240 CLINICAL INFORMATION UNIT

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INTRODUCTION

Preamble

502106 240 .1.00

For reasons associated with the development of the database, the title “Clinical Information Unit” has been used to describe the Unit. However, In different hospitals, the Unit may be called a Health Information Unit or Medical Records Unit.

Health Information systems and management are currently undergoing considerable change and a fully electronic, paperless system is becoming closer to a reality. However, for the purpose of this Guideline, at this time, continuance of hard copy records generation and storage is assumed. Provision of facilities for scanning files for entry into an electronic data base (as a precursor to a full electronic record) has been factored in.

Introduction

502107 240 .2.00

This Health Planning Unit (HPU) is a resource to assist project teams with the planning, design and construction of a Health Information Unit. It should be read in conjunction with generic requirements and Standard Components (Room Data & Room Layout Sheets (RDS/RLS) in Parts A, B, C, D and E of these Guidelines.

Policy Statement

502108 240 .3.00

NSW Health Privacy Manual (2004).

NSW Health Policy Directives:

- PD2005-004, 24-Jan-2005, Medical Records in Hospitals & Community Care Centres.

- PD2005-015, 24-Jan-2005, Medical Records.

- PD2005-127, 25-Jan-2005, Principles for Creation, Management, Storage and Disposal of Health Care Records

- NSW Health Information Bulletin 2004/20, 26.05/04, General Retention and Disposal Authority - Public Health Services: Patient/Client Records (GDA 17)

Description of the Unit

502109 240 .4.00

DEFINITION OF HEALTH PLANNING UNIT (HPU)

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, the Emergency and Outpatient Units and any location where a patient is being admitted/treated.

- medico-legal/release of health information duties with regard to subpoenas, freedom of information requests, adoption requests and other enquiries whilst maintaining the rights and confidentiality of patients and staff

- maintenance of accurate and up-to-date information systems such as the Patient Master Index (PMI), Admissions, Transfers and Separations (ATS) and Disease Index (DI) and any other Patient Administration System (PAS)-related application.

- 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 for maintenance of the Disease Index, generation of DRGs and provision of morbidity/mortality statistics to the NSW Inpatient Statistics Collection

- supply of cancer data to the NSW Cancer Registry

- supply of perinatal statistics to the NSW Health (as appropriate)

- provision of information to management and other authorised staff for purposes such as planning, utilisation review, quality Assurance, casemix studies and research

- quality assurance of the medical record to ensure standards are met

- participation in undergraduate training from tertiary institutions.

- secure storage - primary, secondary and archival that complies with Occupational Health & Safety regulations.
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Additional responsibilities of Health Information Management (HIM) staff may include:
- data collection and analysis
- planning and development of computer information systems
- financial management
- design of manual and computerised medical records
- co-ordination of quality improvement programmes
- management of clerical staff in health information services, outpatients and emergency departments and admissions offices.

PLANNING

Operational Models

502110 240 .6.00 HOURS OF OPERATION

The Unit will operate routinely during business hours Monday to Friday. Large Units will operate a skeleton 24 hour service for retrieval of files primarily for the Emergency Unit.

Provision should be made for 24-hour availability of medical records either by a computerised or manual system.

503262 240 .6.05 PAPER-BASED RECORDS

Historically the way records have been and continue to be generated and still mainly the current form in use.

502111 240 .7.00 ELECTRONIC HEALTH RECORD (EHR)

The primary purpose of the EHR is to provide a documented record of care that supports present and future care by the same or other clinicians. This documentation provides a means of communication among clinicians contributing to the patient's care. The primary beneficiaries are the patient and the clinician(s).

Any other purpose for which the medical record is used may be considered secondary, as are any other beneficiaries. Much of the content of EHRs is currently defined by secondary users, as the information collected for primary

purposes was insufficient for purposes such as billing, policy and planning, statistical analysis, accreditation, etc.

