

**Royal Inland Hospital (RIH)
Clinical Service Building (CSB)
Functional Program Report**

August 2013



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A. INTRODUCTION

Purpose

This report constitutes the 2012 Functional Program for the Royal Inland Hospital (RIH) Clinical Service Building (CSB). It was prepared by RMC Resources Management Consultants (Alberta) Ltd. in association with DIALOG, who is serving as the prime architectural consultant on the project.

The primary purpose of the Functional Program is to provide Interior Health (IH) with the information required to make informed decisions regarding the programs/ services, functional, operational and space requirements of the project. It provides a comprehensive understanding of the activities and the functional needs of each program element, which must be accommodated in the new facility. Specifically, the Functional Program:

- Documents the scope of services, operational procedures and methods, projected workload and staffing assumptions, functional relationships, planning criteria, and room-by-room space requirements for each program component.
- Serves as a planning tool for the RIH service providers - it documents scope of service, objectives and basic operational methods of the specific component; and specifies the human, technical, and building resources necessary to function as intended.
- Acts as a communication tool - it outlines what each component intends to do and why, and assists in securing the necessary resources and project approvals to proceed with the project.
- Provides the assumptions, parameters and foundation for the building design including the space requirements for the new facility (net and gross areas) - it provides instruction to the architectural and engineering team for the preparation of schematic and detailed design and construction documents.

Functional Program Organization

The report is organized as follows:

- Introduction*, summarizes the purpose, background, planning process and contents of the Functional Program.
- Programming Parameters*, outline the project scope, principles and other key parameters and assumptions that serve as the guiding framework for the Functional Program.
- Functional Program Summaries*, for workloads, staffing and space.
- Functional Program Components*, present the more detailed information on projected programs and services and their functional and space requirements, organized according to the 10 components that are included in the approved Functional Program scope.

Background & Planning Process

The Functional Programming work began in late August 2012 when the DIALOG team was selected for the project. From the outset, the DIALOG team has remained committed to meeting the aggressive project implementation schedule. A key factor in maintaining the schedule has been a significant overlap in functional programming and design activities.

Royal Inland Hospital CSB Functional Program

A. Introduction

The 2010 RIH Master Concept Plan and accompanying Master Program were seminal documents in providing key background information for the project. Updated population data and projections and historical workload information were provided to the programming team by IH. For most components, the programming team used this information to develop estimated future workload projections in consultations with the users.

Best practice space guidelines and standards were used to develop the space, i.e. benchmark guidelines such as the CSA.

To develop and review the detailed Functional Program information, the programming team held three series of user/stakeholder meetings in Kamloops that brought together representatives of all of the program components, including on-site service providers, management staff and regional representatives. The Functional Program drafts were circulated for review and comments by the user representatives.

Subsequently, the Final Draft Functional Program was signed off by the identified program representatives, subject in most cases to relatively minor changes and revisions.

RMC Resources Management Consultants (Alberta) Ltd. wishes to acknowledge the input, review and ongoing support of IH, and in particular, the user/stakeholder representatives and the RIH senior management team.

Functional Programming Approach

In developing the Functional Program, RMC assisted the RIH user representatives to focus on:

- Reflecting current best practices and emerging trends in health care services delivery.
- Achieving innovation, flexibility and operational efficiency in program delivery, facility planning and design (with the assistance of a LEAN practitioner as part of the consulting team).
- Ensuring that functional needs are adequately reflected in the space allocations in order to achieve optimum use of resources, and to accommodate future change and flexibility.
- Developing programmed space allocations in relation to method of use, function, occupancy, equipment requirements, and other key parameters, as well as testing the programmed space against valid benchmarks obtained from comparative facilities.

Glossary of Terms

Following are explanations of some common terms frequently used in the Functional Program.

Circulation - The movement of patients, staff, public and materials within the building and site, typically categorized as follows:

- *Dedicated Circulation*: Circulation for specified people or material, which may or may not require a control point.
- *Internal Circulation*: The system of connecting links (corridors, stairs, etc.) within components, connecting rooms of a component or directly connecting contiguous components.
- *General Circulation*: Public connecting links (corridors, stairs, elevators, entrances, etc.) between components and serving the building as a whole.

Royal Inland Hospital CSB Functional Program

A. Introduction

- Restricted Circulation: Internal circulation for specified people, which can be entered only by passing a control point.

Component or Functional Component - A cohesive grouping of activities or spaces related by service or physical arrangement, by which the Functional Program is organized. A component may or may not be a department since the term "department" refers to an administrative organization rather than a functional organization of space and activities.

Component Gross Square Meters (CGSM) - The portion of a building assigned to a specific component (department), including net areas, internal circulation, partitions and small mechanical shafts. For programming purposes, the CGSM is usually determined by multiplying the total net square meters by a component gross-up factor.

External Relationships - The prioritized functional relationships and proximities of one component to another.

FTE - Full Time Equivalent - A term used to express the conversion of a number of annual paid hours into the number of individuals who, if they were working a complete shift on a regular schedule basis, would be required to accommodate that number of hours.

Functional Program - An assessment and description of the proposed services, activities, workload and staffing of a facility's components, together with an allocation of the facility resources (space) required to support them.

Headcount - The number of people actually working in a component or area at peak utilization, which includes full time, part time and casual employees. The headcount or maximum headcount is often a key parameter in determining facility requirements including parking.

Internal Relationships - The prioritized functional relationships and proximities between rooms/areas within a component.

Net Square Meters (NSM) - The horizontal area of space assignable to a specific function. The net area of a room is measured to the inside face of wall surfaces.

B. PROGRAMMING PARAMETERS

Program Scope

The Royal Inland Hospital (RIH) Master Concept Plan (June 2011) identified the urgent need for increased parking capacity onsite and space for clinical service expansion. The business case for the project (date April 26, 2012) identified the program scope:

- Two levels of clinical spaces constructed over a parkade structure. Each clinical floor will have a component gross floor area (CGSM) of 2,100m². Assuming a building gross factor of approximately 24%, a total gross floor area (GFA) of 5,180m² for two clinical floors. Master Programming for clinical spaces will include UBC Medical School, Outpatient Laboratory, Cardiopulmonary/ Neurodiagnostics, Medical Outpatient services (includes Vascular Improvement Program, IV Therapy, and Specialty Medical Clinics and Pre-Surgical Screening), Community Respiratory Therapy, Education Centre (including a lecture theatre) and required Support Space; and
- Four level Parkade structure containing 350 stalls. The parkade will be based on 3,000m² floor plate accommodating approximately 87/88 stalls per floor. The parking garage will have an overall gross area of 12,000m².
- A net area of 600m² for commercial retail space to be constructed at the North end of the parkade adjacent to Columbia Street. Assumes an additional 180m² of base building landlord finished space that will be required to access to the parking garage as well as access to the commercial retail spaces.

The following are the expected benefits of adding a Parkade and Clinical Service Building at RIH:

- Significantly improves patient and visitor access to RIH services;
- Enable standardization of parking services on-site;
- Reduce staff concerns over staff and patient safety as they travel between their vehicles and the site;
- Eliminate the waitlist for staff parking on site;
- Improve community relationships;
- Provide parking and improves vehicle/pedestrian access to site; and
- Prepare the site for Phases 1 and 3 of the RIH Master Site Plan.

Project Guiding Principles

Programming Principles:

1. Plan space to meet functional and workload requirements, based on the 2026/27 planning horizon and recognizing the potential for future growth and expansion. A draft phasing plan was prepared for consideration by IH and it is attached to this report.
2. Plan to meet current infection prevention and control, workplace health and safety, and security standards.
3. Plan for optimum flexibility in the use of space, e.g. to accommodate changes in practice and operations, as well as future growth and surge.
4. Plan to optimize the sharing of space, e.g. facilitate modularity and multi-functional space.

Royal Inland Hospital CSB Functional Program

B. Programming Parameters

5. Respect patient/client privacy in the planning of processes and space, e.g. on how information is collected and managed.
6. Plan the environment based on best practices.

Service Delivery Planning Principles:

1. Provide an integrated service delivery model for patient access to improve patient flow and access to services. (Note: The LEAN consultant provided valuable input in this area.)
2. Plan service delivery to respond to community needs.
3. Plan services based on the 2026/27 planning horizon, taking into consideration population projections and changes in utilization rates, practices and referral patterns.
4. Leverage other system providers and services to enhance care.
5. Focus on individual and family-centered care, including the enhancement of self-managed care.
6. Promote healthy and safe behaviors, including workforce action plans for staff.

Operational Principles:

1. Focus on quality - excellence in the care and work environment.
2. Improve access to information among health care providers to improve quality of care.
3. Support enhanced education and its integration within the clinical environment.
4. Enhance health care provider skills within a changing health system.
5. Facilitate health care provider collaboration and interdisciplinary team building.
6. Explore innovative strategies and Lean principles to improve efficiencies in operational processes, e.g. the streamlining of patient booking and record keeping.

Project Components

The Functional Program includes the following project components.

1. Outpatient Laboratory & ECG
2. Cardiopulmonary/Neurodiagnostics
3. Community Respiratory Therapy
4. IV Therapy
5. Pre-Surgical Screening & OR Booking
6. Medical Outpatient Services
7. Vascular Improvement Program
8. UBC Medical School – Kamloops Affiliated Regional Centre
9. Education
10. Staff & Support Space

C. FUNCTIONAL PROGRAM SUMMARIES

Population Projections

The December 2010 Master Program report included the population projections for the RIH service area. The following table is updated information based on the latest P.E.O.P.L.E.S. 36 population information. The updated information did not change in a significant way from the information presented in the December 2010 Master Program report.

The IH West area includes Revelstoke, Salmon Arm, Kamloops, 100 Mile House, North Thompson, Cariboo-Chilcotin, Lillooet, South Cariboo and Merritt. The following set of tables presents the demographic information for IH West (Source: BC Stats - PEOPLE 36 Population Projections).

Age Group	2012	2017	2022	2027	% Change (2012-2017)	% Change (2012-2022)	% Change (2012-2027)	2012 % of Total	2017 % of Total	2022 % of Total	2027 % of Total
0-4	10,749	11,608	11,980	11,697	8.0	11.5	8.8	4.7	4.9	4.9	4.6
5-9	10,734	11,652	12,690	13,205	8.6	18.2	23.0	4.7	4.9	5.2	5.2
10-14	11,522	11,493	12,556	13,781	-0.3	9.0	19.6	5.1	4.9	5.1	5.4
15-19	13,307	11,787	11,881	13,074	-11.4	-10.7	-1.8	5.9	5.0	4.8	5.1
20-24	15,958	12,985	11,671	11,902	-18.6	-26.9	-25.4	7.0	5.5	4.7	4.7
25-29	14,497	16,205	13,523	12,437	11.8	-6.7	-14.2	6.4	6.9	5.5	4.9
30-34	12,293	15,738	17,660	15,134	28.0	43.7	23.1	5.4	6.7	7.2	5.9
35-39	12,112	13,637	17,341	19,408	12.6	43.2	60.2	5.4	5.8	7.1	7.6
40-44	13,944	13,119	14,827	18,703	-5.9	6.3	34.1	6.2	5.6	6.0	7.3
45-49	16,660	14,591	13,888	15,753	-12.4	-16.6	-5.4	7.4	6.2	5.6	6.2
50-54	18,498	16,886	14,935	14,325	-8.7	-19.3	-22.6	8.2	7.2	6.1	5.6
55-59	18,189	18,470	16,927	15,088	1.5	-6.9	-17.0	8.0	7.8	6.9	5.9
60-64	16,630	17,912	18,210	16,761	7.7	9.5	0.8	7.3	7.6	7.4	6.6
65-69	13,767	16,030	17,273	17,595	16.4	25.5	27.8	6.1	6.8	7.0	6.9
70-74	10,221	12,780	14,910	16,098	25.0	45.9	57.5	4.5	5.4	6.1	6.3
75-79	7,471	8,942	11,261	13,153	19.7	50.7	76.1	3.3	3.8	4.6	5.1
80-84	5,263	5,950	7,186	9,124	13.1	36.5	73.4	2.3	2.5	2.9	3.6
85+	4,562	5,923	7,090	8,496	29.8	55.4	86.2	2.0	2.5	2.9	3.3
Total	226,377	235,708	245,809	255,734	4.1	8.6	13.0				

Year	IH West	IH	BC	IH West Population as % of IH	IH West Population as % of BC
2012	226,377	749,027	4,639,577	30.2%	4.9%
2017	235,708	788,750	4,970,385	29.9%	4.7%
2022	245,809	829,047	5,309,990	29.6%	4.6%
2027	255,734	866,990	5,633,099	29.5%	4.5%

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C. Functional Program Summaries

Population 65+ & 75+ as Percentage of Total Population								
Area Description	65+				75+			
	2012	2017	2022	2027	2012	2017	2022	2027
Revelstoke	15.1	17.7	21.1	24.5	6.7	7.5	8.8	10.3
Salmon Arm	23.0	26.0	28.0	29.9	10.2	11.2	12.9	14.8
Kamloops	17.1	19.5	21.8	23.4	7.4	8.3	9.7	11.1
100 Mile House	22.9	28.0	30.0	30.2	8.2	11.2	13.7	15.8
North Thompson	18.4	23.1	26.7	28.0	7.1	9.4	11.9	14.6
Cariboo - Chilcotin	14.6	18.1	21.5	24.1	5.7	6.7	8.5	10.7
Lillooet	15.9	18.2	20.1	22.1	6.4	7.7	8.5	10.0
South Cariboo	21.8	25.6	29.2	31.6	8.5	10.9	13.3	15.8
Merritt	17.8	19.4	21.5	22.6	7.1	8.3	9.4	10.4
IH West Total	18.2	21.1	23.5	25.2	7.6	8.8	10.4	12.0
Interior Health	19.6	22.1	24.4	26.3	8.9	9.6	10.9	12.6
British Columbia	15.7	17.8	19.9	21.8	7.2	7.6	8.5	9.9

Observations Regarding IH West Demographic Profile Information

The IH West population is projected to increase 4.1% by 2017 and 13.0% by 2027.

The IH West constitutes approximately 30% of the IH Population.

The seniors population (aged 65+) is a significant population in the IH West. The 65+ population will increase from 18.2% (2012) of the IH West population to 25.2% by 2027.

The next set of tables presents demographic information for the Kamloops area (Source: BC Stats – PEOPLE 36 Population Projections).

