
B Inpatient Services**B1 COMPREHENSIVE CARDIOLOGY CARE UNIT**

B1.1 SERVICE DESCRIPTION

B1.1.1 Scope of Clinical Services

This section B1 sets out the requirements for the centralized facilities for the Facility's Comprehensive Cardiology Care Unit (CCCU) to be achieved or accommodated by Project Co in providing the Works and the Services. The range of services to be provided within this component includes:

This component contains patient care, staff support, and visitor support facilities used in the provision of "critical" care to cardiac care adult patients. Pediatric patients will generally not be accommodated here, but will be accommodated on the Pediatric Inpatient Unit or be stabilized only and transferred to an appropriate centre. Specialized medical and nursing services are provided to patients requiring intensive care and/or observation, electronic monitoring in a family-centred environment.

The Comprehensive Cardiology Care Unit includes an 8-bed coronary care area and a 16-bed telemetry care area with shared support areas.

Patients admitted for coronary care require at least one of the following:

- Close and constant observation in a high nurse/patient ratio
- Intravenous anti-arrhythmic therapy
- Hemodynamic monitoring
- Arrhythmia monitoring
- Thrombolytic therapy
- Temporary pacemaker implants
- Respiratory support following myocardial infarction

Patients admitted for telemetry care require at least one of the following examples of specialized care/treatment:

- Close and constant observation in a high nurse/patient ratio
- Cardiac monitoring
- Platelet aggregate inhibitor infusion
- IV infusion of cardiac specific medications
- Close supervision in conjunction with telemetry monitor
- Percutaneous transluminal revascularization and post angioplasty care
- Pacemaker insertion and elective cardioversion
- Occasional post-op coronary artery bypass grafting
- Nitroglycerine infusions

All patients in the CCCU requiring acute care mechanical ventilation will be transferred to the Intensive/Stepdown Care Units (see section B4). Intravenous medication and nutritional interventions will be regularly used here. In the event of the admission of inmates, these patients will be accompanied by prison guards.

Specialized medical and patient care services are provided to patients with known or suspected cardiac failure problems requiring observation and/or electronic monitoring support through the telemetry beds. Patients provided with telemetry equipment will be able to be mobile and away from their bedroom, while maintaining contact with the care station in the event of an emergency.

B Inpatient Services

B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

Care services in the unit will include, among others:

- Receiving all patients after admitting procedures
- Assessing and monitoring patients' physical, psychological and spiritual needs
- Planning and implementing routine nursing care including examinations and treatments
- Providing emergency nursing assessments and treatments
- Administering medications, consulting with physicians and pharmacists as appropriate
- Preparing patients for diagnostic and treatment services
- Facilitating patient comfort and relaxation, recreation and activation
- Providing family and/or visitor support and consultation
- Liaising with community agencies and services
- Educating patients, family, staff, and students
- Documenting patients' progress on patient charts
- Maintaining patient charts/records
- Conducting shift reports and participating in interdisciplinary patient conferences
- Coordinating, implementing, communicating, administering, scheduling, and evaluating the overall operations of the unit

Medical services in the unit will include, among others:

- Collecting and documenting historical medical information
- Ordering medical diagnostic and treatment procedures
- Performing physical examinations and some medical procedures
- Prescribing medications, consulting with nursing staff and pharmacists as appropriate
- Providing emergency medical examination and treatment
- Educating patients, family, staff, students, and residents
- Documenting patients' medical progress on patient charts
- Participating in interdisciplinary patient conferences

Most clinical support service team members (e.g., social work, education, psychology, physiotherapy, occupational therapy, dietetics, laboratory, pharmacy, spiritual care) will travel to the Comprehensive Cardiology Care Unit from their central components, as required.

Any of the above clinical support services may be involved in interdisciplinary patient conferences.