Secondary uses of EHRs include:
- Medico-legal – evidence of care provided, indication of compliance with legislation, reflection of the competence of clinicians.
- Quality management – continuous quality improvement studies, utilisation review, performance monitoring (peer review, clinical audit, outcomes analysis), benchmarking, accreditation.
- Education
- Research – development and evaluation of new diagnostic modalities, disease prevention measures and treatments, epidemiological studies, population health analysis.
- Public and population health - access to quality information enables the effective determination and management of real and potential public health risks
- Policy development – health statistics analysis, trends analysis, casemix analysis
- Health service management – resource allocation and management, cost management, reports and publications, marketing strategies, enterprise risk management.
- Billing/finance/reimbursement – insurers, government agencies, funding bodies.

Source: ISO/TC 215 Ad Hoc Group Report, Standards Requirements for the Electronic Health Record & Discharge/Referral Plans
Final Report, July 26, 2002

502112 240 .8.00 SCANNING

An optical disk-based record management system achieved by scanning of paper-generated records to create digital images can significantly increase access to medical records whilst dramatically reducing the space required to store records.

Optical scanning of records also allows for transition from paper-based records into a full electronic health record.

It is expected that even when records become electronic, there may be an ongoing need for records to be scanned – either readmissions or documents such as GP referrals. Major scanning will be carried out in a dedicated area of the Unit; minor scanning such as referrals could be carried out locally – Outpatients. Emergency etc.

Operational Policies

502113 240 .9.00 GENERAL

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

- A centralised record system should be maintained for all inpatient, emergency and outpatient/day patient attendances. Where a centralised 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

- The Hospital's Confidentiality Policy (which includes borrowing rules) will be adhered to. This policy will be based on local decisions, relevant NSW Health Policy Directives and Legislative Acts.

- Information will only be released to a third party with the patient's authority except if required for continuing patient care, or requested under subpoena. Records will not be removed from the Hospital except as a result of a court subpoena, statutory authority, for a coronial investigation, by order of the Director-General or if authorised by the Director of Medical Services.

- Medico-legal reports and subpoenas will be prepared in accordance with the Confidentiality Policy and relevant NSW Health Policy Directives.

- Records will be retained in accordance with NSW Health Information Bulletin 2004/20, 26/5/04, General Retention and Disposal Authority, Public Health Services: Patient/Client Records (GDA 17).

- 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.

- All inpatient attendances will be coded according to the Australian Modification of an international disease and procedure classification system

- A centralised dictating system utilising 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 when the hospital will implement 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 utilised when moving from one system to another.

502114 240 .10.00 STORAGE

Medical records must be kept for at least 10 or 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 Building Code of Australia and regulations under the State Records Act. Note that sprinklers should NOT be installed.

502115 240 .11.00 TERMINAL DIGIT FILING SYSTEM (HARD COPY)

Terminal digit filing is a method of filing where records are filed by the last two digits (primary or terminal digits) of a number instead of the fist two digits.

The entire number (which may range from 6 to 10 digits) is broken into groups of twos or threes (and in some instances fours), with the last group being filed first, followed by the second group of digits, and so on.

Filing storage is divided into 100 primary sections numbered 00 to 99.

502116 240 .12.00 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.

In a paperless electronic environment, the staff mix will change as many of the staff currently involved in transcription, record assembly and filing will no longer perform traditional functions but will change to perform duties associated with access and quality control.

Planning Models

502117 240 .13.00 LOCATION

Location will / 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 so as to provide natural light and – if possible - views to staff who occupy the area 8 hours a 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 minimise time wasted in access.

502118 240 .14.00 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.

Functional Areas

502119 240 .15.00 FUNCTIONAL ZONES

- Entry / Reception

- Transcription
- Clinical Coding
- Assembly / Sorting areas
- Staff Amenities
- Files Store/s.

502120 240 .16.00 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.

May be optimum location for the offices for medico-legal staff with dual access from the Waiting Area and from inside the Unit.

Entry door should have a buzzer and key card or similar for secure access for authorised 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.

502121 240 .17.00 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.

502122 240 .18.00 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.

502123 240 .19.00 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.

502124 240 .20.00 PHOTOCOPYING / PRINTING

Dedicated, acoustically-treated and ventilated space.