Kamloops LHA Population Distribution by 5-year Age Group - Current & Projected												
Age Group	2012	2017	2022	2027	%	%	%	2012 % of Total	2017 % of Total	2022 % of Total	2027 % of Total	
					Change (2012- 2017)	Change (2012- 2022)	Change (2012- 2027)					
0-4	5,435	5,728	5,901	5,795	5.4	8.6	6.6	4.8	4.8	4.7	4.4	
5-9	5,358	5,989	6,371	6,643	11.8	18.9	24.0	4.7	5.0	5.1	5.0	
10-14	5,667	5,844	6,560	7,062	3.1	15.8	24.6	5.0	4.9	5.2	5.3	
15-19	6,510	5,909	6,170	6,965	-9.2	-5.2	7.0	5.8	5.0	4.9	5.3	
20-24	7,877	6,516	6,005	6,339	-17.3	-23.8	-19.5	7.0	5.5	4.8	4.8	
25-29	8,436	8,158	6,924	6,544	-3.3	-17.9	-22.4	7.5	6.9	5.5	5.0	
30-34	6,847	9,211	8,999	7,880	34.5	31.4	15.1	6.1	7.7	7.2	6.0	
35-39	6,266	7,653	10,134	10,019	22.1	61.7	59.9	5.6	6.4	8.1	7.6	
40-44	7,396	6,890	8,380	10,991	-6.8	13.3	48.6	6.6	5.8	6.7	8.3	
45-49	8,337	7,799	7,364	8,949	-6.5	-11.7	7.3	7.4	6.6	5.9	6.8	
50-54	8,948	8,492	8,000	7,629	-5.1	-10.6	-14.7	7.9	7.1	6.4	5.8	
55-59	8,778	8,924	8,501	8,058	1.7	-3.2	-8.2	7.8	7.5	6.8	6.1	
60-64	7,697	8,598	8,776	8,390	11.7	14.0	9.0	6.8	7.2	7.0	6.3	
65-69	6,327	7,364	8,253	8,455	16.4	30.4	33.6	5.6	6.2	6.6	6.4	
70-74	4,692	5,920	6,915	7,775	26.2	47.4	65.7	4.2	5.0	5.5	5.9	
75-79	3,543	4,192	5,316	6,227	18.3	50.0	75.8	3.1	3.5	4.2	4.7	
80-84	2,497	2,841	3,399	4,338	13.8	36.1	73.7	2.2	2.4	2.7	3.3	
85+	2,270	2,854	3,410	4,090	25.7	50.2	80.2	2.0	2.4	2.7	3.1	
Total	112,881	118,882	125,378	132,149	5.3	11.1	17.1					

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Community	Type	2006	2011	% Change
Kamloops	C ¹	83,129	87,654	5.4%
Chase	VL	2,439	2,497	2.4%
Logan Lake	DM	2,198	2,215	0.8%
Barriere	DM ²	1,209	1,693	na
Total Area	LHA	105,491	111,641	5.8%
Total West	HSA	213,205	224,230	5.2%
Total IH	IHA	690,394	737,468	6.8%
Total BC	BC	4,243,580	4,573,321	7.8%

Notes:

C = City, VL = Village, DM = District Municipality.

All figures correspond to municipal boundaries as of July 1st of the year stated.

All figures are as of July 1st of the year stated.

¹ Denotes a boundary or status change between July 1, 2006 and June 30, 2011.

² New incorporations: Barriere on Dec 4, 2007.

Source: Demographic Analysis Section, BC Stats

Year	Kamloops LHA	IH West	IH	Kamloops LHA Population as % of West	Kamloops LHA Population as % of IH
2012	112,881	226,377	749,027	49.9%	15.1%
2017	118,882	235,708	788,750	50.4%	15.1%
2022	125,378	245,809	829,047	51.0%	15.1%
2027	132,149	255,734	866,990	51.7%	15.2%

Age Group	2012	2017	2022	2027	% Change (2012-2017)	% Change (2012-2022)	% Change (2012-2027)	2012 % of Total	2017 % of Total	2022 % of Total	2027 % of Total
<20	22,970	23,470	25,002	26,465	2.2	8.8	15.2	20.3	19.7	19.9	20.0
20-44	36,822	38,428	40,442	41,773	4.4	9.8	13.4	32.6	32.3	32.3	31.6
45-64	33,760	33,813	32,641	33,026	0.2	- 3.3	- 2.2	29.9	28.4	26.0	25.0
65+	19,329	23,171	27,293	30,885	19.9	41.2	59.8	17.1	19.5	21.8	23.4
Total	112,881	118,882	125,378	132,149	5.3	11.1	17.1				
75+	8,310	9,887	12,125	14,655	19.0	45.9	76.4	7.4	8.3	9.7	11.1
85+	2,270	2,854	3,410	4,090	25.7	50.2	80.2	2.0	2.4	2.7	3.1
IH West	226,377	235,708	245,809	255,734	4.1	8.6	13.0				
IHA	749,027	788,750	829,047	866,990	5.3	10.7	15.7				

Notes: Figures in the 75+ row overlap with those shown in 65+ row. Figures in the 85+ row overlap with those shown in the 65+ row and the 75+ row.

Observations Regarding Kamloops Area Demographic Profile Information

- The Kamloops area population is projected to increase by 5.3% by 2017, 11.1% by 2022 and 17.1% by 2027.
- The seniors population (age 65 plus) is a significant population. The 65+ population is projected increase by nearly 60% from 2012 to 2027, i.e.: 19,329 in 2012 to 30,885 in 2027.

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Workload Summary

The following workload summary table presents the current and projected workload for the programs/ services included in the CSB project.

Workload Measure	Historical			Projected		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
1. Outpatient Laboratory & ECG						
# Outpatient Lab Procedures	1,239,078	1,310,703	1,322,682	1,375,590	1,405,393	1,496,754
# ECGs (includes in & outpatients)	20,468	17,514	23,330	24,260	27,070	31,130
2. Cardiopulmonary & Neurodiagnostics						
<i>Neurodiagnostics</i>						
EEG	686	648	697	725	856	985
EMG	2,718	2,332	2,491	2,590	3,084	3,550
Evoked Potential	22	14	16	17	40	47
Sleep Studies	529	631	701	730	835	960
<i>Cardiology Diagnostics</i>						
ECGs	15,492	20,468	17,514	21,290	27,070	31,130
Stress Tests	2,154	2,064	2,136	2,220	2,311	2,660
Holter	1,087	1,539	2,390	1,600	1,965	2,260
Pacemaker	1,528	1,718	1,785	1,855	2,272	2,615
<i>Pulmonary Function Tests (PFTs)</i>	11,670	12,122	12,595	26,940	28,060	32,269
3. Community Respiratory Therapy (RT)						
# IHN Community RT Visits/year	830	N/A	N/A	1,835	1,910	2,195
# Community RT Visits/year	1,113	N/A	N/A	2,150	2,240	2,575
# HOP Diagnostic & Therapeutic Procedures/year	4,641	N/A	N/A	5,895	6,140	7,060
4. IV Therapy						
# of Patients/Day	N/A	N/A	5,760	11,520	11,520	11,520
5. Pre-Surgical Screening (PSS) & OR Booking						
<i>Inpatient Surgery</i>						
# of Visits/year	4,868	4,875	4,682	5,070	6,345	6,600
Length of Cases (hrs)	9,269	9,407	8,977			
Average Hours/Visit	1.92	1.93	1.92			
<i>Surgical Day Care</i>						
# of Visits/year	6,270	6,354	5,828	6,610	8,655	9,900
Length of Cases (hrs)	5,631	5,801	5,317			
Average Hours/Visit	0.90	0.91	0.91			
Total Surgical Visits	11,108	11,229	10,510	11,680	15,000	16,500
% SDC of total Surgeries	56.4%	56.6%	55.5%	56.6%	57.7%	60.0%

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Workload Measure	Historical			Projected		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
6. Medical Outpatient Services (OPS)						
Ear, Nose & Throat (ENT) Clinic	317	145	173	330	360	383
Rheumatology Clinic	1,377	1,300	1,229	1,280	1,562	1,664
Gynecology	409	291	360	425	464	494
New Tertiary Clinic Visits/Year	N/A	N/A	N/A	22,000	23,040	30,720
7. Vascular Improvement Program (VIP)						
VIP Visits per Year	3,808	4,220	5,136	5,350	7,306	8,197
8. UBC Medical School - Kamloops Affiliated Regional Centre						
Not Applicable						
9. Education Centre						
Not Applicable						
10. Staff & Support Space						
Not Applicable						

Notes: The 2015/16 workload projections for most services are pro-rated based on the projected population growth (from 2011/12 to 2015/16) of approximately 4% growth. The IV Therapy workload assumes 12 treatment spaces in operation in 2015/16. For some services, a previous year was used as the base year, e.g. holter monitoring and ECG 2015/16 projections based on 2010/11 actual, ENT 2015/16 projection based on 2009/10, and the 2015/16 surgical projections based on 2010/11 when there was a more complete complement of specialists at RIH. PFT 2015/16 projections assumes an additional respirologist on staff. The IV Therapy area will also support PICC line insertions. The estimated number of insertions is expected to be 60 to 90 per month.

The historical and projected workload (based on the 2010 master program information) was reviewed and updated to reflect current utilization and projection information.

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Staffing Summary

Position	Current Staff			2015 Projected Staff <small>(growth based)</small>		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
1. Outpatient Lab & ECG						
<i>TOTAL</i>	<i>2.20</i>	<i>3</i>	<i>2</i>	<i>4.20</i>	<i>5</i>	<i>5</i>
2. Cardiopulmonary/Neurodiagnostics						
Pulmonary	2.00	2	2	2.00	2	2
Cardiology	5.80	6	6	6.40	7	7
Vascular	2.00	3	2	2.00	3	2
Neurodiagnostics	7.00	7	7	7.00	7	7
Manager	1.00	1	1	1.00	1	1
Professional Practice Lead	1.00	1	1	1.00	1	1
Clerical/reception	3.00	4	3	3.00	4	3
<i>TOTAL</i>	<i>21.80</i>	<i>24</i>	<i>22</i>	<i>22.40</i>	<i>25</i>	<i>23</i>
3. Community Respiratory Therapy (RT)						
Resp - HOP	2.00	2	2	2.00	2	2
Resp - Community	2.00	2	2	2.00	2	2
Resp - IHN & Breathe Well	3.50	4	4	3.50	4	4
<i>TOTAL</i>	<i>7.50</i>	<i>8</i>	<i>8</i>	<i>7.50</i>	<i>8</i>	<i>8</i>
4. IV Therapy						
Registered Nurse	2.00	2	2	3.00	3	3
Unit Clerk (shared)	0.00	0	0	1.00	1	1
PICC Nurse	1.00	1	1	2.00	2	2
OPT Nurse	1.00	1	1	3.00	4	4
<i>TOTAL</i>	<i>4.00</i>	<i>4</i>	<i>4</i>	<i>9.00</i>	<i>10</i>	<i>10</i>
5. Pre-Surgical Screening (PSS) & OR Booking						
PSS Nurse	6.20	7	6	6.20	7	6
PSS Clerk	2.00	2	2	2.00	2	2
OR Booking	4.00	4	4	5.00	5	5
<i>TOTAL</i>	<i>12.20</i>	<i>13</i>	<i>12</i>	<i>13.20</i>	<i>14</i>	<i>13</i>

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Position	Current Staff			2015 Projected Staff <small>(growth based)</small>		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
6. Medical Outpatients (Future Program Administration)						
Registered Nurse	0.0	0	0	2.00	2	2
Licensed Practical Nurse	0.00	0	0	1.00	1	1
Social Work	0.00	0	0	0.50	1	1
Unit Clerk	0.00	0	0	1.00	1	1
<i>TOTAL</i>	<i>0.00</i>	<i>0</i>	<i>0</i>	<i>4.50</i>	<i>5</i>	<i>5</i>
7. Vascular Improvement Program (VIP)						
Registered Nurse	2.75	4	4	4.00	6	6
Program Assistants	1.40	2	2	2.00	2	2
Dietitian	0.20	1	1	0.50	1	1
Exercise Specialist	0.40	1	1	0.50	1	1
Clinical Coordinator	0.90	1	1	0.90	1	1
Program Coordinator	0.80	1	1	0.80	1	1
<i>TOTAL</i>	<i>6.45</i>	<i>10</i>	<i>10</i>	<i>8.70</i>	<i>12</i>	<i>12</i>
Additional Staff Required to Support CSB						
Plant & Maintenance	n/a	n/a	n/a	2.50	3	3
Logistics/Supplies	n/a	n/a	n/a	1.00	1	1
Laundry	n/a	n/a	n/a	0.50	1	1
Porters	n/a	n/a	n/a	2.00	2	2
Housekeeping	n/a	n/a	n/a	12.06	13	13
<i>TOTAL</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>18.06</i>	<i>20</i>	<i>20</i>
GRAND TOTAL	54.15	62	58	87.56	99	96

Notes: The projected staffing in this table shows the staffing to support the projected service volume shown in the workload summary table.

Notes:

The staffing information in the table above was reviewed and updated by the RIH senior management team. It reflects the projected staffing by 2015 assuming all programs and services are in operation at that point in time.

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Space Summary

Component / Space Description	Total NSM	Total CGSM	Remarks
1. Outpatient Lab & ECG			
Patient Intake	34.5		Component grossing factor of 1.40
Lab Patient Collection & Processing Area	69.0		Component grossing factor of 1.40
Lab Supply Area	9.0		Component grossing factor of 1.35
Other Support Areas	7.8		Component grossing factor of 1.35
Sub Total:	120.3	164.9	
2. Cardiopulmonary/Neurodiagnostics			
Waiting/Reception/Administrative Support	74.5		Component grossing factor of 1.35
Cardiology Diagnostics	140.0		Component grossing factor of 1.40
Pulmonary Diagnostics	55.0		Component grossing factor of 1.40
Neurodiagnostics	163.5		Component grossing factor of 1.40
Clinic Support Area	45.5		Component grossing factor of 1.40
Staff Support Area	7.2		Component grossing factor of 1.35
Sub Total:	485.7	672.4	
3. Community Respiratory Therapy (RT)			
Waiting/Reception/Administrative Support	22.0		Component grossing factor of 1.35
Patient Examination & Education Area	64.5		Component grossing factor of 1.40
Clinic Support Area	10.0		Component grossing factor of 1.40
Staff Support Area	2.4		Component grossing factor of 1.35
Sub Total:	98.9	137.2	
4. IV Therapy			
Waiting/Reception/Administrative Support	28.0		Component grossing factor of 1.35
Patient Treatment Area	206.5		Component grossing factor of 1.40
Clinic Support Area	43.0		Component grossing factor of 1.40
Staff Support Area	6.3		Component grossing factor of 1.35
Sub Total:	283.8	395.6	
5. Pre-Surgical Screening			
Waiting/Reception/Administrative Support	85.0		Component grossing factor of 1.35
Patient Examination Area	72.0		Component grossing factor of 1.40
Clinic Support Area	10.0		Component grossing factor of 1.40
Staff Support Area	8.4		Component grossing factor of 1.35
Sub Total:	175.4	240.9	

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Component / Space Description	Total NSM	Total CGSM	Remarks
Waiting/Reception/Administrative Support	82.0		Component grossing factor of 1.35
Patient Examination & Education Area	312.0		Component grossing factor of 1.40
Clinic Support Area	51.0		Component grossing factor of 1.40
Staff Support Area	12.0		Component grossing factor of 1.35
Sub Total:	457.0	635.1	
7. Vascular Improvement Program (VIP)			
Waiting/Reception/Administrative Support	50.5		Component grossing factor of 1.35
Patient Examination Area	189.5		Component grossing factor of 1.40
Clinic Support Area	10.0		Component grossing factor of 1.40
Staff Support Area	8.1		Component grossing factor of 1.35
Sub Total:	258.1	358.5	
8. UBC Space			
Centralized Area - Teaching & Learning	168.4		Component grossing factor of 1.35
Centralized Area - Locker & On-Call	115.1		Component grossing factor of 1.35
Administration Offices	81.3		Component grossing factor of 1.35
Family Practice	39.0		Component grossing factor of 1.35
Sub Total:	403.8	545.2	
9. Education			
Entry & Catering Area	87.0		Component grossing factor of 1.35
Lecture Theatre	228.0		Component grossing factor of 1.35
Education Breakout Area	30.0		Component grossing factor of 1.35
Skills Lab	108.5		Component grossing factor of 1.35
Sub Total:	453.5	612.2	
10. Staff Support & Retail			
Staff Area & Common Support Space	151.5		Component grossing factor of 1.35
Lobby Area (incl. info desk and public washrooms)	189.0		Component grossing factor of 1.35
Retail Area	600.0		Component grossing factor of 1.35
Sub Total:	940.5	1313.6	Component grossing factor of 1.35
TOTAL	3,677.0	5,075.6	

Note: The existing space inventory of programs/services planned for the CSB is included as Attachment 1 to this report. Please note that some programs do not have existing space, e.g. Medical Outpatient Services.

C. Functional Program Summaries

Clinical Support and Logistical Support Overview

Meetings with representatives from the Clinical and Logistical Support Services were held to determine the impact of the CSB on their services. The following provides a summary of the key outcomes of the discussions.