B1.1.1.1 Current Trends

In providing the Works and Services, Project Co shall take into account the following trends:

- *An aging population's impact on case mix complexity and the move towards a more aggressive treatment regime for the elderly to improve success rates.*
- *The move to consolidate critical care within the service area and within the region.*
- *Life support systems appear to be trending away from 'headwalls' toward 'freestanding' models.*
- *Direct care will be decentralized closer to the bedside with central functions, including a 'unit clerk', central monitoring and a place for non-resident interdisciplinary team members.*
- *Rooms will be larger, designed for more equipment and procedures such as line insertions.*

B Inpatient Services**B1 COMPREHENSIVE CARDIOLOGY CARE UNIT**

B1.1.2 Scope of Education Services

The Comprehensive Cardiology Care Units will provide clinical resources in support of teaching programs for the following types and numbers of students:

- Medical/surgical residents, 4 at a time
- Medical undergraduates, up to 4 at a time
- Nursing (diploma, undergraduate and graduate) students, up to 8 at a time (on one shift)
- Pharmacy undergraduates/residents, 1 at a time
- Physiotherapy students, up to 2 at a time
- Occupational therapy students, up to 2 at a time
- Dietetic intern, 1 at a time
- Social work students, up to 3 at a time
- Respiratory therapy students for vents, 2 to 3 at a time
- Unit clerk students, up to 1 at a time

Inservice education and patient teaching programs will also occur within the unit.

B1.1.3 Scope of Research Services

Clinical research may be conducted within the component generally occurring within available space provided in support of service functions.

B1.1.4 Specific Exclusions

This specification excludes critical care services/requirements provided elsewhere, including:

- Pediatric patients will generally not be accommodated here, but will be accommodated in the Pediatric Inpatient Unit (see section B5 Maternal Child Program) or will be stabilized and transferred to another appropriate care centre.
- Cardiology patients requiring mechanical ventilation will be transferred to the ICU area of the Intensive/Stepdown Care Units (see section B4 Intensive/Stepdown Care Units).

B1.2 OPERATIONAL DESCRIPTION**B1.2.1 Minimum Hours of Operation**

The Comprehensive Cardiology Care Unit will be staffed 24 hours a day, 7 days a week.

B Inpatient Services

B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

B1.2.2 Patient Management Processes

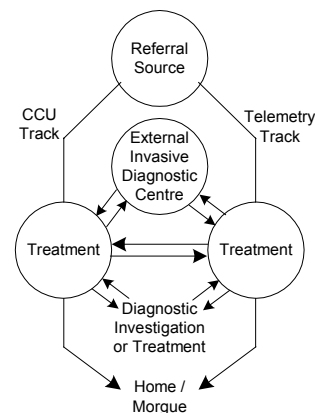
B1.2.2.1 Referral Source

Most patients will be admitted from Emergency following initial resuscitation/stabilization. Others will come from other inpatient areas of the Abbotsford Hospital or from other hospitals/long-term care homes in the service area. Following the initial acute episode in the coronary care unit, cardiac patients will be transferred to the telemetry care unit for monitoring.

Patients will normally arrive on a stretcher. Patient will be accompanied by a porter and a nurse when transferred to and from the unit.

B1.2.2.2 Inpatient Care/Treatment

The unit will, of necessity, contain an increasing variety and complexity of technical equipment and can be quite noisy and active, especially in emergency situations.



Patient Flow Diagram

Patients (and especially cardiac patients) are very sensitive to noise disturbance. The design should strive to contain/absorb noise wherever possible, especially for cardiac patients.

Each patient bed area is to be provided with visual and acoustical privacy from activities in adjacent spaces.

A patient sitting area is required in the patient cubicle to encourage patients to get out of bed as soon as possible.

Lighting systems must be designed to provide for adequate nursing care yet maintain optimum patient comfort. Patients can be quite sensitive to intense levels of lighting and use of dimmers may be appropriate. Night-time lighting must facilitate patient sleeping while maintaining nurse-patient observation.

Patients should at least be aware of time and day (day/night orientation) and weather conditions. Natural lighting will help maintain circadian cycles and decrease problems of "ICU/CCU psychosis." All patient beds in the unit should provide exterior views to provide patients with an alternative to a very technical environment and to provide relief to staff working in the units. The ability to see vegetation and activity is very desirable. Windows will be operable to offer natural ventilation and have low sills to afford views to prone patients.

The patient bed cubicles will all be the same size and will be closed, with sliding glass doors at the corridor and between rooms to allow for maximum accessibility and observation.

Room finishes as well as furnishings will be selected so as to create a bright, cheerful, positive environment for patients undergoing a high degree of stress.

A clothes closet, plus shelves for personal effects, etc. will be provided. Space will also be provided for a supply cart in each cubicle.