May also be location for generating bar code labels etc.

May also include stationery storage.

Locate with ready access to the medico-legal offices that generate a large amount

of photocopying.

502125 240 .21.00 ASSEMBLY & SORTING

An open plan area used for the processing activities associated with the filing and preparation of the medical records for clinics, admissions etc.

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 & Stationery Store.

502126 240 .22.00 SHELVING & 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 300mm deep. Regardless of the number of shelves in each bay (may be 7), 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.
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The main access aisle/s should be at least 1500mm wide to allow for trolleys passing each other, and for exit in the event of fire.

When configuring the arrangement of shelving, planners must ensure that the length of a row of bays between main aisles does not contravene BCA codes for fire egress.

502127 240 .23.00 CALCULATION OF ACTIVE RECORDS STORAGE

Refer to Appendix.

Functional Relationships

502128 240 .24.00 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.

502129 240 .25.00 ARCHIVE FILE STORE

All the records requiring storage to meet the statutory requirements beyond the 5 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, and
. easy access for refiling

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, silverfish and other insects likely to attack the paper. Fire sprinklers should NOT be installed.

DESIGN

Access

502130 240 .26.00 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.

Car Parking Requirements

502131 240 .27.00 For staff parking, refer to Part C, Clause 790 of these Guidelines for further information.

Disaster Planning

502132 240 .28.00 Refer to Part B Clause 80 and Part C of these Guidelines for further information.

Infection Control

502133 240 .29.00 Refer to Part D of these Guidelines for further information.

Environmental Considerations

502134 240 .30.00 ACOUSTICS

Refer to Part B of these guidelines.

Environmental Considerations

502135 240 .31.00 NATURAL LIGHT

Essential in general work areas.

502136 240 .32.00 INTERIOR DESIGN

Refer to Part B of these Guidelines

Space Standards and Components

502137 240 .33.00 ERGONOMICS

Refer Part C of these Guidelines for information.

502138 240 .34.00 HUMAN ENGINEERING

Refer Part C of these Guidelines for information.

502139 240 .35.00 ACCESS AND MOBILITY

Refer Part C of these Guidelines for information.

502140 240 .36.00 DOORS, WINDOWS AND CORRIDORS

Refer Part C of these Guidelines for information.

Safety and Security

502141 240 .37.00 SAFETY

Shelving and workbenches must meet Occupational Health & Safety Standards

502142 240 .38.00 SECURITY

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 unauthorised 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 unauthorised 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.

Safety and Security

502143 240 .39.00 OPTICAL DISC 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 unauthorised persons.

System access and security systems must have multi-dimensional passwords that can avoid unauthorised intrusion into the system and particular records.

Finishes

502144 240 .40.00 WALL PROTECTION

Refer to Part C of these Guidelines

502145 240 .41.00 FLOOR FINISHES

Refer to Part C of these Guidelines

502146 240 .42.00 CEILING FINISHES

Refer to Part C of these Guidelines

Fixtures & Fittings

502147 240 .43.00 Refer to part C of these Guidelines and to the Room Data Sheets (RDS) and Room Layout Sheets (RLS) for further detailed information

Building Service Requirements

502148 240 .44.00 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

502149 240 .45.00 DURESS ALARM SYSTEM

Locate at Reception.

Building Service Requirements

502150 240 .46.00 LIGHTING

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

502151 240 .47.00 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.

COMPONENTS OF THE UNIT

General

502152 240 .48.00 The Clinical Information Unit will consist of a combination of Standard and Non-Standard Components.

Standard Components

502153 240 .49.00 Standard Components must comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data and Room Layout Sheets.

Provide the Standard Components as identified in the Schedule of Accommodation.

Non-Standard Components

502154 240 .50.00 Provide the Non-Standard Components as identified in this section and in the Schedule of Accommodation, according to the Operational Policy and Functional Brief.

502155 240 .51.00 ASSEMBLY / SORTING 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).

May have “zones” for assembled files ready for issue and records waiting to be refiled. Will need workstations and sorting tables.

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.