I. Clinical Support Services

Biomedical Services: Biomedical staff will repair equipment in the clinical area, or as required will bring the equipment to the workshop in the main building of RIH. For the most part, the equipment in the CSB will be 'low tech' equipment. No additional staff resources are anticipated to support the CSB.

Diagnostic Imaging: The PICC service will require access to a portable x-ray as required. An alcove to store the portable x-ray unit should be included in the layout for the PICC area (which is part of #4. IV Therapy functional program). No other space or staffing implications were identified.

Patient Registration: As much as possible, patients coming to the CSB will be pre-registered patients. If patients are not pre-registered, the key direction will be to register patients at the point-of-care. Space has been allocated in each clinic area in the CSB to support decentralized registration. Clinic administrative staff will book/schedule patient appointments. The Patient Registration department will remain in the main building of RIH.

Health Records: Until the electronic patient record is in place, secure record file storage in each clinic area will be required. The functional programs for the clinical areas have included space to store patient records. It is assumed that clinic administrative staff will manage the secure storage of these records. The Health Records department will remain in the main building.

Infection Control: Clean linen should be stored on carts in enclosed alcoves. For IV Therapy, 1 sink is required for every 3 patient treatment spaces. All examination and procedure rooms require hand wash sinks. All patient examination rooms require soiled hampers. Additional infection control requirements are described in the functional programs.

Pharmacy: The Pharmacy will continue to operate from their current location in the main building. As required medication room space has been provided in the CSB, e.g. IV Therapy. No other space or staffing implications were identified.

II. Logistical Support Services

Security: The Staff Support & Support Space functional program describes in detail the security requirements for the CSB. The following are the highlights:

- Flow and access will be controlled through design and technology.
- Interior space shall be designed so as to provide staff the ability to impose a secure physical barrier between the public and staff/operational areas therefore providing the ability to control who is granted access.
- Identified entrances to the spaces will be equipped with proximity card reader technology. The access control system shall be integrated into the site's existing system.

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

- Video images of all public areas, corridors, entrances/exits and lobbies/vestibules shall be recorded. Video surveillance system technology shall be integrated into the site's existing system infrastructure. Camera placement and video quality shall provide high quality images that provide true representation of colours, facial features and overall details within the environment in all expected lighting conditions.
- Specifically addressed emergency duress alarms shall be incorporated throughout the facility including.
- Parkade lighting shall provide white coloured light in order to enable true colour rendering for security cameras and shall of a sufficient level so as to achieve a minimum of 5 foot-candles (horizontally and vertically) of illumination uniformly throughout the parking structure.
- Blind corners shall be minimized to the extent practical and convex mirrors of sufficient size shall be used to help mitigate safety risk relating to both vehicle and pedestrian traffic areas where they do exist.
- Pedestrian routes within the parkade that traverse sloped surfaces or stairs shall be well marked and incorporate anti-slip surfaces.

Food Services: Minimal patient food service requirements for the CSB are anticipated. Small nourishments for some programs (e.g. IV Therapy) can be provided as required delivered by porters. There will be a pedway between the CSB and the main building allowing people to access food services in the main building.

CSB Medical Supplies: Replenishment medical supplies located throughout the facility will be achieved on a top-up basis as follows:

- Supply Chain staff will prepare replenishment orders for the carts, based on consumption data, at an off-site central facility (Kelowna). Supplies from the Kelowna facility will be delivered to the stores area in the main building of RIH.
- Replenishment supplies will be delivered to the CSB on a cart.
- Supply carts located in the clean supply rooms in the clinical areas will be topped up by Supply Chain staff. In most cases, this activity will occur after regular business hours.
- To transport supplies, 1.0 FTE Transportation Attendant will be required. For porter services, an additional 2.0 FTE is projected.

Housekeeping: Soiled linen, garbage and biomedical waste will be stored in the soiled utility space located in the clinical areas. It is assumed that as much as possible, disposable products will be used in the clinical areas. Housekeeping staff will pick up the soiled supplies and transport them to the lower level or the main building loading dock area. As required, a macerator should be included in the soiled utility room. The supplies for the macerator (e.g. kidney basins, urinals, etc.) should not be stored in the soiled utility room. Recycling products will be transported from the program areas to recycling bins located on the lower level of the CSB (Note: The recycling program is a contracted service).

Royal Inland Hospital CSB Functional Program

C. Functional Program Summaries

Clean linen will be delivered to the clinical areas and the linen carts will be topped up by housekeeping staff. Housekeeping rooms are planned on Level 1 and 2 of the CSB. The housekeeping rooms are of sufficient size to clean small equipment as required (i.e. 12.0 nsm per room). Larger equipment will be transported to the main building for cleaning.

An additional 12.06 FTE for housekeeping and 0.5 FTE for a Laundry worker anticipated.

IMIT: The Staff & Support Space component includes 4 IT Telecom rooms to support the IT needs in the CSB. No additional IMIT staff is anticipated to support the CSB.

Plant & Maintenance Services: Plant Services will continue to operate from the workshop space in the main building. Additional staff will be required (project 2.5 FTE) to support the CSB.

D. FUNCTIONAL PROGRAMS

1. OUTPATIENT LABORATORY & ECG

A. OVERVIEW

Outpatient Laboratory and ECG will include the following services:

- Outpatient specimen collection
- Outpatient ECG testing

The following service planning assumptions apply to this component:

- The outpatient collection area will not do specimen analysis. As required, staff will spin the specimens before sending to the core laboratory for analysis (via pneumatic tube). Space for a centrifuge, biosafety hood and under counter refrigerator will be required in the processing work area.
- It is assumed the Medical Laboratory Assistants (MLAs) will do the specimen collection and perform the ECGs. Currently, Cardiology technologists in the Cardiopulmonary/ Neurodiagnostics department deliver the ECG service.
- It is assumed that the majority of outpatients will come to this centralized specimen collection area. There will be a pneumatic tube to send specimens to the core laboratory in the main building.
- Bone marrow procedures will continue to be performed in the ambulatory care area in the main building. In all likelihood, Fine Needle Aspirations (FNAs) will also remain in the current laboratory area, but in future could be performed in the outpatient area depending on the availability of a pathologist.
- The existing specimen collection area and associated staffing in the main laboratory will remain as is to support the inpatient area and other services in the main building.
- The MLA currently stationed in Emergency will continue to be located in that area.
- It is assumed the Tutor Village location for outpatient specimen collection will continue to operate, although it is acknowledged there are space concerns with that location.
- It is assumed the Clinical Service Building (CSB) will support a wireless environment, have a pneumatic tube system and offer short term (perhaps free) parking for these patients.
- A pneumatic tube system between the CSB lab and the main laboratory is essential.
- It is assumed that Logistics will top up phlebotomy supplies and MLAs will top up the phlebotomy carts.
- Staff rooms and washrooms will be shared among programs and be strategically located in common areas for ease of access by all staff.
- Vocera system will be available for communication within the CSB as well as with Lab and other departments in RIH.

B. SERVICES / FUNCTIONS

Scope of Services

Outpatient Laboratory & ECG

As mentioned above, this area will collect specimens for outpatients. As well, outpatient ECGs will be performed in this zone.

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
Cardiopulmonary/ Neurodiagnostics	X	Co-locating Outpatient Laboratory & ECG will support further integration of outpatient diagnostics services.
Pre-Surgical Screening (PSS)	X	The proposed CSB plan will have PSS adjacent which will allow for the seamless flow of pre-surgical patients requiring a diagnostic workup prior to surgery.

Education Role

Education will be accommodated as follows:

- Most clinical teaching will occur within available clinical spaces with convenient access to group teaching facilities required. All Education rooms will be Telehealth capable.

Research Role

As appropriate, this area will participate in applied health research studies as required. No additional space is projected to support research activities. It is assumed that research will be conducted in the clinical area.

C. OPERATIONS

Patient Profile

- Patients will be from all age groups and some patients will have mobility issues.
- Families with children in strollers will be coming to the area and therefore adequate space for strollers in the waiting area is required.

Patient Flow

Service Delivery Principles & Methods

- A designated waiting space will be provided.
- Laboratory staff will receive and register patients. Patient privacy/ confidentiality must be addressed in the overall design of this area.
- From the waiting area, patients will be accompanied to a phlebotomy chair or private collection area for registration and specimen collection. If a patient requires an ECG, they will be taken to the ECG room once registered.
- Family or support persons will be able to accompany the client into clinical space, or will wait in the waiting area.

Royal Inland Hospital CSB Functional Program

1. Outpatient Laboratory & ECG

Future Patient Journey

Routine Outpatient Laboratory Specimen Collection

Patients will be referred for outpatient lab services by a primary care provider in the community or by a clinician at RIH (CSB, Ambulatory Care, Inpatient, etc.), and will arrive at the Outpatient Laboratory with a Laboratory Requisition for specimen collection.

The projected CSB service model is that a single MLA will serve a patient from beginning to end of the encounter, with continuous flow.

The patient journey begins with arrival at the Outpatient Laboratory waiting room. The patient will take a number and wait for their number to be called in order. An MLA will call the next patient, by number, ask for their Laboratory Requisition and BC Care Card, and will escort the patient to a specimen collection chair or private room. The MLA will verify the Requisition information and query the patient on their compliance (e.g. fasting). If the Requisition is complete/correct and the patient compliant, the MLA will register the patient and input the Requisition orders, which triggers printing of collection labels on an adjacent label printer. The MLA will retrieve the collection labels from the label printer, and will proceed with specimen collection. For urine specimens, the MLA will provide the patient with a pre-labelled container. The patient will use the Outpatient Lab patient washroom for auto-collection and place the specimen container in a designated location or a pass-through device. Following specimen collection and any required waiting period, the patient departs the Outpatient Laboratory.

Outpatient Laboratory Specimen Drop-Off

In some cases patients are required to auto-collect specimens at home and bring them in to the Lab for analysis. In this case, when the patients first present at a Laboratory with their Requisition, they may or may not be registered, depending if they are having other tests done at the same time. Registration for drop-off specimens only, will take place at the time of the specimen drop off. They will be given required collection containers and labels, which they take away. When they have completed their collection(s), they will return to the Outpatient Laboratory to drop off their collected specimens. Clear signage (perhaps a large Stop sign with text instructions) will instruct them to not take a number, but instead to wait at a clearly designated location for priority attention (e.g. perhaps standing or sitting in a chair on a large green dot on the floor, adjacent the Stop sign). The next available MLA will greet the patient waiting in the designated priority drop-off location. The MLA will review the patient's documentation, visually verify quality of the sample (if appropriate), visually verify accuracy and completeness of the labelling of the samples, and will query the patient on compliance. If all is acceptable, the MLA will accept the specimen(s) and the patient will depart the Outpatient Lab. The MLA will record the specimens and process them as required.

Patient Care Services

Every attempt will be made to coordinate diagnostic testing and clinical visits to the facility or individual departments within the facility.

Royal Inland Hospital CSB Functional Program

1. Outpatient Laboratory & ECG

Organization & Management

- This area will be managed by the management group located in the core laboratory of the main building.

Clinical & Logistical Support Services

- Locating Cardiopulmonary/Neurodiagnostics adjacent to this service will support the seamless delivery of ECG services.
- Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:
 - *Patient Registration*
 - *Health Records*
 - *Biomedical Services*
 - *Food Services*
 - *Supply Chain*
 - *Housekeeping Services*
 - *Linen Services*
 - *Plant & Maintenance*
 - *Security Services*
 - *IMIT*

Hours of Operation

Future Hours of Operation for will be as follows:

- Monday to Friday from 0630 – 1800 hours
- Saturday and Sunday from 0900 – 1500 hours
- Statutory Holidays - Lab will be closed

D. WORKLOAD

Table 1: Historical and Projected Workload

Workload Measure	Historical			Projected (see notes)		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
# Outpatient Lab Procedures	1,239,078	1,310,703	1,322,682	1,375,590	1,405,393	1,496,7544
# ECGs (includes in & outpatients)	20,468	17,514	23,330	24,260	27,070	31,130

Notes:

1. Projections from December 2010 master program with updated information from IH.
2. The projected outpatient specimen workload is estimated to be 150-200 specimen collections per day and increasing to 250 collections per day in the longer term. 1 MLA can safely do 40-50 collections per day.
3. 24 hour urine, etc.). MLAs must check the dropped off specimen with the patient because approximately one-third of the specimens are non-compliant.
4. The number of outpatient ECGs is projected to be 13-20 per day or 3,120 to 4,800 per year.
5. Pre-surgical patients will most likely be serviced by CSB rather than Tudor Collection site, as ECGs will now be available on site. Possible extra 10 ECGs daily.
6. Physician Clinics will be encouraged to drop off their specimens in the RIH laboratory, as per current process.

1. Outpatient Laboratory & ECG

E. STAFFING

Table 2: Current and Projected Staffing

Position	Current			Projected - 2015		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
Outpatient Lab Staff	2.2	3	2	4.2	5	5
TOTAL	2.2	3	2	4.2	5	5

Notes:

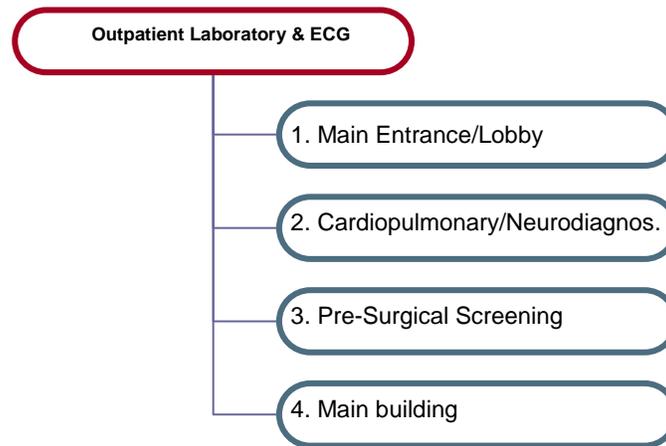
1. FTE = Full Time Equivalent
2. HCT = Headcount
3. Maximum Headcount identifies the total number of staff working in the area at a given point of time. This is an important measure to identify parking requirements.
4. Approximately 1.4 FTE of the current Outpatient staffing could move to the CSB; 3.0 FTE must be added in order to provide both patient collection and ECG services.

F. FUNCTIONAL RELATIONSHIPS

Location

- Outpatient Laboratory and ECG must be located in a readily accessible location given the high volume of patient visits.