B Inpatient Services**B1 COMPREHENSIVE CARDIOLOGY CARE UNIT**

CCCU patients can be supported in either private or semi-private rooms. Coronary Care beds will be used for patients who are in the acute stage. These patients may be transferred to telemetry beds if continued monitoring is required after the acute phase.

Critically ill patients are generally relatively immobile and unable to move any distance to use a washroom. It is intended that commodes will be used for this purpose. Folding toilets built into the bed cubicles are considered undesirable.

Provision will be made for cardiac patients to ambulate for one day prior to transfer out of the unit through use of telemetry monitoring.

Provide for visual privacy between each adjacent patient bed and the corridor, ideally by means of intrinsic louvre blinds built into double-glazed windows in doors and walls.

B1.2.2.3 Visitor Control

Opportunity must be provided for emotionally distressed or grieving family members to find privacy areas away from other patient visitors. Overnight sleeping facilities will also be provided.

Unnecessary traffic to the unit will be carefully controlled. Relatives and friends of critically ill patients will wait in an adjacent area until being admitted to the unit. This waiting area will be large enough to accommodate extended families and will be discretely located to allow for the needs of the bereaved. It will be equipped with a communication device (telephone and a door buzzer), monitored by staff at the nurses' station. Patient areas will not be visible from visitor areas.

B1.2.3 Patient Information Management

Refer to Output Specifications, Section 3: Non-Clinical Services, subsection D1 Information Management; Section 5: Design and Technical, subsection 5.3.17 Technology and Communication Systems; and Section 6: IT/Tel Services.

B Inpatient Services

B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

B1.2.4 Staff Work Processes

B1.2.4.1 Care Delivery

Nursing care is based upon a concept known as decentralized client-centred care. Generally, one registered nurse is assigned the total care of one or two patients in the CCU. In the telemetry unit a nurse may be assigned the care of as many as two to three patients.

Both nurses and physicians will have areas where they can discuss a patient's condition/information in private. Although the nurses' station will not be accessible to patients, an acoustically private conference area will also be provided. Dictation areas will be designed for acoustic privacy.

The physical environment, supplies and material resources will be planned and developed to maximize nursing time at the bedside. Distance from the patient beds to support areas will be as short as possible to minimize travel time to/from the bedside.

All patient bed areas must be provided with generous space at the sides, head and end of the bed to accommodate life support and monitoring equipment and often a large number of staff, and to allow access around the patient's head in an emergency. Room should also be provided for bedside computer charting.

All patients must be directly visible from adjacent nurse work areas. It is important that visual contact be maintained at all times between nursing staff and patients. Nursing staff must have direct views of a patient's head and face without being isolated from other activities in the unit.

The unit clerk's office could be peripheral.

Consideration will be given to locating a semi-enclosed nurse substation/charting area directly adjacent to each pair of bed cubicles with direct observation, through a window, of each of the patients and the patient monitor screens.

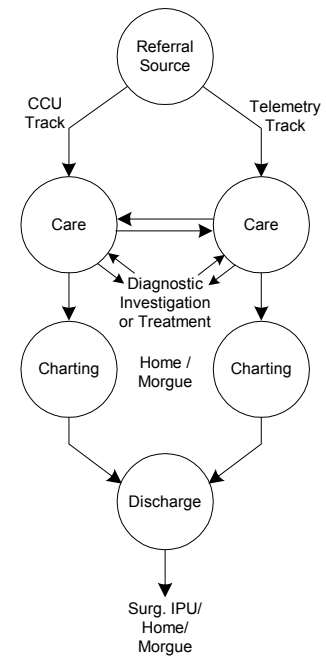
The substation will be large to be used by one nurse if the nurse to patient ratio is 1:2 or by 2 nurses if the ratio is 1:1.

B1.2.4.2 Staff Services

Outer clothing will be stored in coat closets located in a lockable coat hanging area. Students and volunteers will also have space for coat storage in the coat closets. Purse lockers will be provided for personal valuables and will be shared across shifts. A small staff break room will be provided for beverage making, staff debriefing, grieving and rest.

Facilities will be provided for on-call medical staff to stay overnight.

The staff conference room will also be available for use as a visitors' quiet room and will be available for a large family group, from time-to-time, but will primarily serve as an education and training room, skills lab and student conference room.