502156 240 .52.00 DICTATING CUBICLE

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.

502157 240 .53.00 ACTIVE FILE STORE

DESCRIPTION AND FUNCTION

All the medical records will be stored in adjustable steel shelving bays. The number of years held in active storage will depend on available space. 5 years is ideal but spatial constraints may restrict this to 3-4 years only but anything less is not acceptable with regard to efficiency of record retrieval.

The average size of the medical record is 305 x 240mm and may be stored vertically or horizontally (i.e. number of shelves per 100 bay 7 for the latter and 6 for the former). Each file is allocated a unique identifying number.

LOCATION

Direct access to / from the assembly/sorting area.

CONSIDERATIONS
Lighting to be parallel with direction of filing bays to ensure adequate lighting of each aisle.

Schedule of Accommodation

502158 240 .54.00 A Generic Schedule of Accommodation for a Clincial Information Unit at Levels 3/4 and 5/6 follows.

In the NSW Health - Guide to the Role Delineation of Health Care Facilities, (Third Edition 2002), Medical Records is not defined by level of service as are other Clinical Support Services such as Pharmacy. Therefore for the purpose of developing this schedule of accommodation, levels are assumed to provide the necessary support to the hospital overall.

WORK AREAS

ROOM/SPACE	Standard Component			Level 3/4 Qty x m2		Level 5/6 Qty x m2	Remarks
WORK AREAS							
RECEPTION	yes			1 x10		1 x 10	
WAITING - SUB	yes			1 x 4		1 x 6	
MEETING (INTERVIEW) ROOM - SMALL	yes			1 x 9		1 x 9	Interviews
RECORD PROCESSING				1 x 25		1 x 50	Main work area
BAY - MOBILE EQUIPMENT	yes			1 x 4		2 x 6	Trolleys
REVIEW / DICTATION CUBICLES				1 x 9		1 x 20	
RECORDS STORE - ACTIVE				Project specific		Project specific	Sqm assessment needs to include circulation between aisles otherwise increase the 15%
OFFICE - SINGLE - HI DEPUTY MANAGER	yes			0		1 x 9	
OFFICE - SINGLE -HI MANAGER	yes			1 x 9		1 x 12	
WORKSTATION - HIM				5.5		5.5	According to Staff Establishment
OFFICE - MEDICO-LEGAL	yes			1 x 9		1 x 12	12 sqm = 2 staff
OFFICE - WORKSTATION (TYPING)				4.4		4.4	No. determined by staff establishment and operational policy
OFFICE - WORKSTATION (CODING)				1 x 6		6	Quiet environment. No. determined by staff establishment and operational policy
STORE - GENERAL				1 x 9		1 x 9	
WORKROOM - SCANNING & PROCESSING	yes			1 x 20		1 x 20	Optional, depending on Policy
STORE - PHOTOCOPY / STATIONERY	yes			1 x 8		1 x 8	

502162 240 .54.10 STAFF AREAS

STAFF AREAS							
MEETING ROOM - MEDIUM	yes			Share		1 x 15	Unit meetings

PROPERTY BAY - STAFF	yes			1 x 2		1 x 2	
BAY - BEVERAGE	yes			1 x 3		1 x 5	After-Hours use
TOILET - STAFF	yes			1 x 2		1 x 2	Particularly for after-hours access
DISCOUNTED CIRCULATION %				15%		15%	Refer Active File Store
RECORDS STORE - ARCHIVE				Project Specific		Project Specific	May be remote

Functional Relationships

502159 240 .55.00 A diagram of key functional relationships is attached.

Checklists

502160 240 .56.00 A Security Checklist is appended to this document. Refer also to Part C of these Guidelines for general requirements.

References and Further Reading

502161 240 .57.00 DS-20 – HBG – Medical Records Unit, NSW Department of Health, Capital Works Branch, July 1993.