External Relationships



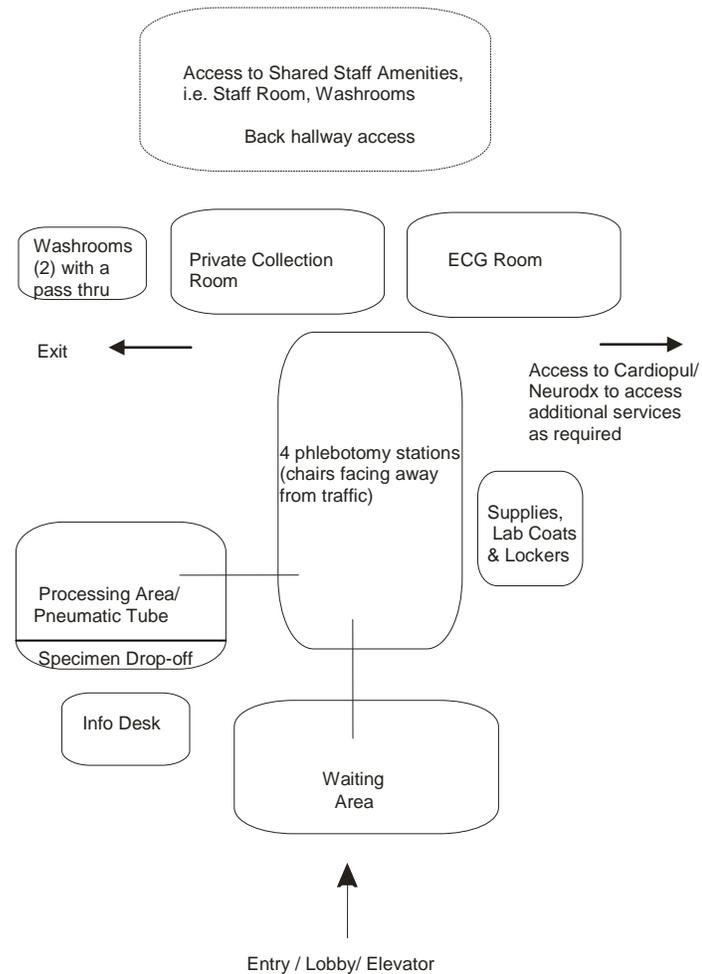
1. Locate close to a main entrance/lobby for movement of patients.
2. Provide convenient access by general circulation to Cardiopulmonary/ Neurodiagnostics for movement of patients and staff. Possibility for overflow into the Cardiopulmonary department space, in order to process ECG patients in a timely manner.
3. Provide convenient access by general circulation to Pre-Surgical Screening for movement of patients and staff.
4. Provide convenient access by general circulation to the main building for patients requiring other services, e.g. imaging services.

1. Outpatient Laboratory & ECG

Internal Relationships

Outpatient Laboratory & ECG should be organized into the following zones:

- Patient waiting and specimen drop-off
- Phlebotomy & ECG area
- Washrooms for specimen collection
- Processing area
- Laboratory supply area
- Staff support area (lockers, lab coats)



G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Infection Prevention & Control

- Provide hands free hand washing stations and container for sharps.
- Examination rooms require a sink with space for soap dispenser, lotion and paper towel dispensers.

Security & Safety

One main point of entry will be controlled both visually by staff and by video surveillance. The main door will be open during regular hours and be in lockdown mode (night mode) after regular business hours. A staff card access system will be incorporated into the building and department entrances. The following security features will be employed in the area:

- Public access to the clinical areas and staff work areas will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Security and safety of staff in off hours needs to be considered.
- Vocera will be available as part of Working Alone Policy and for emergency contact with RIH main building.

Flexibility & Adaptability

Space will be designed in the area to adapt to long-term growth and changes in workload. Future flexibility will be incorporated through the following mechanisms:

- Moveable partitions and modular furnishings to create an open work environment that allows easy reconfiguration of workstations to accommodate additional staff.
- Moveable partitions could be considered in the clinical areas to allow ease of reconfiguration. Movable partitions and furnishings used in clinical areas must meet healthcare infection control guidelines.
- Ergonomics must be considered during design.

Supervision of Patients

Visual supervision is needed from reception and work areas.

Patient Management

Provide a central activity area (reception) for the control of patient services. All scheduled and unscheduled patients will be received and documented at this point and information on all patients will be accessed from this point.

Access & Circulation

- Routine high-volume spaces will be located closest to the patient entry point.

Other Considerations

Privacy

- The importance of patient confidentiality and privacy will be reflected in the design of the area. Techniques that maximize acoustic and/or visual privacy will be incorporated.

Royal Inland Hospital CSB Functional Program

1. Outpatient Laboratory & ECG

- Although patients will not access staff work areas, the use of computer based communication technology, e.g. electronic patient health record, may create issues related to client privacy that will need to be addressed.

Environment

The following concepts will impact the overall environment of the space:

- Facilities for patients and families should present a calm and reassuring, yet professional environment;
- Wherever possible daylight should be brought in;
- All meeting and clinical spaces should accommodate Telehealth technologies;
- All work areas must be wired to support use of networked devices e.g. computers, handheld devices;
- The colors within the area should be designed to provide a comfortable environment for staff and patients; and
- Clinical spaces must be appropriate for a variety of ages to accommodate paediatric to geriatric clients and special needs patients, e.g. bariatric patients, and a paediatric “corner”.

Special Requirements

Reception and Drop-off

- This area should be visible from the processing area.
- Please ensure that the INFO reception desk is separate from the DROP OFF zone and counter space.

Private Collection and ECG Exam Rooms

- These rooms must include flexible examination space that accommodates a parent with a young child or an adult.

Phlebotomy Collection Area

- The (4) phlebotomy areas must include a patient collection chair, a staff workstation with computer and label printer and space for a supply cart. One station should be planned to accommodate a wheelchair.
- Each station should be enclosed on minimum 2 – ideally 3 sides to provide patient privacy.
- The bulk supply storage should be located proximal to the collection area for ease of supply cart top-up.

Processing/Soiled Area

- This space will be classified as a ‘dirty area’. The space requires a sink, counter area with cupboards to store supplies, a biosafety hood to support urine pour off and a small fridge to hold other samples/ specimens.
- This area should be semi-open to and with easy access to the phlebotomy stations and patient bathrooms
- The pneumatic tube station should be located in this area to support fast transport of specimens to the core laboratory.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	164.9
Patient Intake	
Total Net Square Metre (NSM)	34.5
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	<u>48.3</u>
Lab Patient Collection & Processing Area	
Total Net Square Metre (NSM)	69.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	<u>96.6</u>
Lab Supply Area	
Total Net Square Metre (NSM)	7.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>9.5</u>
Other Support Areas (shared w/adjacent program)	
Total Net Square Metre (NSM)	7.8
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>10.5</u>

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Patient Intake					
1 - 1	Waiting Area	27.0	1	27.0	Locate other program waiting space adjacent to allow for overflow waiting during peak periods, e.g. early in the day
	• <i>general waiting seats</i>	15	@	1.5	Electronic numbering machine located in waiting area
	• <i>specimen drop-off waiting seats</i>	3	@	1.5	Include up to 3 chairs for specimen drop-off waiting
1 - 2	Reception/Information Station	7.5	1	7.5	With a separate drop-off area for specimens
	• <i>receiving/reception counter</i>	1	@	6.0	
	• <i>printer/fax/supplies</i>	1	@	1.5	Multifunction printer unit
	Subtotal			<u>34.5</u>	

Royal Inland Hospital CSB Functional Program

1. Outpatient Laboratory & ECG

No.	Space Name / Function	NSM	Qty	Total	Comments
Lab Patient Collection & Processing Area					
1 - 3	Specimen Collection Area	50.0	1	50.0	
	• <i>phlebotomy stations</i> 3 @ 6.5				Includes phlebotomy chair, supply cart, data entry, workstation with label printer
	• <i>phlebotomy station (accessible)</i> 1 @ 8.0				Includes wheelchair accessible phlebotomy station, supply cart, data entry, workstation with label printer
	• <i>hand hygiene sink</i> 2 @ 0.5				Locate 1 sink near 2 phlebotomy stations
	• <i>enclosed collection room</i> 1 @ 10.0				For pediatric & special needs (including bariatric) patient specimen collection; can also be used for other procedures (e.g. FNA in the future)
	• <i>processing/soiled area</i> 1 @ 7.5				Counter area with centrifuge, specimen supplies, biosafety hood, eye wash station & under counter fridge
	• <i>Pneumatic Tube Station</i> 1 @ 4.0				Locate proximal to the processing counter
1 - 4	ECG Room	10.0	1	10.0	Require a typical exam room layout
1 - 5	Specimen Collection Washroom	4.5	2	9.0	Barrier-free; with pass thru
	Subtotal			69.0	
Lab Supply Area					
1 - 6	Supplies Storage	7.0	1	7.0	Storage of phlebotomy supplies and related medical supplies
	Subtotal			7.0	
Other Support Areas (shared w/adjacent program)					
1 - 7	Soiled Utility	0.0	1	0.0	Will share space with adjacent program
1 - 8	Housekeeping Room	0.0	0	0.0	Will share space with adjacent program
1 - 9	Lab Coat Storage & Coat Closet	6.0	1	6.0	Require a storage area for clean lab coats, a closet to hang lab coats that are in use, and a space for a soiled linen hamper
1 - 10	Locker Area	0.3	6	1.8	Assume half lockers; for storage of personal belongings
1 - 11	Staff Washroom & Staff Room	0.0	0	0.0	Will share with an adjacent program
	Subtotal			7.8	

2. CARDIOPULMONARY/NEURODIAGNOSTICS

A. OVERVIEW

Cardiopulmonary/Neurodiagnostics include the following services:

- Cardiology diagnostics
- Pulmonary diagnostics
- Neurodiagnostics & Sleep Disorders

The following service planning assumptions apply to this component:

- It is assumed that all services will move to the CSB with the following exceptions: Vascular Service (there are 2 vascular labs and 1 Bronchoscopy suite). It is assumed Bronchoscopy will be aligned with the Ambulatory Care Unit (for prep and recovery) and the Vascular Service with Diagnostic Imaging.
- Stress tests that use isotopes will continue to be performed in Diagnostic Imaging (DI). The expansion of cardiac tests to include stress echo tests (in DI) is a likely direction that will be part of DI.
- The Neurodiagnostics & Sleep Disorders space will be planned as dual purpose space – the patient treatment spaces (6 spaces) will be used for neurodiagnostic testing during the day and will transition to the sleep lab space in the evening.
- The Sleep Laboratory must be located in a quiet, low stimulation area. Because this service operates at night, it must be in an accessible and safe location for both patients and staff.
- As identified in the Laboratory component, outpatient ECGs will be done by the MLAs in the Outpatient Laboratory.
- It is assumed that most patient files will be digital in the future resulting in a diminished need for file storage space. The issue of the management of archival storage has been table with the RIH Senior Leadership group for further review.

B. SERVICES / FUNCTIONS

Scope of Services

Pulmonary Diagnostics

- There are 2 Pulmonary Function Test (PFT) laboratories (Level 3 & 4) each staffed with a respiratory therapist. Exercise induced tests are performed in the labs. The labs operate from 0700 to 1630 hours Monday to Friday. On average, 12 patients are seen per day per lab (total of 24 patients for the 2 labs). This functional program includes 2 PFT Labs that are sized as per the CSA Z8000 space guidelines.
- There is a bronchoscopy suite that operates 1-2 days per week from 0800 to 1400 hours with 3-4 cases seen per day. Prep and post procedure recovery is provided by the ACU. This service will remain in the main building.
- Services are provided for the west area of the health region.
- There is 1 respirologist supporting this service and 1 additional respirologist is being recruited.

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

Cardiology Diagnostics

- The cardiology service includes a pacemaker clinic, holter monitoring, stress testing (there are 2 stress test labs and 2 are included in this functional program based on CSA Z8000 space guidelines) and related cardiology diagnostic tests. Currently, the pacemaker clinic is operating 5 days per week in one space and another 2 days per week using the stress lab space. The future requirement is for 2 clinic rooms to support the pacemaker clinic workload.
- Holter monitoring data analysis is provided for Kamloops and the rural sites.
- Patients referred to Cardiology can be outpatients, inpatients, and referrals from the Emergency Department.
- Outpatient ECGs are also provided in this area (1 designated room). In future, Outpatient Laboratory staff members will perform the outpatient ECGs in the Outpatient Lab. Cardiology staff will continue to support the patient volume (i.e. inpatient ECGs) in the main building at the point-of-care.

Neurodiagnostics & Sleep Disorders

- This area includes 6 EEG/EMG/Sleep Lab rooms. The sleep lab operates 4 nights per week from 1900 – 0700 hours, and will increase to 7 days per week. EEG and EMG tests are provided Monday through Friday from 0800 to 1730 hours.
- EEG patients are primarily outpatients, but there are also inpatients. Inpatients can arrive by stretcher or bed. EMG work is primarily outpatient, with some EMG patients using a walker or wheelchair. In future, staff will go to the inpatient areas with portable equipment to perform these tests. Otherwise, patients will come to the CSB for these tests.
- For the EMG procedure, the patient is required to change into a gown for the test. Part of the test is performed with the patient on the bed/stretcher and a portion of the testing requires the patient to stand and walk in place. Access to a washroom post procedure is important.

Vascular Service (remains in main building)

- This service is provided from 2 lab spaces. Some diagnostic services are provided by DI, i.e. ultrasound service. The majority of vascular ultrasound performed within CPS/NDS. One vascular surgeon and two technologists support this service. This service will remain in the main building.

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
Outpatient Lab & ECG	X	Locating this program with Outpatient Lab & ECG supports seamless access to patient diagnostics services and provides cardiology back-up
Community Respiratory (RT)	X	Co-location of this program with Community RT will support an integrated team approach.

2. Cardiopulmonary/Neurodiagnostics

Education Role

Education will be accommodated as follows:

- Consult spaces that are Telehealth capable rooms are accessible and bookable for the education needs of patients and staff.
- Most clinical teaching will occur within available clinical spaces with convenient access to group teaching facilities required within the component. Touchdown stations for students will be provided.

Research Role

Cardiopulmonary/Neurodiagnostics will participate in applied health research studies as required. No additional space is projected to support research activities. It is assumed that research will be conducted in the clinical area.

C. OPERATIONS

Patient Profile

- Patients will be from all age groups and some patients will have mobility issues.

Patient Flow

Service Delivery Principles & Methods

- A designated patient waiting with adjacent programs will be provided. Ensure clear sightlines from the reception workstation to this alcove.
- Decentralized reception/registration functions should be located near the entrance and have visual access to the waiting area. Patient privacy/confidentiality must be addressed in the overall design of this area. The meeting, counselling and clinical spaces should have generic layouts that can accommodate various needs of the programs.
- From the waiting area, patients will be directed to a clinic room or program area to receive services. Once the patient is in the clinic room or program area, they will be looked after by the appropriate staff.
- Family or support persons will be able to accompany the patient into clinical space, or will wait in the waiting area.

Future Patient Journey

Cardiology Diagnostics

Outpatients will be referred by a primary care provider or specialist in the community, or inpatients will be referred by hospitalist or specialist at RIH.

Patients will have a pre-booked appointment in the Community Wide Scheduling (CSW) booking system and will either be registered at the CSB registration area, or (ideally) will be pre-registered and simply present directly to the Cardiopulmonary/Neurodiagnostics reception area to check in, and then wait to be called for their test. A Cardiology Technologist or Assistant will collect the patient from the waiting area and escort him/her to the test lab. Staff will verify patient information, prep the patient, run the test, verify completeness of the test and that results have been obtained/saved, and then advise the patient they can get re-dressed.

Ideally, any required consult with the cardiologist would be carried out during this visit. Upon completion of the clinical encounter, the patient will be able to book any follow-up appointment at the Cardiopulmonary/ Neurodiagnostics reception area, before departing.

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

Pulmonary Diagnostics

Outpatients will be referred by a primary care provider or specialist in the community, or inpatients will be referred by hospitalist or specialist at RIH.

Patients will have a pre-booked appointment in the Community Wide Scheduling (CSW) booking system and will either be registered at the CSB registration area, or (ideally) will be pre-registered and simply present directly to the Cardiopulmonary/Neurodiagnostics reception area to check in, and then wait to be called for their test. A respiratory therapist will collect the patient from the waiting area and escort him/her to the pulmonary function test lab. The tech will verify patient information, prep the patient, run the test, verify completeness of the test and that results have been obtained/saved, and then advise the patient they are done and may leave.

Ideally, any required consult with the respirologist would be carried out during this visit. Upon completion of the clinical encounter, the patient will be able to book any follow-up appointment at the Cardiopulmonary/ Neurodiagnostics reception area, before departing.

Neurodiagnostics - EEG/EMG

Outpatients will be referred by a primary care provider or specialist in the community, or inpatients will be referred by hospitalist or specialist at RIH.