Process Flow Diagram

B Inpatient Services

B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

B1.2.5 Materiel Services

Refer to Output Specifications, Section 4: Facility Management Services, subsection E7 Materiel Services, and Section 2: Clinical Services, subsection C8 Sterile Processing Services.

B1.2.6 Linen/Housekeeping Services

Refer to Output Specifications, Section 4: Facility Management Services, subsections E5 Housekeeping Services and E6 Laundry/Linen Services.

B1.2.7 Equipment Asset Management

Refer to Output Specifications, Section 4: Facility Management Services, subsection E2 Biomedical Engineering; and Section 7: Equipment.

B1.3 ACTIVITY INDICATORS

The table below summarized the projected activity for critical care services which must be addressed by Project Co in performing the Works and the Services.

B1.3.1 Hospital Activity

Unit	Minimum Projected Yearly Activity
<u>Coronary Care Unit</u>	
# Cases	993
# Patient-Days	2,482
ALOS (Days)	2.5
% Occupancy	85.0
# Beds Set-Up	8
<u>Telemetry Care Unit</u>	
# Cases	1,502
# Patient-Days	5,256
ALOS (Days)	3.5
% Occupancy	90.0
# Beds Set-Up	16

B1.3.2 Cancer Centre Activity (Incl. in Hospital Activity above)

B Inpatient Services

B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

B1.4 PEOPLE REQUIREMENTS

This component will have a total staff complement in the range of 55 FTE, consisting of 49 nurses, 2 clinicians, and 4 clerical/administrative personnel.

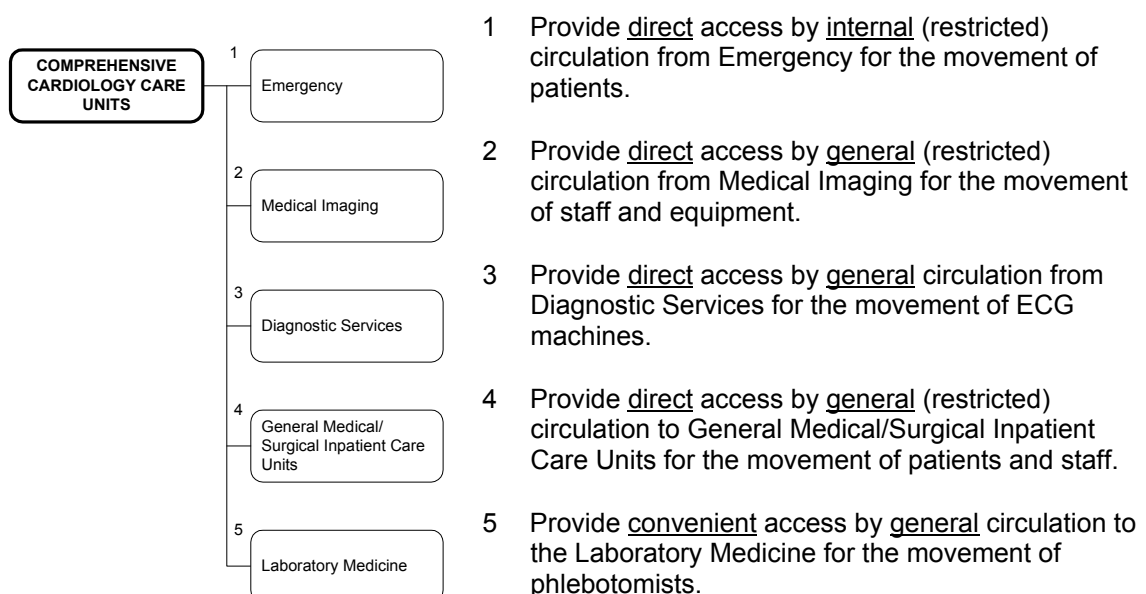
It is anticipated that the key functional areas in the component will need to accommodate the following maximum number of people.