Patient Matters Procedure Manual for NSW Health System. http://www.health.nsw.gov.au/audit/manuals/patient_matters_toc.html

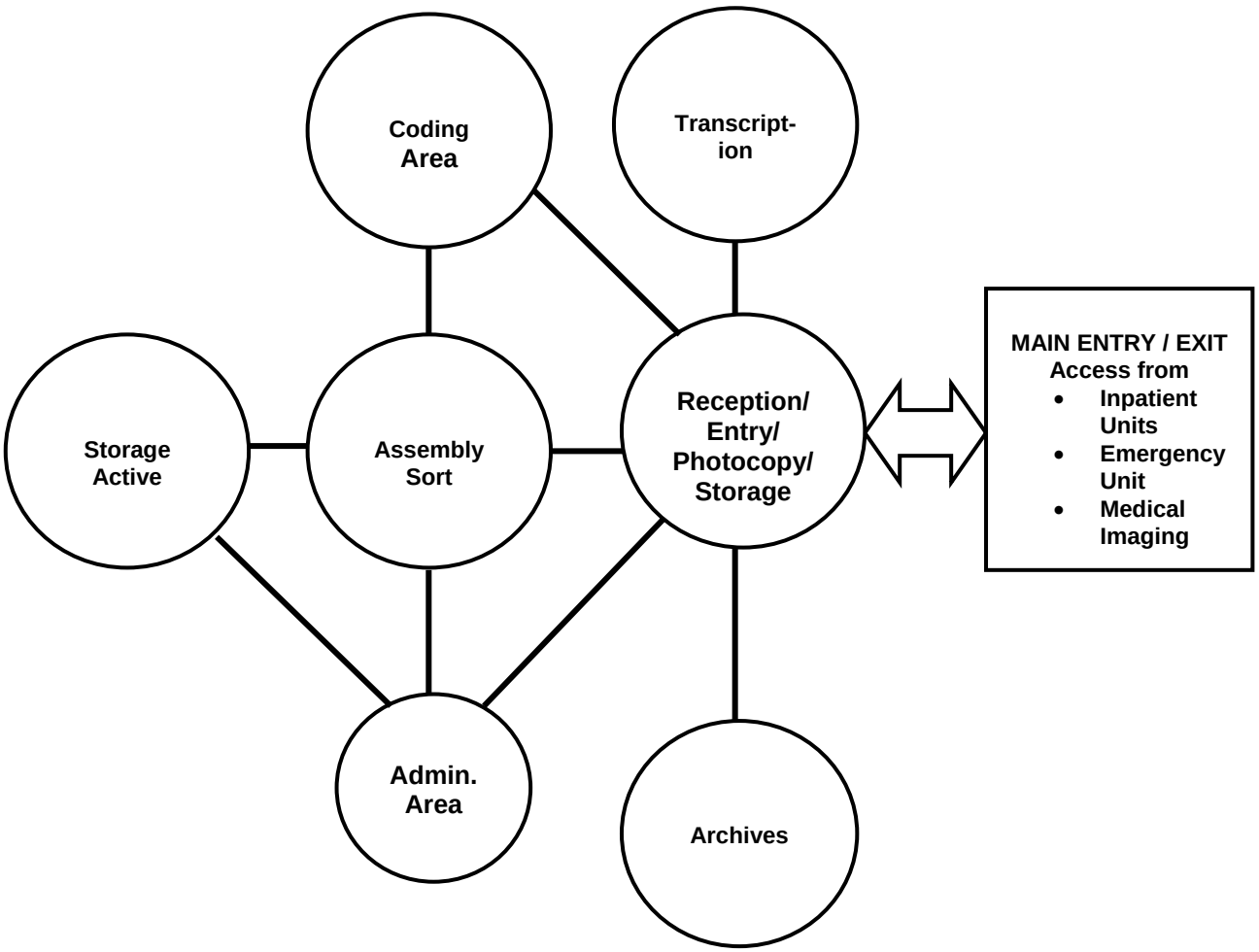
“Filmless & Paperless Hospitals – An Emerging Reality in the UK, Medical Architecture Research Unit, London, UK, August 2001.

Calculations of Active Records Storage

503263 240 .58.00 A Schedule is attached.