Patients will have a pre-booked appointment in the Community Wide Scheduling (CSW) or via Neurologist office booking system and will either be registered at the CSB registration area, or (ideally) will be pre-registered and simply present directly to the Cardiopulmonary/Neurodiagnostics reception area to check in, and then wait to be called for their test. A neurodiagnostic technologist will collect the patient from the waiting area and escort him/her to the EEG or EMG test room. The tech will verify patient information, prep the patient, run the test, verify completeness of the test and that results have been obtained/saved, and then advise the patient they are done and may leave. Ideally, any required consult with the neurologist would be carried out during this visit. Upon completion of the clinical encounter, the patient will be able to book any follow-up appointment at the Cardiopulmonary/ Neurodiagnostics reception area, before departing.

Sleep Disorders Lab

Sleep Lab patients will be referred by a primary care provider or specialist in the community, or inpatients will be referred by a specialist at RIH.

Patients are pre-booked and will be pre-admitted since Sleep Lab studies are conducted outside of regular CSB hours. Patients will present at a designated Sleep Lab access/egress door equipped with a direct 2-way communication link to the Sleep Lab to alert the technologists of the patient's arrival (dedicated intercom, pre-programmed or restricted telephone, etc.; specific equipment to be determined). Once the patient has used the communication link to signal their arrival, a Sleep lab staff member will attend the access/egress door, let the patient in, and escort him/her to the Sleep Lab patient zone, and then directly to his/her assigned room.

The Sleep Lab staff will then prep the patient for the sleep test, provide instructions for the night, and then leave the patient to fall asleep.

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

The patient may use the ensuite washroom during the sleep test, after alerting the staff so the leads can be disconnected if/as required.

In the morning, the patient will have access to a shower facility in the Sleep Lab, can leave to have breakfast on site (not provided by the lab) and/or can depart. The patient will be able to book any follow-up appointment at the Cardiopulmonary/Neurodiagnostics reception area, before departing.

Patient Care Services

Every attempt will be made to coordinate diagnostic testing and clinical visits to the facility or individual departments within the facility. All efforts will be made to minimize time lost for a patient, i.e. travel time, missed work days etc.

Booking and Scheduling

Healthcare professionals will be expected to share program space (exam/ treatment/ general consult/rooms). Staff will have access to education/ meeting rooms for programming on a bookable basis.

Organization & Management

- There are onsite professional practice leaders (3) and a program manager. This functional plan assumes space for 3 onsite staff is required in the CSB. The professional practice leader for Respiratory Therapy will remain in the main building. Visiting staff and student work space will also be provided.

Clinical & Logistical Support Services

- Locating Cardiopulmonary/Neurodiagnostics adjacent to Outpatient Laboratory & ECG will support the seamless delivery of ECG services.
- Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:
 - *Patient Registration*
 - *Health Records*
 - *Biomedical Services*
 - *Food Services*
 - *Supply Chain*
 - *Housekeeping Services*
 - *Linen Services*
 - *Plant & Maintenance*
 - *Security Services*
 - *IMIT*

Hours of Operation

Hours of operation: Cardiology and Pulmonary testing: 0800 – 1800 hrs; Neurodiagnostics – 0800 – 1800 hrs; Sleep Lab – 1900 – 0700 hrs. Sleep lab patients arrive at 1 hour intervals in the evening – 7:30 pm, 8:30 pm and 9:30 pm. It takes approximately one hour to prepare the patient (i.e. check in with Patient Registration, arrive at the sleep lab, change and then be hooked up to the equipment).

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

D. WORKLOAD

Table 1: Historical and Projected Workload

Workload Measure	Historical			Projected (see notes)		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
Neurodiagnostics						
EEG	686	648	697	725	856	985
EMG	2,718	2,332	2,491	2,590	3,084	3,550
Evoked Potential	22	14	16	17	40	47
Sleep Studies	529	631	701	730	835	960
Cardiology Diagnostics						
ECGs	15,492	20,468	17,514	21,290	27,070	31,130
Stress Tests	2,154	2,064	2,136	2,220	2,311	2,660
Holter	1,087	1,539	2,390	1,600	1,965	2,260
Pacemaker	1,528	1,718	1,785	1,855	2,272	2,615
Pulmonary Function Tests (PFTs)	11,670	12,122	n/a	26,940	28,060	32,269

Notes:

Notes:

1. Projections from December 2010 master program with updated information provided by IH.
2. EEG and EMG tests take approximately 1 to 2 hours per test.
3. Pacemaker clinic currently booked 5 days per week in a clinic room and another 2 days per week in part of the stress lab space which is far from ideal.
4. PFT projection reflects the additional of a respirologist and other specialists.

E. STAFFING

Table 2: Current and Projected Staffing

Position	Current			Projected - 2015		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
Pulmonary	2.0	2	2	2.0	2	2
Cardiology	5.8	6	6	6.4	7	7
Vascular	2.0	3	2	2.0	3	2
Neurodiagnostics	7.0	7	7	7.0	7	7
Manager	1.0	1	1	1.0	1	1
Professional Practice Lead	1.0	1	1	1.0	1	1
Clerical/Reception	3.0	4	3	3.0	4	3
TOTAL	21.8	24	22	22.4	25	23

Notes:

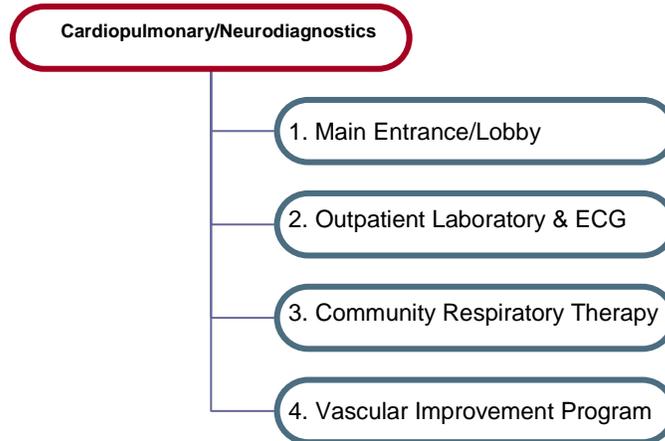
1. FTE = Full Time Equivalent
2. HCT = Headcount
3. Maximum Headcount identifies the total number of staff working in the area at a given point of time. This is an important measure to identify parking requirements.
4. An additional neurologist has been recruited and it is projected that 1 additional neurologist will be recruited within 2 years. Another respirologist is being recruited which will have an impact on RT services and in particular PFT.
5. There are 2 cardiologists at RIH and additional resources will be required. Kelowna General Hospital is the IH Cardiology Centre. However, RIH should have a Cardiac Care Unit (CCU) when the number of cardiologists reaches 4.
6. A cardiology clinic estimated at 0.5 days per week have been reflected in the Medical Outpatient Clinic scope of services. Space will also be available in the Medical Outpatient Service component (please refer to #8 – Medical OPS for further information) for pulmonary and neurology specialty clinics.

F. FUNCTIONAL RELATIONSHIPS

Location

- Cardiopulmonary/Neurodiagnostics must be located in a readily accessible location given the high volume of patient visits.

External Relationships



1. Locate close to a main entrance/lobby for movement of patients.
2. Provide convenient access by internal circulation to the Outpatient Laboratory & ECG for movement of staff, and convenient access by general circulation for movement of patients.
3. Provide convenient access by internal circulation to the Community Respiratory service for movement of staff.
4. Provide convenient access by general circulation to the Vascular Improvement Program (VIP) for movement of staff and patients.

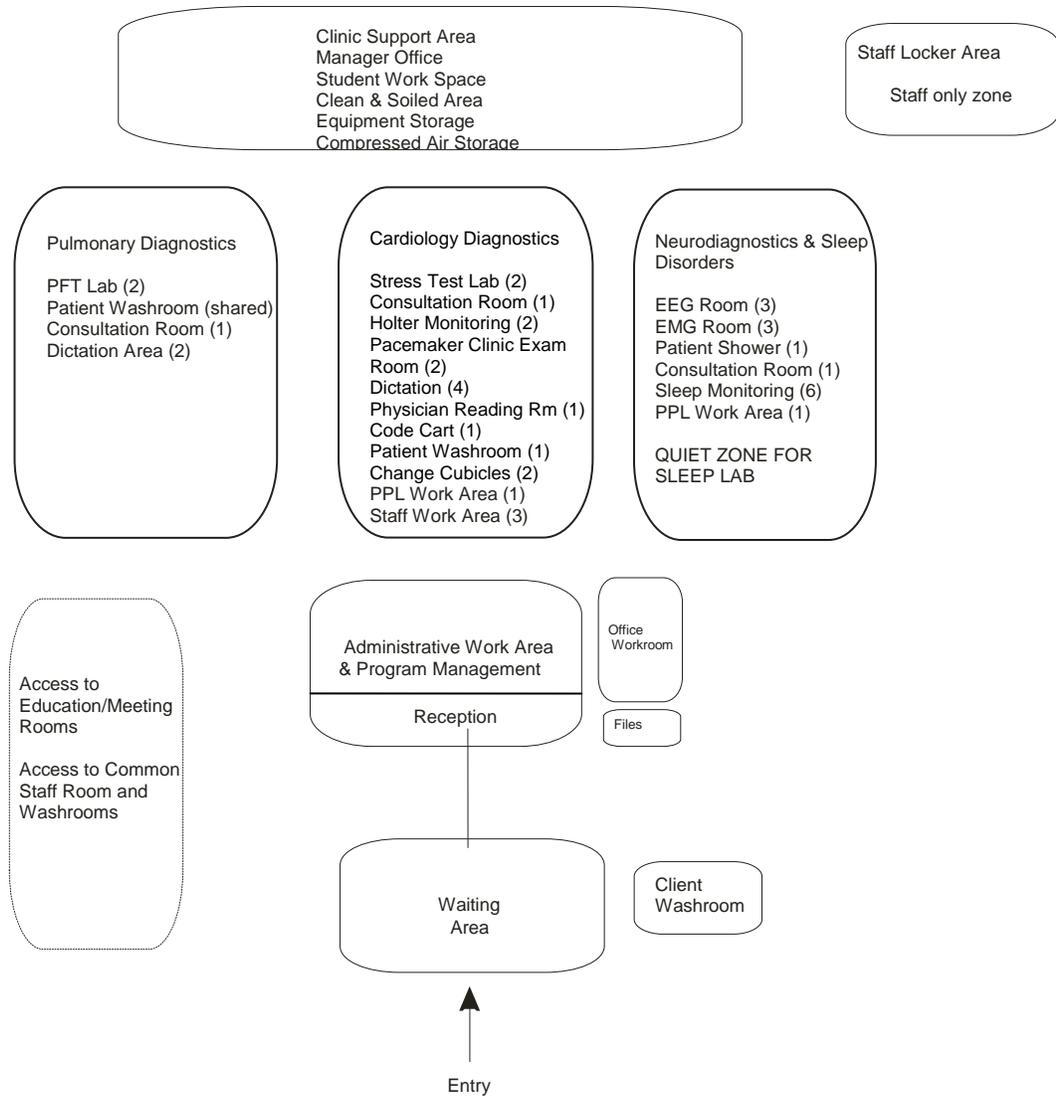
Internal Relationships

Cardiopulmonary/Neurodiagnostics should be organized in the following zones:

- Patient/Family Waiting Area
- Reception/Administration Area
- Cardiology Diagnostics
- Pulmonary Diagnostics
- Neurodiagnostics & Sleep Disorders
- Shared Support Area

Cardiopulmonary/Neurodiagnostics Internal Relationships

Note: The Medical Outpatient Service component has examination and consultation room space to support future specialty clinics, e.g. Cardiology, Respiriology, Neurology. Refer to #6 Medical OPS for further information.



G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Infection Prevention & Control

- Provide hands free hand washing stations in common areas and treatment areas.
- Examination rooms require a sink with space for soap dispenser, lotion and paper towel dispensers. Hairdressing type sinks are required in the EEG/EMG rooms.

Security & Safety

One main point of entry will be controlled both visually by reception staff and by video surveillance. The main door will be open during regular hours and be in lockdown mode (night mode) after regular business hours. A staff card access system will be incorporated into the building and department entrances. The following security features will be employed in the area:

- Public access to the clinical areas and staff work areas will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to meeting spaces for after hours use by public and staff groups.
- Security and safety of staff in off hours needs to be considered.

Flexibility & Adaptability

Flexible exam and treatment space will be designed in the area to adapt to long-term growth and changes in workload. Where appropriate, exam/ treatment rooms will be centralized in clusters so various clinics can share exam rooms. Exam rooms will typically have space for an exam table, sink, cabinets, and a workspace. All exam rooms will be wired for data/telephone /nurse call systems and Telehealth. Meeting rooms and team rooms will be wired for data/telephone and Telehealth. Future flexibility will be incorporated through the following mechanisms:

- Moveable partitions and modular furnishings to create an open work environment that allows easy reconfiguration of workstations to accommodate additional staff.
- Moveable partitions could be considered in the clinical areas to allow ease of reconfiguration. Movable partitions and furnishings used in clinical areas must meet healthcare infection control guidelines.
- Ergonomics must be considered during design.

Supervision of Patients

Visual supervision is needed from reception and work alcoves of all waiting patients/patients.

Multi-disciplinary space is to be centrally located for team discussion, team consults, etc.

Patient Management

Provide a central activity area (reception) for the control of patient services. All scheduled and unscheduled patients will be received and documented at this point and information on all patients will be accessed from this point.

2. Cardiopulmonary/Neurodiagnostics

Access & Circulation

- Routine high-volume spaces (clinic/exam space) will be located closest to the scheduled patient entry/reception point.

Other Considerations

Privacy

- The importance of patient confidentiality and privacy will be reflected in the design of the area. Techniques that maximize acoustic and/or visual privacy will be incorporated where applicable, i.e. registration/check-in.
- Although patients will not access staff work areas, the use of computer based communication technology, e.g. electronic patient health record, may create issues related to patient privacy that will need to be addressed.
- Patients coming to the Sleep Laboratory require a safe, secure, quiet environment.

Environment

The following concepts will impact the overall environment of the space:

- Facilities for patients and families should present a calm and reassuring, yet professional environment;
- Wherever possible daylight should be brought in with the exception of the Neurology testing space used for the Sleep Laboratory requiring a quiet, darker environment to promote sleep.
- All meeting and clinical spaces should accommodate Telehealth technologies.
- All work areas must be wired to support use of networked devices e.g. computers, handheld devices.
- The colors within the area should be designed to provide a comfortable environment for staff and patients.
- Staff workstations should be configured to allow for visual as well as acoustical privacy to create a quieter work environment. Address acoustics and noise transference in open work areas by use of appropriate technologies e.g. sound dampening technology.
- Clinical spaces must be appropriate for a variety of ages to accommodate paediatric to geriatric patients and special needs populations, e.g. bariatric patients.

Special Requirements

Cardiology Diagnostics

- The Stress Test Labs should be located together with patient change cubicles immediately adjacent (1 regular cubicle and 1 bariatric) and near the linen cart alcove.
- The code cart located in an alcove with data and power should be located with the labs.
- The physician dictation and reading room areas must be in a quiet zone to ensure privacy.
- The holter monitoring work area (2 workstations) can be located in a staff only zone. The prep room should be located in this zone,
- The consultation room and pacemaker clinic exam rooms (2) should be located together. The 2 pacemaker clinic rooms require the typical exam room set-up.

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

Pulmonary Diagnostics

- The (2) Pulmonary Function Labs must be temperature controlled because temperature changes impact volume calculations.
- Each lab must be free of vibration as equipment calculates volumes based on pressure readings.
- Both labs must be negative pressure spaces (for Tuberculosis precautions) and well ventilated because of nebulized medication delivery and methacholine exposure.
- The physician dictation area must be in a quiet zone to ensure privacy.
- The consultation room should be located near the labs. The consultation space should include a staff workstation and 2 chairs. This space should also include a sink.

