be considered:

- **Estimate percentage increase in activity in future years**
  This information should be available from the overall health services planning process.

- **Multiply total number of current records per annum by estimated annual percentage increase to give total number of records required to be stored per annum.**

Step 2 – Determine the number of years to be stored in active records storage

An active records storage area should be able to store at least five years of records before records are deemed 'inactive' and are removed to secondary storage.

Step 3 – Determine total number of records to be stored

Total number of records required to be stored per annum x number of years to be stored.

Step 4 – Calculate average size of each medical record

Undertake a physical count of a sample number of randomly distributed 'typical' active storage shelves in the current active storage area. This will indicate an average of number of records per shelf (usually 900 mm wide).

Equate this number per shelf to number of records per linear metre (1000mm).

Step 5 – Calculate total linear metres required

Formula: $\dfrac{\text{Number of records}}{\text{Number of records per linear metre}}$

=   **Total linear metres required**

Step 6 – Total bays required

Identify shelving configuration e.g. shelves per bay x 900w = 5.4 linear metres per bay.
Can be calculated in two ways:

1. **Total records by shelves**
Formula: $\dfrac{\text{Total number of records}}{\text{Number of records per shelf x number of shelves}}$

=   **Total number of bays**

2. **Total linear metres by linear metres per bay**
Formula: $\dfrac{\text{Total linear metres}}{\text{Total linear metres per bay}}$

=   **Total number of bays**

Step 7 – Terminal Digit (TD) filing

To enable TD filing, the number of linear meters of shelving required of each primary digit is calculated as follows:

Formula: $\dfrac{\text{Metres of shelving required}}{\text{Number of primary digits}}$

=   **Linear metres per TD section**

Step 8 – Determine total number of storage bays with TD filing

Formula: $\dfrac{\text{Linear metres per TD section x 100}}{\text{Number of metres storage per bay}}$

=   **Total bays**

Note: Compare this figure to that obtained in Step 6 - they should be the same.

Step 9 – Floor area required

There are two ways to calculate the floor space required based on number of bays to be stored – either by assuming the layout of shelving or estimating the area required for each bay aisle space and discounted circulation for file area.

1. **Assume Layout**
   - Assume bays are arranged to form double sided 'stacks', a designated number of bays to each side. Such a stack will hold the estimated records per shelf x 6 shelves high x number of bays in the stack e.g. bays are arranged 10 bays to each side of stack. Such a stack will hold (number of records per shelf) x (number of shelves) x 20 bays.
   - Estimate how many records each stack will hold.
   - To store the required total number of records, divide total number of records by number of records per stack.
   - Calculate length and width of each stack, e.g. if stack is 10 bays long and 2 bays wide, length will be 10 x 900m = 9.1m long and 0.62m wide.
   - Calculate gangways (minor aisle) and main aisle widths (e.g. 900mm and 1500mm) e.g. If 8 stacks are required, assume stacks are arranged in 4 rows of 2 stacks (a minimum width of gangways may be 750mm, but 900 is preferred).

   The total length required is:
       (2 x 9.1m stacks) + (1 x 1.5m main aisles) + (2 x 0.9 minor aisles)
     = 18.2m stacks + 1.5 main aisles + 1.8 aisles
     = 21.5 metres

   The total width required is:
       (4 x 0.62m stacks) + (2 x1.5 aisles) + (3.0 x 0.9 minor aisles)
     = 2.48m stacks + 3.0 main aisles + 2.7 aisles
     = 8.18 metres

   The floor area required is thus 21.5 x 8.18m = 175.87m^2 (176m^2)

   Notes:
       i. Need to include space for aisles in calculation otherwise 15% discount circulation for the whole unit will be inadequate.
       ii. This is an approximation and final amount would depend on layout of shelving.

2. **Assign estimated area required for each bay, aisle space and discounted circulation estimate bay width and minor aisle width per bay (aisle width divided by 2).**
   Calculate main aisle(s) utilising 15% discounted circulation, for example:
       300mm + 450mm = 750mm per bay width
     = 0.75m^2 per bay x number of bays x 15%
     = Estimated floor area required

ATTACHMENTS

Attachments

SECURITY ISSUES TO BE CONSIDERED IN HEALTH INFORMATION UNIT

GENERIC SAFETY AND/OR SECURITY RISKS	POTENTIAL SOLUTIONS
1. Areas where patient records are maintained including active and archival files.	1. Minimise entry and exit doors with lockable area at all times.

SPECIFIC SAFETY AND/OR SECURITY RISKS	POTENTIAL SOLUTIONS
1. Patient files.	1. Staff working on these files must return then to the secure area after use. 2. If any electronic files are produced, locate in restricted area of the hard drive.
2. Furniture, fittings and equipment including computers and office equipment.	3. Non-removal 'asset no.' on all equipment above a predetermined value. 4. Keep equipment in a lockable area.
3. Hospital staff safety	5. Staff working in this area to have knowledge of locations for fixed duress and/or use of a mobile pendant. 6. Provide suitable after-hours access and security including secure access from all parts of the facility.
4. Staff personal effects	7. Provision of lockable space for staff personal property (e.g. locker or desk draw).

FACILITY:	DEPARTMENT: Health Information Unit
RISK ISSUE	**DESIGN RESPONSE**
1. Do staff have access to fixed and mobile duress systems?	
2. Is access to patient records restricted to authorised staff?	
3. Is a system implemented to prevent theft of equipment, files and staff property?	
4. How is after-hours access provided for staff?	
5. How is this area secured during and after-hours?	
6. Is lockable furniture or lockers provided for storage of staff personal effects?	
7. Has a secure waiting areas been planned in this area that allows the public to present to the service to sign forms, wait and then receive records?	
DESIGN COMMENTARY / NOTES	**DESIGN SIGN-OFF**
	Name:.. Position:... Signature:... Date:...
	Name:.. Position:... Signature:... Date:...
	Name:.. Position:... Signature:... Date:...