Functional Areas	Patients	Staff	Visitors	Others	Total
<u>Coronary Care Unit Area (8 beds)</u>					
Patient Care Area	8	10-12	16-20	3-4	37-81
Staff Work Area	0	10-12	0	3-4	13-16
<u>Telemetry Care Unit Area (16 beds)</u>					
Patient Care Area	16	10-15	30-40	5-8	61-79
Patient Care Support Area	1-2	4-5	4-6	1-2	10-15
Staff Work Area	0	10-15	0	5-8	15-23
<u>Shared Support Area</u>					
Shared Patient Care Support Area	0	4-5	0	1-2	5-7
Shared Administrative Area	0	20-25	0	1-2	21-27
Shared Visitor Support Area	0	0	20-25	1-2	21-27
Shared Staff Facilities Area	0	15-20	0	1-2	16-22

B1.5 DESIGN CRITERIA

B1.5.1 Key External Relationships

The following key relationships will be achieved in the priority order as numbered for the purposes stated:



B Inpatient Services**B1 COMPREHENSIVE CARDIOLOGY CARE UNIT**

B1.5.2 Key Internal Relationships/ Environmental Considerations

The following will be achieved:

B1.5.2.1 Zoning

The component will be generally organized into two zones of patient care activity, one for the CCU, and one for the telemetry unit but some areas will be shared and require accessibility from both.

B1.5.2.2 Future Expansion

Refer to Output Specifications, Section 1: Key Site and Building Design Criteria, subsection 1.2.3.3 Flexibility and Expandability.

B1.5.2.3 Room Isolation Capability/Infection Control

Refer to Output Specifications, Section 1: Key Site and Building Design Criteria, subsection 1.2.4.5 Infection Control; and Section 5: Design and Technical, Division 15 Mechanical.

B1.5.2.4 Doors to Unit

All doors leading into or out of the unit will be automatic and hand-activated.

B1.5.2.5 Doors to Bed Cubicles

It is essential that the sliding doors between the corridor and the bed cubicles open up to provide a wide opening (ideally 2.4 metres) to allow maximum accessibility during an emergency.

B1.5.2.6 Component Functional Diagrams

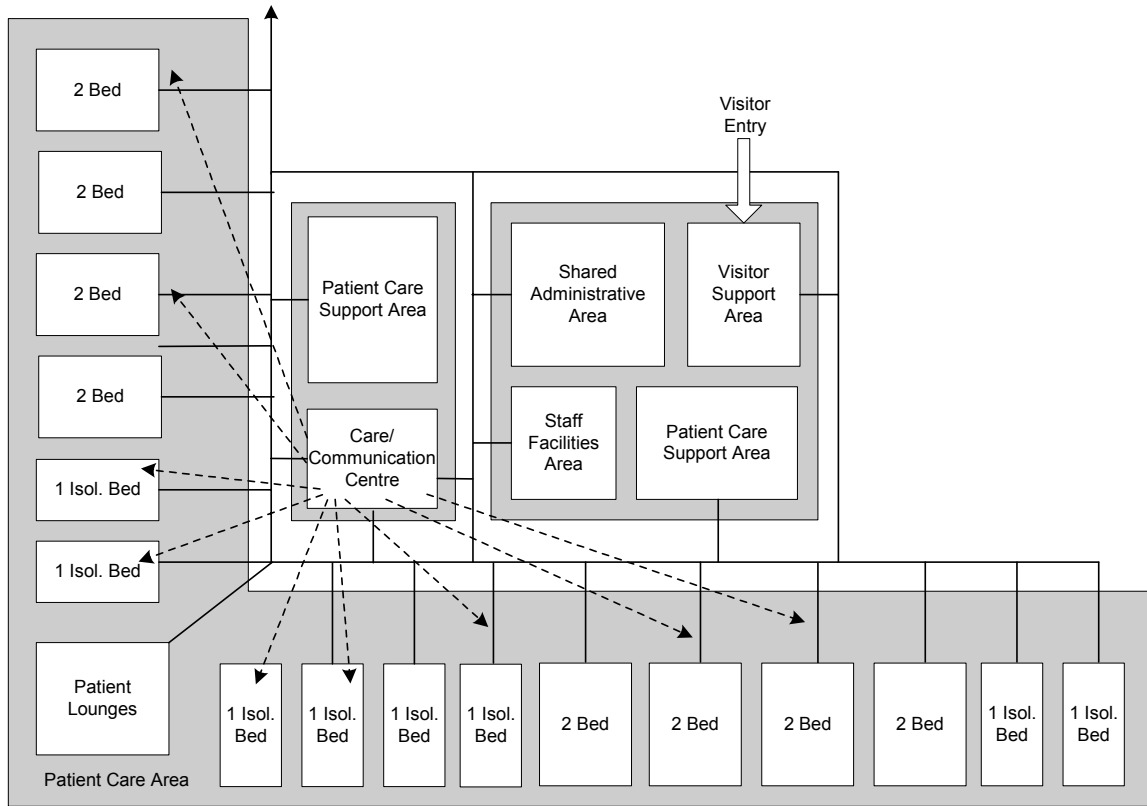
The spatial organization of this component will be generally as shown in the diagrams below.