Neurodiagnostics & Sleep Disorders

- The EEG/EMG (3 EEG and 3 EMG) spaces will be used for the sleep lab in the evening. Therefore, all rooms will include ensuite bathrooms. There must be ample in-room storage for the testing equipment (accommodated on carts). Each room could be designed with a storage garage/bay to store equipment when not in use. Each room must be temperature controlled. As well as a hand wash sink, a hairdressing sink is required in each room to facilitate patient hair washing and removal of the leads.
 - 3 of the rooms (zone together) will be assigned for EEG during the day. This test requires a quiet environment and therefore soundproofing essential.
 - 3 of the rooms (zone together) will support EMG testing (including the bariatric room - i.e. a large door entry, large bed, ceiling lift and large ensuite washroom) during the day. This test has a louder auditory component and therefore soundproofing essential. Localized heat lamps are required in these spaces to warm patient extremities, e.g. arms and hands.
 - The sleep monitoring area will include 6 workstations, each to accommodate a large computer screen, key board and counter space to review files. This space must be in a staff only zone and will be used by physicians and staff. Of the 6 workstations, 1 workstation will be used primarily by a technologist for sleep review / scoring, 1 workstation for EEG review / scoring, 1 workstation for EMG review / scoring, and 3 workstations for physician / technologist Meditech/EMR access (physicians will also dictate in this area)
- The preferred layout for the area is to locate the patient rooms on the perimeter with a patient entry from the exterior corridor and the physician and staff work area located in the core with staff door entries into each patient room from the interior core.

H. SPACE ALLOCATION SUMMARY

	CGSM
Total Component Gross Area (square metres)	672.4
Waiting/Reception/Administrative Support	
Total Net Square Metre (NSM)	74.5
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	100.6
Cardiology Diagnostics	
Total Net Square Metre (NSM)	139.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	194.6
Pulmonary Diagnostics	
Total Net Square Metre (NSM)	54.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	75.6
Neurodiagnostics & Sleep Disorders	
Total Net Square Metre (NSM)	163.5
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	228.9
Clinic Support Area	
Total Net Square Metre (NSM)	45.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	63.0
Staff Support Area	
Total Net Square Metre (NSM)	7.2
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	9.7

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Waiting/Reception/Administrative Support					
2 - 1	Waiting Area	27.0	1	27.0	
	• seats	12 @	1.5		
	• wheelchairs	2 @	3.0		
	• stretcher alcove	1 @	3.0		
2 - 2	Reception / Administrative Support	6.0	4	24.0	4 workstations; locate 3 proximal to waiting area and 1 workstation near staff work area
2 - 3	Patient File Storage	10.0	1	10.0	Consider high density shelving for patient files
2 - 4	Office Workroom	9.0	1	9.0	Work counter with upper and lower cabinets; photocopier, printer/scanner, office supplies, etc.; locate proximal to reception workstations
2 - 5	Client/Patient Washroom	4.5	1	4.5	Includes infant change table; barrier-free
	Subtotal			74.5	

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

No.	Space Name / Function	NSM	Qty	Total	Comments
Cardiology Diagnostics					
2 - 6	Patient Change Cubicle	1.5	1	1.5	Locate proximal to stress lab area
2 - 7	Accessible Patient Change Cubicle	4.0	1	4.0	Locate proximal to stress lab area
2 - 8	Stress Test Lab	20.0	2	40.0	Includes treadmill, exam table, cart for supplies, workstation and sink area (space as per CSA Z8000 guideline)
2 - 9	Consultation Room	10.0	1	10.0	Consult room with soft seating and a sink
2 - 10	Holter Monitoring Work Area	4.5	2	9.0	Require work area with 2 workstations and counter area
2 - 11	Holter Monitoring Prep Room	4.5	2	9.0	Similar to a consult room layout
2 - 12	Pacemaker Clinic Exam Room	10.0	2	20.0	Includes a patient exam area, sink, flexible supply storage, staff workstation and chair
2 - 13	Linen Cart Alcove	2.5	1	2.5	Locate proximal to stress lab area
2 - 14	Staff Work Area	4.5	3	13.5	Workstation with storage, chair, computer, phone; locate with exam/consult room space
2 - 15	Code Cart Alcove	1.5	1	1.5	Requires electrical outlet and data port
2 - 16	Physician Dictation Area	2.5	4	10.0	Desk with space for a phone and computer; quiet zone to support dictation requirement
2 - 17	Practice Leader Work Area	7.5	1	7.5	Enclosed work area with workstation and 1 chair
2 - 18	Physician Reading Room	7.0	1	7.0	Private work area with a workstation
2 - 19	Patient Washroom	4.5	1	4.5	Barrier-free
	Subtotal			140.0	
Pulmonary Diagnostics					
2 - 20	Pulmonary Function Lab (PFT)	20.0	2	40.0	Includes a patient testing area, supply cart, sink, flexible supply storage, staff workstation and chair; must be negative pressure space
2 - 21	Consultation Room	10.0	1	10.0	Consult room with soft seating and a sink; could be converted to exam room if required
2 - 22	Physician Dictation Area	2.5	2	5.0	Desk with space for a phone and computer; quiet zone to support dictation requirement
2 - 23	Patient Washroom	0.0	0	0.0	Shared with Cardiology Diagnostics
	Subtotal			55.0	

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

No.	Space Name / Function	NSM	Qty	Total	Comments
Neurodiagnostics & Sleep Disorders					
2 - 24	Combination EEG & Sleep Lab Space with ensuite bathroom	18.0	3	54.0	Includes a full patient bed, hand wash sink, hairdressing sink flexible supply storage, chair, storage area for 2 equipment carts and an ensuite bathroom with sink and toilet; requires soundproofing
2 - 25	Combination EMG & Sleep Lab Space with ensuite bathroom	18.0	2	36.0	Includes a full patient bed, hand wash sink, hairdressing sink, flexible supply storage, chair, storage area for 2 equipment carts and an ensuite bathroom with sink and toilet; requires soundproofing
2 - 26	Combination EMG & Sleep Lab Space with ensuite bathroom for bariatric patients	22.0	1	22.0	Includes a full patient bed, hand wash sink, hair dressing sink, flexible supply storage, chair, storage area for 2 equipment carts; include a ceiling lift carts and an ensuite bathroom with sink and toilet; wider door entry; requires soundproofing
2 - 27	Patient Shower Room	7.0	1	7.0	1 unisex shower room with an accessible shower, toilet and sink
2 - 28	Consultation Room	10.0	1	10.0	Consult room with soft seating and a sink
2 - 29	Sleep Lab Monitoring Area	4.5	6	27.0	6 workstations each with a computer and 2 monitors, chair, phone; locate near sleep lab space in a staff only zone
2 - 30	Practice Leader Work Area	7.5	1	7.5	Enclosed work area with workstation and 1 chair
	Subtotal			163.5	
Clinic Support Area					
2 - 31	Office, Manager	9.0	1	9.0	Workstation with storage, chair, computer, phone and seating for 1-2
2 - 32	Student Work Space	2.5	1	2.5	Touch down desk with space for a phone and computer; shared by all Cardiopulmonary/ Neurodiagnostic programs
2 - 33	Clean Utility Room	12.0	1	12.0	Storage of clean medical supplies
2 - 34	Cylinder Storage for Compressed Air	3.0	1	3.0	Require an enclosed space for compressed air cylinder
2 - 35	Equipment Storage Area	10.0	1	10.0	Storage of medical equipment, e.g. IV pumps, wheelchairs, etc.
2 - 36	Soiled Supply Area	9.0	1	9.0	Accommodates soiled linen / macerator
2 - 37	Housekeeping Room	0.0	0	0.0	Will access a common housekeeping room
				45.5	

Royal Inland Hospital CSB Functional Program

2. Cardiopulmonary/Neurodiagnostics

No.	Space Name / Function	NSM	Qty	Total	Comments
Staff Support Area					
2 - 38	Staff Room	0.0	0	0.0	Will access a staff room in a common area that is shared with adjacent programs
2 - 39	Staff Washroom	0.0	0	0.0	Will access shared staff washrooms
2 - 40	Locker Area	0.3	24	7.2	Assume half lockers; include a coat rack with boot storage below; for use by staff and students
				<u>7.2</u>	

3. Community Respiratory Therapy (RT)

3. COMMUNITY RESPIRATORY THERAPY (RT)

A. OVERVIEW

Community Respiratory Program (RT) includes the following services:

- Community Respiratory Therapy, Asthma Education, Integrated Health Network (IHN) and Breathe Well
- Home Oxygen Program (HOP)

The following service planning assumptions apply to this component:

- The community-based Respiratory Therapy (RT) services identified in the December 2010 master program are the services that will move to the Clinical Service Building (CSB). These services include: Home Oxygen Program (HOP), Community RT including the Integrated Health Network (IHN) component, Breathe Well, and Asthma Education.
- Access to (shared) group education space will be required to support patient group visits with services delivered by a multi-disciplinary team.
- The Community RTs (which includes HOP) will continue to work in the community the majority of the time. Their administrative work will occur at RIH.
- A stronger connection to the Vascular Improvement Program (VIP) anticipated.

B. SERVICES / FUNCTIONS

Scope of Services

- Community RT supports discharge planning and ongoing community support of patients including chronic ventilated clients, tracheotomy, COPD, fibrosis, neuromuscular, etc. In most cases, the Community Respiratory Therapists (RTs) are working with patients in their homes. The program is in the Alumnae Tower co-located with HOP and IHN.
- Breathe Well is a newly funded initiative that focuses on at-risk populations with the goal of avoiding a patient visit to the Emergency Department and/or an acute care admission to hospital.
- The TCS Home Oxygen Program operates from the Alumnae Tower. The RTs and clerk adjudicate the Home Oxygen Program for TCS sites.
- The Integrated Health Network (IHN) opened in 2007 with 2 RTs supporting the program. The RTs work closely with community physicians (2 physician groups that are part of the Integrated Health Network). An Asthma Clinic is part of the IHN.
- Diagnostic services are provided by Community RTs, i.e. pulmonary function tests using portable equipment. Quality control testing of the equipment must be completed every day.
- There are benefits of having the Community RT programs onsite at RIH because it allows skills development of the RT staff between the community and acute care settings.

3. Community Respiratory Therapy (RT)

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
Cardiopulmonary/ Neurodiagnostics	X	Locating this program with the Cardiopulmonary/Neurodiagnostics supports seamless access to patient diagnostics services and provides respiratory therapy back-up.
Vascular Improvement Program (VIP)	X	Co-location of this program with the Vascular Improvement Program will support an integrated team approach to patient service delivery.
RIH Acute Care RT Services		Keeping Community RT services at the RIH campus promotes skills development of the RT staff between the community and acute care settings.

Education Role

Education will be accommodated as follows:

- Consultation and education spaces that are Telehealth capable rooms are accessible and bookable for the education needs of patients and staff.
- Most clinical teaching will occur within available clinical spaces with convenient access to group teaching facilities required within the component.

Research Role

Community RT will participate in applied health research studies as required. No additional space is projected to support research activities. It is assumed that research will be conducted in the clinical area.

C. OPERATIONS

Patient Profile

- Patients will be from all age groups and some patients will have mobility issues.

Patient Flow

Service Delivery Principles & Methods

- A designated patient waiting with adjacent programs will be provided. Ensure clear sightlines from the reception workstation to this alcove.
- Decentralized reception/registration functions should be located near the entrance and have visual access to the waiting area. Patient privacy/confidentiality must be addressed in the overall design of this area. The meeting, counselling and clinical spaces should have generic layouts that can accommodate various needs of the programs.
- From the waiting area, patients will be directed to a clinic room or program area to receive services. Once the patient is in the clinic room or program area, they will be looked after by the appropriate staff.
- Family or support persons will be able to accompany the patient into clinical space, or will wait in the waiting area.

3. Community Respiratory Therapy (RT)

Future Patient Journey

Patients will be referred for Community RT services by a primary care provider in community for CSB services related to HOP, IHN, Breathe Well, and/or Asthma Education, and will book an appointment in the Community Wide Services (CWS) booking system.

The patient journey begins with arrival at the Community RT area waiting room. Patients will be pre-registered through CWS, so will be checked in at a reception area. The patient will be taken to an exam or test room, or to an education consult room, as appropriate to their booked appointment. Upon completion of the exam, test, or education session, the patient will be able to book any follow-up appointment at the Community RT reception area before departing.

Patient Care Services

Every attempt will be made to coordinate diagnostic testing and clinical visits to the facility or individual departments within the facility. All efforts will be made to minimize time lost for a patient, i.e. travel time, missed work days etc.

Booking and Scheduling

Healthcare professionals will be expected to share program space (exam/ treatment/ general consult/rooms). Staff will have access to education/meeting rooms for programming on a bookable basis.

Organization & Management

Community RT has both functional and operational reporting relationships to RIH Respiratory Therapy Services and Community Integrated Health Services.

Clinical & Logistical Support Services

- Locating Community RT adjacent to Cardiopulmonary/Neurodiagnostics will support the seamless delivery of respiratory services.
- Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:
 - *Patient Registration*
 - *Health Records*
 - *Biomedical Services*
 - *Food Services*
 - *Supply Chain*
 - *Housekeeping Services*
 - *Linen Services*
 - *Plant & Maintenance*
 - *Security Services*
 - *IMIT*

Royal Inland Hospital CSB Functional Program

3. Community Respiratory Therapy (RT)

Hours of Operation

Hours of operation: Monday to Friday from 0800 to 1630 hours.

D. WORKLOAD

Table 1: Historical and Projected Workload

Workload Measure	Historical			Projected (see notes)		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
# IHN Community RT Visits per year	830	n/a	n/a	1,835	1,910	2,195
# Community RT Visits per year	1,113	n/a	n/a	2,150	2,240	2,575
# HOP diagnostic & therapeutic procedures per year	4,641	n/a	n/a	5,865	6,140	7,060

Notes:

1. Projections from December 2010 master program.
2. Projections based on projected population growth and historical program volume growth.

E. STAFFING

Table 2: Current and Projected Staffing

Position	Current			Projected - 2015		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
Resp – HOP	2.0	2	2	2.0	2	2
Resp - Community	2.0	2	2	2.0	2	2
Resp – IHN & Breathe Well	3.5	4	4	3.5	4	4
TOTAL	7.5	8	8	7.5	8	8

Notes:

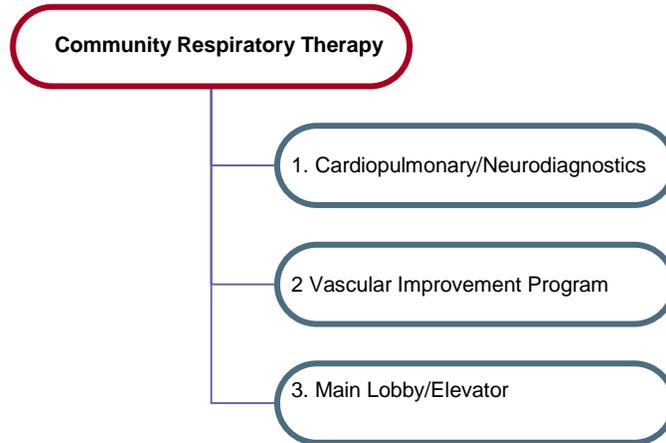
1. FTE = Full Time Equivalent
2. HCT = Headcount
3. Maximum Headcount identifies the total number of staff working in the area at a given point of time. This is an important measure to identify parking requirements.

F. FUNCTIONAL RELATIONSHIPS

Location

- Community RT must be located adjacent to Cardiopulmonary/ Neurodiagnostics, and as well be in an accessible location for patients.