FUNCTIONAL RELATIONSHIP DIAGRAM –CLINICAL INFORMATION UNIT

The following diagram sets out the relationships between zones in a Clinical Information Unit:



SECURITY ISSUES TO BE CONSIDERED IN CLINICAL INFORMATION UNIT

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

SPECIFIC SAFETY AND/OR SECURITY RISKS	POTENTIAL SOLUTIONS
1. Patient files	1. Personnel working on these files must return to secure area after use. 2. If any electronic files are produced, locate in restricted area of hard drive.
2. Furniture fittings and equipment including Computers and Office Equipment	1. Non-removable 'Asset No.' on all equipment above a predetermined value.. 2. Keep equipment in lockable area.
3. Hospital personnel safety	1. Staff working in this area to have knowledge of where the fixed duress system is located and/or use a mobile duress pendant. 2. Provide appropriate after-hours access and security, including secure access from all parts of the facility.
4. Staff personal effects	1. Provision for lockers in staff areas and lockable desk drawer to keep small personal effects.

SECURITY CHECKLIST – CLINICAL INFORMATION UNIT

FACILITY:	**DEPARTMENT: Clinical Information Unit**
RISK ISSUE	**DESIGN RESPONSE**
1. Do staff have access to both fixed and mobile duress systems?	
2. Is access to patient records restricted to staff entitled to that access?	
3. Is a system implemented to prevent theft of equipment, files, personal possessions, etc?	
4. How is after hours access provided for staff?	
5. How is this area secured during and after hours?	
6. Are there lockable storage areas available for specialised equipment?	
7. Is lockable furniture provided for storage of staff personal effects?	
8. How is after-hours access provided for staff, including access from all other areas of the facility?	
9. Has a secure waiting area been planned in this area that allows for the public to present at a counter, sign forms, wait and then receive photocopies of relevant records as requested?	

DESIGN COMMENTARY /NOTES	**DESIGN SIGN-OFF**
	Name: …… Position: …….. Signature: …….. Date: ……..
	Name: …… Position: …….. Signature: …….. Date: ……..
	Name: …… Position: …….. Signature: …….. Date: ……..

CALCULATION OF ACTIVE RECORDS STORAGE

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

Determine the current records to be stored per annum

a) Annual Admitted Patient Separations + Annual New Non-Admitted (Outpatient & 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 allows for the expansion of the file with each readmission.

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

b) Estimate % increase in activity in future years

This information should be available from the overall Health Services Planning process

c) Multiply total number of current records per annum by % 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(5) years worth 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: $\frac{\text{Number of records}}{\text{Number of records per linear metre}}$ = **Total linear metres required**

Step 6 : Total Bays Required (Note / = divided by)

Identify shelving configuration e.g. 6 shelves per bay x 900w = 5.4 linear metres per bay.

Can be calculated in two ways**.**

a) Total Records by Shelves

Formula: Total Number of Records / Number of records per shelf x number of shelves

= Total Number of Bays

b) Total Linear Metres by Linear Metres per Bay

Formula: Total Linear Metres / Linear Metres per Bay

= Total Number of Bays

Note: It is useful to perform both calculations as a cross-check as total should be the same.

Step 7 : Terminal Digit (TD) Filing

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

Formula = Metres of Shelving Required
Number of Primary Digits
= linear metres per TD section

Step 8: Determine Total Number of Storage Bays with TD Filing

Formula = Linear Metres per TD section x 100
Number of Metres Storage per Bay
= Total bays

Note: Compare this figure to that obtained in Step 6. 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.

a) 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. 900mmw and 1500mm)

e.g. If 8 stacks are required, assume stacks are arranged in 4 rows of 2 stacks

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 x 1.5 aisles) + (3 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 8.18 = 175.87m^2 (176 m^2)

Note: Need to include space for aisles in calculation otherwise 15% discounted circulation for the whole Unit will be inadequate

Note: that this is an approximation and final amount would depend on layout of shelving.

b) 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

Eg. = 300mm + 450mm = 750mm per bay width

= 0.75 m^2 per bay x number of bays x 15%

= Estimated floor area required