B1.5.2.6.1 *Macro Relationship Diagram*

None provided

B Inpatient Services
B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

B1.5.2.6.2 Micro Relationship Diagram



Legend

- ==== Immediately Adjacent
- Direct Access
- Reasonably Close Access
- ←--- Direct Visual Supervision

Diagram above is not to imply that one wing is coronary and one is telemetry. As stated on page 161 there are 8 coronary beds and 16 telemetry beds.

B Inpatient Services**B1 COMPREHENSIVE CARDIOLOGY CARE UNIT****B1.5.3 Schedule of Accommodation** (Note: Spaces listed in parentheses () are spaces supporting services provided by Project Co and are included in the total net square metres.)

Ref	Space	Area Requirements		
		units	nsm/unit	nsm
	<u>Patient Care Area (24 beds)</u>			
01				
01-1	Bedroom, Private (Isolation with Ante Room B1-02)	2	24.0	48.0
01-2	Bedroom, Private (with Ante Room B1-02)	2	24	48.0
01-3	Bedroom, Private (without Ante Room)	4	24	96.0
02	Ante Room	4	4.0	16.0
03	Washroom, Patient, Wheelchair Type	8	5.5	44.0
04	Bedroom, Semi-Private	8	26.0	208.0
05	Washroom, Patient, Wheelchair Type	8	5.5	44.0
	Subtotal			504.0
	<u>Patient Care Support Area</u>			
06	Lounge, Patient/Family/Visitor	2	15.0	30.0
07	Washroom, Public, Wheelchair Type	1		5.0
08	Quiet Room	1		12.0
09	Quiet/Grieving/Interview Room	1		12.0
10	Food Service Galley	1		(20.0)
11	Storage, Equipment	1		45.0
12	Mobile X-Ray Alcove	1		3.0
13	Housekeeping Closet	1		(5.0)
	Subtotal			132.0
	<u>Staff Work Area</u>			
14	Care/Communications Centre	1		25.0

B Inpatient Services**B1 COMPREHENSIVE CARDIOLOGY CARE UNIT**

Ref	Space	Area Requirements		
		units	nsm/unit	nsm
15	Pneumatic Tube Station	1		1.0
16	Crash Cart Alcove	1		0.5
17	Physician Dictation/Work Area	1		8.0
18	Medications Alcove	1		10.0
19	Nourishment Centre	1		(5.0)
20	Washroom, Staff	1		2.5
21	Clean Supply Holding Room	1		(15.0)
22	Soiled Utility Room	1		(10.0)
23	Soiled Holding Room	1		(10.0)
Subtotal				87.0
<u>Administrative Area</u>				
24	Office, Medical Director	1		9.0
25	Office, Patient Care Manager	1		9.0
26	Office, Nurse Clinician	1		12.0
27	Office/Interview, Social Worker	1		12.0
28	Office, Pharmacist	1		12.0
29	Conference Room	1		24.0
Subtotal				78.0
<u>Staff Facilities Area</u>				
	On-Call Room			0 ¹
30	Break Room, Staff	1		24.0
31	Staff Coat Closet	1		4.0

¹ See B2 General Medical/Surgical Inpatient Care Units.

B Inpatient Services

B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

Ref	Space	Area Requirements		
		units	nsm/unit	nsm
32	Washroom, Staff	1		2.5
	Subtotal			30.5
	Total			831.5

B1.6 DESIGN GUIDANCE

None

B1.7 OTHER SPECIFICATIONS

Cardiology services are primarily based in the Comprehensive Cardiology Care Units, however, other specifications that will be consulted are:

- A3 General Day Care Unit
- B2 General Medical/Surgical Inpatient Care Units
- B4 Intensive/Stepdown Care Units
- B5 Maternal Child Program
- C7 Surgical Services

B Inpatient Services

B1 COMPREHENSIVE CARDIOLOGY CARE UNIT

Purposely left blank for pagination.