External Relationships



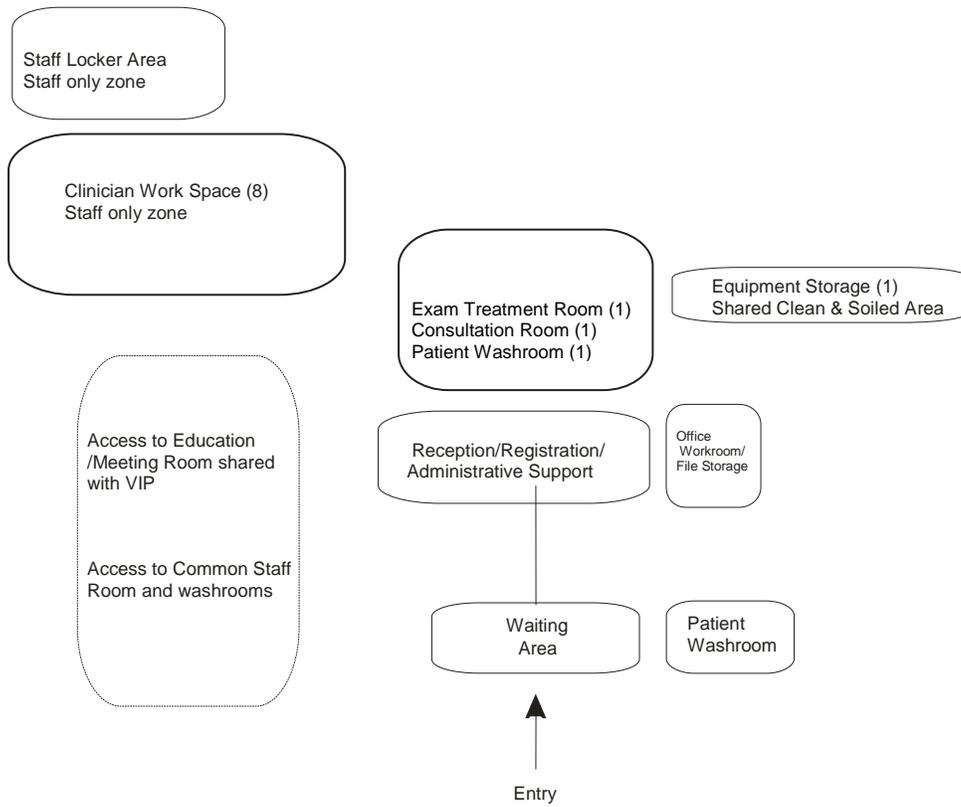
1. Provide convenient access by internal circulation to Cardiopulmonary/ Neurodiagnostics for movement of staff, and convenient access by general circulation for movement of patients.
2. Provide convenient access by general circulation to the Vascular Improvement Program (VIP) for movement of staff and patients.
3. Locate close to a main entrance/lobby for movement of patients.

Internal Relationships

Community RT should be organized in the following zones:

- Patient/Family Waiting Area
- Reception/Administrative Area
- Patient Examination & Education Area
- Clinical Support Area
- Staff Support Area

Community RT Internal Relationships



G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Infection Prevention & Control

- Provide hands free hand washing stations in common areas and treatment areas.
- Examination rooms require a sink with space for soap dispenser, lotion and paper towel dispensers.

Security & Safety

One main point of entry will be controlled both visually by reception staff and by video surveillance. The main door will be open during regular hours and be in lockdown mode (night mode) after regular business hours. A staff card access system will be incorporated into the building and department entrances. The following security features will be employed in the area:

- Public access to the clinical areas and staff work areas will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to meeting spaces for after hours use by public and staff groups.
- Security and safety of staff in off hours needs to be considered.

Flexibility & Adaptability

Flexible exam and treatment space will be designed in the area to adapt to long-term growth and changes in workload. Where appropriate, exam/ treatment rooms will be centralized in clusters so various clinics can share exam rooms. Exam rooms will typically have space for an exam table, sink, cabinets, and a workspace. All exam rooms will be wired for data/telephone /nurse call systems and Telehealth. Meeting rooms and team rooms will be wired for data/telephone and Telehealth. Future flexibility will be incorporated through the following mechanisms:

- Moveable partitions and modular furnishings to create an open work environment that allows easy reconfiguration of workstations to accommodate additional staff.
- Moveable partitions could be considered in the clinical areas to allow ease of reconfiguration. Movable partitions and furnishings used in clinical areas must meet healthcare infection control guidelines.
- Ergonomics must be considered during design.

Supervision of Patients

Visual supervision is needed from reception and work alcoves of all waiting patients/patients.

Multi-disciplinary space is to be centrally located for team discussion, team consults, etc.

Patient Management

Provide a central activity area (reception) for the control of patient services. All scheduled and unscheduled patients will be received and documented at this point and information on all patients will be accessed from this point.

3. Community Respiratory Therapy (RT)

Access & Circulation

- Locate the exam/assessment and consultation rooms proximal to the patient entry/reception point.

Other Considerations

Privacy

- The importance of patient confidentiality and privacy will be reflected in the design of the area. Techniques that maximize acoustic and/or visual privacy will be incorporated where applicable, i.e. registration/check-in.
- Although patients will not access staff work areas, the use of computer based communication technology, e.g. electronic patient health record, may create issues related to patient privacy that will need to be addressed.

Environment

The following concepts will impact the overall environment of the space:

- Facilities for patients and families should present a calm and reassuring, yet professional environment;
- All meeting and clinical spaces should accommodate Telehealth technologies.
- All work areas must be wired to support use of networked devices e.g. computers, handheld devices.
- The colors within the area should be designed to provide a comfortable environment for staff and patients.
- Staff workstations should be configured to allow for visual as well as acoustical privacy to create a quieter work environment. Address acoustics and noise transference in open work areas by use of appropriate technologies e.g. sound dampening technology.
- Clinical spaces must be appropriate for a variety of ages to accommodate paediatric to geriatric patients and special needs populations, e.g. bariatric patients.

Special Requirements

- The exam/assessment room requires the typical exam room set-up, patient stretcher or chair area, sink, flexible storage and staff workstation.
- The consultation room should be located near the exam/assessment room. The consultation space should include a staff workstation and 2 chairs. This space should also include a sink.
- An equipment storage space is required for respiratory therapy supplies.
- Community RT will share clean utility and soiled utility space with an adjacent program.
- HOP and Community RT require access to a patient test walk area which can be accommodated in an open corridor area.
- The clinician work space will be located in a staff only zone.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	137.2
Waiting/Reception/Administrative Support	
Total Net Square Metre (NSM)	22.0
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	29.7
Patient Examination & Education Area	
Total Net Square Metre (NSM)	64.5
Net to Gross Ratio	<u>1.40</u>
Component Gross Area (CGSM)	90.3
Clinic Support Area	
Total Net Square Metre (NSM)	10.0
Net to Gross Ratio	<u>1.40</u>
Component Gross Area (CGSM)	14.0
Staff Support Area	
Total Net Square Metre (NSM)	2.4
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	3.2

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Waiting/Reception/Administrative Support					
3 - 1	Waiting Area	6.0	1	6.0	
	• seats	2	@ 1.5		
	• wheelchairs	1	@ 3.0		
3 - 2	Reception/Registration Workstation	6.0	1	6.0	Locate proximal to waiting area
3 - 3	Office Workroom/File Storage	10.0	1	10.0	Work counter with upper and lower cabinets; photocopier, printer/scanner, office supplies, high density shelving file storage; locate proximal to reception workstations
	Subtotal			<u>22.0</u>	

Royal Inland Hospital CSB Functional Program

3. Community Respiratory Therapy (RT)

No.	Space Name / Function	NSM	Qty	Total	Comments
Patient Examination & Education Area					
3 - 4	Exam/Assessment Room	10.0	1	10.0	Includes a client exam area or chair, sink, flexible supply storage, staff workstation and chair
3 - 5	Consultation Room	10.0	1	10.0	Consult room with soft seating and a sink; could be converted to exam room if required
3 - 6	Patient Education Group Room	0.0	1	0.0	Will share patient education space with VIP
3 - 7	Clinician Work Space	7.5	4	30.0	Workstation with storage, chair, computer, phone; locate with exam/consult room space
3 - 8	Clinician Touchdown Work Space	2.5	4	10.0	Workstation with storage, chair, computer, phone; locate with exam/consult room space
3 - 9	Patient Washroom	4.5	1	4.5	Barrier-free
	Subtotal			64.5	
Clinic Support Area					
3 - 10	Clean Utility Room	0.0	0	0.0	Shared with an adjacent program
3 - 11	Equipment Storage Area	10.0	1	10.0	Storage of medical supplies
3 - 12	Soiled Supply Area	0.0	0	0.0	Shared with an adjacent program
3 - 13	Housekeeping Room	0.0	0	0.0	Shared with an adjacent program
				10.0	
Staff Support Area					
3 - 14	Staff Room	0.0	0	0.0	Shared with an adjacent program
3 - 15	Staff Washroom	0.0	0	0.0	Shared with an adjacent program
3 - 16	Locker Area	0.3	8	2.4	Contains half lockers
				2.4	

4. IV THERAPY

A. OVERVIEW

IV Therapy is part of RIH Ambulatory Care Services that provides continuous intravenous therapy (IV) and phlebotomy services.

The following service planning assumptions apply to this component:

- It is assumed that a portion of the Outpatient Parenteral Therapy (OPT) Program which supports patient home IV therapy will operate from the CSB as well as from the Pharmacy area. A patient teaching space is included in the IV Therapy space allocation to support OPT. For most OPT patients, IV supplies will continue to be sent to their homes or patients will come to the Pharmacy to pick up their supplies. The majority of these patients will be assessed and followed up in the Ambulatory Nursing Clinic and Home & Community Care.
- The Peripherally Inserted Central Catheter (known as PICC) service currently operating from the Ambulatory Care area will be included with the IV Therapy area in the CSB. This includes PICC insertion space, PICC staff work area and PICC sterile supply storage.

B. SERVICES / FUNCTIONS

Scope of Services

- The IV Therapy Program is for people who require ongoing intravenous antibiotics and other medication but do not need to be hospitalized. A blood transfusion service is also provided.
- This program allows people to be discharged from hospital earlier and receive safe and effective care at home.
- PICC insertions will be done in dedicated space in the IV Therapy area. The numbers have increased from the 60's to the 90's per month. More insertion could be done each day if there was more than one nurse assigned for this service. At times, the manager has brought in another nurse to cope with the workload. Other duties include seeing PICC patients in the ER, Home IV, Medical floors (3W/5N/7N) Surgical (6S//6N) Critical Care (ICU/SDU) Cancer Clinic and Pediatrics. As was as insertion, the PICC nurse provides education, follow-up maintenance and troubleshooting. One insertion can take up to 2 hours from start to finish as this includes the patient education and follow-up X-Ray. Ideally, a minimum of 3 full time PICC nurses would support the CSB project.

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
Medical Outpatient Clinics	X	Locating this program in the CSB supports seamless access to other medical outpatient services, e.g. Infectious Disease Clinic.

Education Role

Education will be accommodated as follows:

- Consultation and education spaces that are Telehealth capable rooms are accessible and bookable for the education needs of patients and staff.
- Most clinical teaching will occur within available clinical spaces with convenient access to group teaching facilities required within the component.

Research Role

IV Therapy will participate in applied health research studies as required. No additional space is projected to support research activities. It is assumed that research will be conducted in the clinical area.

C. OPERATIONS

Patient Profile

- Patients will be from all age groups and some patients will have mobility issues.

Patient Flow

Service Delivery Principles & Methods

- A designated patient waiting area will be provided. Ensure clear sightlines from the reception workstation to this alcove.
- Decentralized reception/registration functions should be located near the entrance and have visual access to the waiting area. Patient privacy/confidentiality must be addressed in the overall design of this area. The meeting, counselling and clinical spaces should have generic layouts that can accommodate various needs of the programs.
- From the waiting area, patients will be directed to a treatment bay to receive service. Once the patient is in the treatment area, they will be looked after by the appropriate staff.
- Family or support persons will be able to accompany the patient into clinical space, or will wait in the waiting area.

Future Patient Journey

Patients are referred through multiple channels, and the majority of patients are pre-registered. "New" patients will be registered either at the CSB registration area, or at the IV Therapy reception area. Pre-registered patients will simply check with IV Therapy upon arrival and will be escorted by staff to their pre-booked phlebotomy chair/stretchers, a PICC insertion room or Home IV Education session.

For IV Therapy, the nurse verifies the patient information, collects necessary supplies, obtains and/or prepares necessary IV medications, and then returns to the patient to start the IV treatment or the phlebotomy session. After the treatment or session is complete, the patient will be able to book any follow-up appointment before departing.

Patient Care Services

Every attempt will be made to coordinate diagnostic testing and clinical visits to the facility or individual departments within the facility. All efforts will be made to minimize time lost for a patient, i.e. travel time, missed work days etc.

Booking and Scheduling

Healthcare professionals will be expected to share program space (exam/ treatment/ general consult/rooms). Staff will have access to education/ meeting rooms for programming on a bookable basis.

Organization & Management

- IV Therapy is part of RIH Ambulatory Care Services.

Clinical & Logistical Support Services

- Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:
 - *Patient Registration*
 - *Health Records*
 - *Biomedical Services*
 - *Food Services*
 - *Supply Chain*
 - *Housekeeping Services*
 - *Linen Services*
 - *Plant & Maintenance*
 - *Security Services*
 - *IMIT*

Hours of Operation

Hours of operation: Monday to Friday from 0800 to 1630 hours. There is the potential to extend hours of operation but there are operational costs implications if hours are extended.

D. WORKLOAD

4. IV Therapy

Table 1: Historical and Projected Workload

Workload Measure	Historical			Projected (see notes)		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
# of patients per day	n/a	n/a	5,760	11,520	11,520	11,520

Notes:

1. Current workload assumes an average of 1 patient every 2 hours x 8 hours x 5 days per week x 48 weeks (6 treatment spaces).
2. Projections assume 1 patient per every 2 hours x 8 hours x 5 days per week x 48 week (12 treatment spaces).
3. Projections based on projected population growth and historical program volume growth with 12 treatment spaces in operation. The need for 12 patient spaces was documented in the December 2010 RIH Master Program.
4. In addition to the numbers above, there are 60-90 PICC insertions per month.

E. STAFFING

Table 2: Current and Projected Staffing

Position	Current			Projected - 2015		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
Registered Nurse	2.0	2	2	3.0	3	3
Unit Clerk (shared)	0.0	0	0	1.0	1	1
PICC Nurse	1.0	1	1	2.0	2	2
Outpt Therapy (see note 5)	1.0	1	1	3.0	4	4
TOTAL	4.0	4	4	9.0	10	10

Notes:

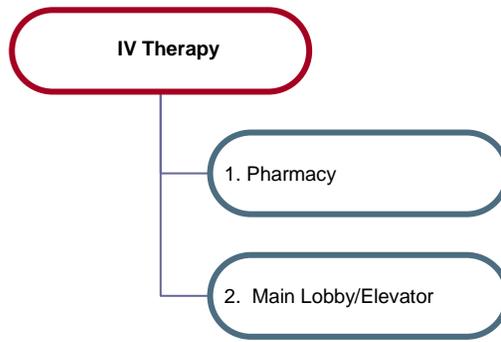
1. FTE = Full Time Equivalent
2. HCT = Headcount
3. Maximum Headcount identifies the total number of staff working in the area at a given point of time. This is an important measure to identify parking requirements.
4. Patient to staff ratio: 1 nurse for 6 patients.
5. A pharmacist (0.8 FTE) and a pharmacy technician (0.6 FTE) will support the OPT Program in addition to 2 nurses.

F. FUNCTIONAL RELATIONSHIPS

Location

- IV Therapy must be located in a quieter zone because most patients will be in treatment for several hours. It is preferred to locate the program near exterior windows so that patients have access to an exterior view / daylight while obtaining treatment, i.e. treatment bays located next to exterior windows.
- The service must also be in an accessible location for patients.

External Relationships

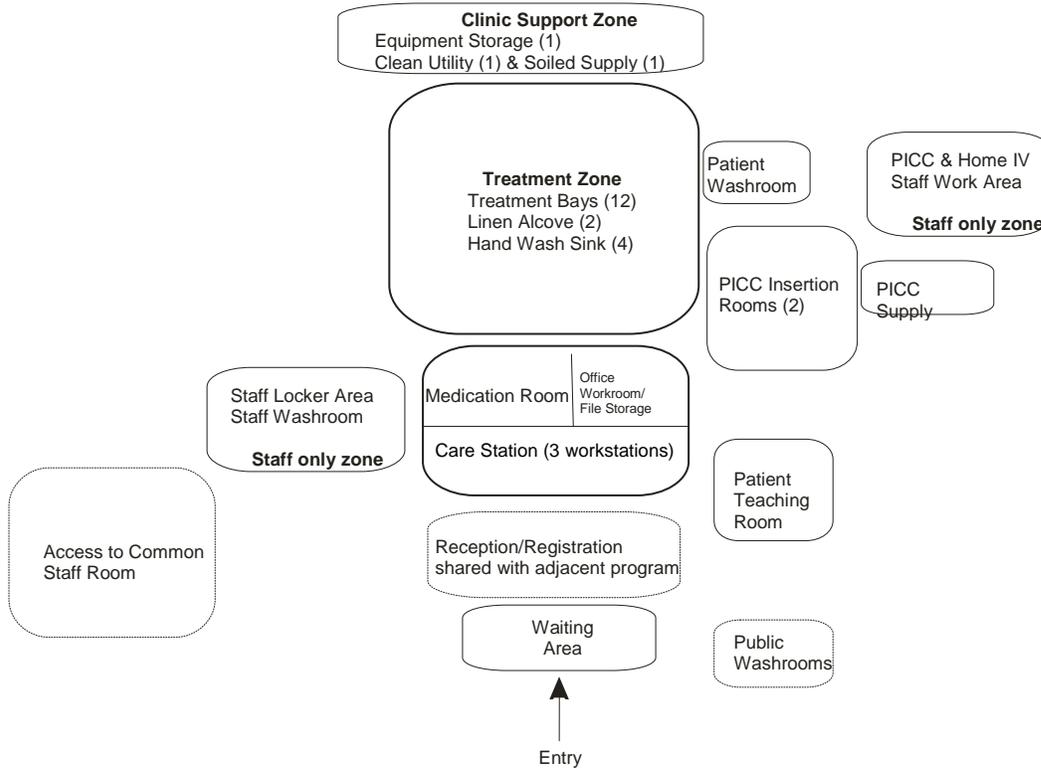


1. Provide convenient access by general circulation for movement of staff and IV supplies from Pharmacy.
2. Provide convenient access to lobby/elevator for movement of patients.

Internal Relationships

IV Therapy should be organized in the following zones:

- Patient/Family Waiting Area
- Reception/Administrative Area
- Treatment Zone
- Clinic Support Area
- Staff Support Area



G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Infection Prevention & Control

4. IV Therapy

- Provide hands free hand washing stations in common areas and treatment areas.
- Examination rooms require a sink with space for soap dispenser, lotion and paper towel dispensers.

Security & Safety

One main point of entry will be controlled both visually by reception staff and by video surveillance. The main door will be open during regular hours and be in lockdown mode (night mode) after regular business hours. A staff card access system will be incorporated into the building and department entrances. The following security features will be employed in the area:

- Public access to the clinical areas and staff work areas will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to meeting spaces for after hours use by public and staff groups.
- Security and safety of staff in off hours needs to be considered.

Flexibility & Adaptability

Flexible exam and treatment space will be designed in the area to adapt to long-term growth and changes in workload. Where appropriate, exam/ treatment rooms will be centralized in clusters so various clinics can share exam rooms. Exam rooms will typically have space for an exam table, sink, cabinets, and a workspace. All exam rooms will be wired for data/telephone /nurse call systems and Telehealth. Meeting rooms and team rooms will be wired for data/telephone and Telehealth. Future flexibility will be incorporated through the following mechanisms:

- Moveable partitions and modular furnishings to create an open work environment that allows easy reconfiguration of workstations to accommodate additional staff.
- Moveable partitions could be considered in the clinical areas to allow ease of reconfiguration. Movable partitions and furnishings used in clinical areas must meet healthcare infection control guidelines.
- Ergonomics must be considered during design.

Supervision of Patients

Visual supervision is needed from reception and work alcoves of all waiting patients/patients.

Multi-disciplinary space is to be centrally located for team discussion, team consults, etc.

Patient Management

Provide a central activity area (reception) for the control of patient services. All scheduled and unscheduled patients will be received and documented at this point and information on all patients will be accessed from this point.

Access & Circulation

- Locate the treatment area proximal to the patient entry/reception point.

Other Considerations

Privacy

- The importance of patient confidentiality and privacy will be reflected in the design of the area. Techniques that maximize acoustic and/or visual privacy will be incorporated where applicable, i.e. registration/check-in.
- Although patients will not access staff work areas, the use of computer based communication technology, e.g. electronic patient health record, may create issues related to patient privacy that will need to be addressed.

Environment

The following concepts will impact the overall environment of the space:

- Facilities for patients and families should present a calm and reassuring, yet professional environment;
- All meeting and clinical spaces should accommodate Telehealth technologies.
- All work areas must be wired to support use of networked devices e.g. computers, handheld devices.
- The colors within the area should be designed to provide a comfortable environment for staff and patients.
- Staff workstations should be configured to allow for visual as well as acoustical privacy to create a quieter work environment. Address acoustics and noise transference in open work areas by use of appropriate technologies e.g. sound dampening technology.

- Clinical spaces must be appropriate for a variety of ages to accommodate paediatric to geriatric patients and special needs populations, e.g. bariatric patients.

Special Requirements

Care Station Area

- The care station will include work area for up to 3 staff members, computer terminals, space for charts and related supplies.
- The office supply / file storage area should be located proximal to the care station.

Medication Room

- The medication room must be in an enclosed, quiet area. The space includes a work counter, computer terminal, sink, under counter fridge, locked drug storage, and floor space for an automated drug dispensing tower (a future direction).

Treatment Area

- There will be 12 treatment bays enclosed on three sides to promote patient privacy. Each space requires gases and suction. The area must be of sufficient size to accommodate a stretcher or treatment chair, a visitor zone and a staff work zone.
- The (2) linen alcoves must be located in proximity to the treatment bays.
- There will be 1 hand wash sink for every 3 treatment bays which is a total of 4 sinks. These sinks must be located in the treatment zone.
- There will be (2) PICC insertion rooms. The layout of each room should be similar to an examination room layout with special task lighting and space to accommodate a patient bed rather than a stretcher. A supply space for PICC sterile supplies should be located adjacent to these rooms. The staff work space should also be located in this zone.
- A patient teaching area for use by the Home IV program should comfortably accommodate 4-6 people. This space should be located near the entry.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	395.6
Waiting/Reception/Administrative Support	
Total Net Square Metre (NSM)	28.0
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	37.8
Patient Treatment Area	
Total Net Square Metre (NSM)	206.5
Net to Gross Ratio	<u>1.40</u>
Component Gross Area (CGSM)	289.1
Treatment Support Area	
Total Net Square Metre (NSM)	43.0
Net to Gross Ratio	<u>1.40</u>
Component Gross Area (CGSM)	60.2
Staff Support Area	
Total Net Square Metre (NSM)	6.3
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	8.5

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Waiting/Reception/Administrative Support					
4 - 1	Waiting Area • seats 12 @ 1.5	18.0	1	18.0	
4 - 2	Reception/Registration Workstation	0.0	0	0.0	Shared with an adjacent program
4 - 3	Office Workroom/File Storage	10.0	1	10.0	Work counter with upper and lower cabinets; photocopier, printer/scanner, office supplies, 2 file cabinets, etc.; locate proximal to reception workstations
	Subtotal			<u>28.0</u>	

Royal Inland Hospital CSB Functional Program

4. IV Therapy

No.	Space Name / Function	NSM	Qty	Total	Comments
Patient Treatment Area					
4 - 4	Patient Treatment Bay	9.5	12	114.0	Includes a stretcher or treatment chair, space for a chair, partial wall on 3 sides, gases and suction
4 - 5	Patient Teaching Room	12.0	1	12.0	Teaching area for 4-6 people @ 2.0 nsm per person; supports Home IV service
4 - 6	Care Station	12.0	1	12.0	Work area for 2-3 staff
4 - 7	PICC Insertion Procedure Room	12.0	2	24.0	Require an exam style room layout that will accommodate a patient bed; requires good task lighting
4 - 8	PICC Supply Storage	6.0	1	6.0	Require an enclosed area for PICC supplies on 2 carts (sterile supplies) adjacent to procedure rooms
4 - 9	PICC & Home IV Staff Work Area	4.5	3	13.5	Work area for 2 PICC staff and 1 OPAT nurse
4 - 10	Medication Room	9.0	1	9.0	Includes sink, counter area, cabinets, fridge and floor area for a future automated drug dispensing tower
4 - 11	Clean Linen Alcove	2.5	2	5.0	Locate alcove proximal to treatment bays
4 - 12	Hand Wash Sink	0.5	4	2.0	1 sink per 3 treatment spaces
4 - 13	Patient Washroom	4.5	2	9.0	Barrier-free
	Subtotal			206.5	
Clinic Support Area					
4 - 14	Clean Utility Room	12.0	1	12.0	Storage of clean medical supplies
4 - 15	Soiled Supply Area	9.0	1	9.0	Accommodates soiled linen / macerator
4 - 16	Equipment Storage Area	10.0	1	10.0	Storage of medical equipment, e.g. IV pumps, crutches, wheelchairs, etc.
4 - 17	Housekeeping Room	12.0	1	12.0	Includes shelving for supplies, cart, floor and hand sinks and a floor scrubber; shared with adjacent programs
				43.0	
Staff Support Area					
4 - 18	Staff Room	0.0	1	0.0	Will access a staff room in a common area that is shared with adjacent programs
4 - 19	Staff Washroom	4.5	1	4.5	
4 - 20	Locker Area	0.3	6	1.8	Contains half lockers
				6.3	

5. PRE-SURGICAL SCREENING (PSS) & OR BOOKING

A. OVERVIEW

This component includes the following services:

- PSS - patient assessment services prior to surgery
- OR Booking

The following service planning assumptions apply to this component:

- PSS and OR Booking will move as one unit to the Clinical Services Building (CSB).

Scope of Services

- PSS is a region-wide IH program that better prepares patients for surgery, resulting in fewer delays and cancellations, better surgical outcomes, better use of surgical resources, and reduced wait times. Also, the IH Surgical Optimization Program anticipates and minimizes the risks for delayed recovery and actively engages patients in preparing for surgery and rehabilitation.
- A significant number of pre-surgical screenings are done over the phone. Face-to-face appointments are booked. The Clinic starts @ 0730 hours.
- PSS currently see 10-14 patients, and this number will increase to 16 shortly.
- Anaesthetic consultations are done in this area.
- The PSS is currently co-located with OR Booking.
- The OR Booking function books patients for surgery. There are 4 clerks supporting the OR booking function. Once additional ORs are added as part of the master site plan, the FTE would need to increase by one for a total of 5 clerks.

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
Outpatient Lab & ECG	X	Locating this program with Outpatient Lab & ECG supports seamless access to patient diagnostics services that patients require as part of their pre-surgical assessment.
Cardiopulmonary/ Neurodiagnostics	X	Locating this program with the Cardiopulmonary/Neurodiagnostics supports seamless access to patient diagnostics services that patients require as part of their pre-surgical assessment.

Education Role

Education will be accommodated as follows:

- Consultation and education spaces that are Telehealth capable rooms are accessible and bookable for the education needs of patients and staff.
- Most clinical teaching will occur within available clinical spaces with convenient access to group teaching facilities required within the component.

Royal Inland Hospital CSB Functional Program

5. Pre-Surgical Screening (PSS) & OR Booking

Research Role

PSS will participate in applied health research studies as required. No additional space is projected to support research activities. It is assumed that research will be conducted in the clinical area.

B. OPERATIONS

Patient Profile

- Patients will be from all age groups and some patients will have mobility issues.

Patient Flow

Service Delivery Principles & Methods

- A designated patient waiting with adjacent programs will be provided. Ensure clear sightlines from the reception workstation to this alcove.
- Decentralized reception/registration functions should be located near the entrance and have visual access to the waiting area. Patient privacy/confidentiality must be addressed in the overall design of this area. The meeting, counselling and clinical spaces should have generic layouts that can accommodate various needs of the programs.
- From the waiting area, patients will be directed to a clinic room or program area to receive services. Once the patient is in the clinic room or program area, they will be looked after by the appropriate staff.
- Family or support persons will be able to accompany the patient into clinical space, or will wait in the waiting area.

Patient Care Services

Every attempt will be made to coordinate diagnostic testing and clinical visits to the facility or individual departments within the facility. All efforts will be made to minimize time lost for a patient, i.e. travel time, missed work days etc.

Booking and Scheduling

Healthcare professionals will be expected to share program space (exam/ treatment/ general consult/rooms). Staff will have access to education/meeting rooms for programming on a bookable basis.

Organization & Management

- PSS and OR Booking are managed by the Surgical Program group.

Clinical & Logistical Support Services

- Locating PSS adjacent to Outpatient Laboratory & ECG and Cardiopulmonary/Neurodiagnostics will support the seamless delivery of required pre-surgical diagnostic tests. PSS patients will however be required to travel to the main building for diagnostic imaging services.
- Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:
 - *Patient Registration*
 - *Health Records*
 - *Biomedical Services*
 - *Food Services*
 - *Supply Chain*
 - *Housekeeping Services*

Royal Inland Hospital CSB Functional Program

5. Pre-Surgical Screening (PSS) & OR Booking

- *Linen Services*
- *Plant & Maintenance*
- *Security Services*
- *IMIT*

Hours of Operation

Hours of operation: Monday to Friday from 0700 to 1930 hours.

C. WORKLOAD

Table 1: Historical and Projected Workload

Workload Measure	Historical			Projected (see notes)		
	2007/108	2008/09	2009/10	2015/16	2021/22	2026/27
<u>Inpatient Surgery</u>						
# of visits per year	4,868	4,875	4,682	5,070	6,345	6,600
Length of Cases (hrs)	9,269	9,407	8,977			
Average Hours/Visit	1.92	1.93	1.92			
<u>Surgical Day Care</u>						
# of visits per year	6,270	6,354	5,828	6,610	8,655	9,900
Length of Cases (hrs)	5,631	5,801	5,317			
Average Hours/Visit	0.90	0.91	0.91			
Total Surgical Visits	11,108	11,229	10,510	11,680	15,000	16,500
% SDC of total Surgeries	56.4%	56.6%	55.5%	56.6%	57.7%	60.0%

Notes:

1. Projections from December 2010 master program.
2. Projections based on projected population growth and historical program volume growth.
3. 12,000 surgical cases used as the base for the projected workload. There was a 15% reduction in services approx 18 months ago and therefore using 10,510 surgical visits for 2009/10 as the base for the projected workload results in an under-estimate of the workload.

Royal Inland Hospital CSB Functional Program

5. Pre-Surgical Screening (PSS) & OR Booking

D. STAFFING

Table 2: Current and Projected Staffing

Position	Current			Projected - 2015		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
PSS Nurse (DC1 & DC2)	6.2	7	6	6.2	7	6
PSS Clerk	2.0	2	2	2.0	2	2
OR Booking (incl superv.)	4.0	4	4	5.0	5	5
TOTAL	12.2	13	12	13.2	14	13

Notes:

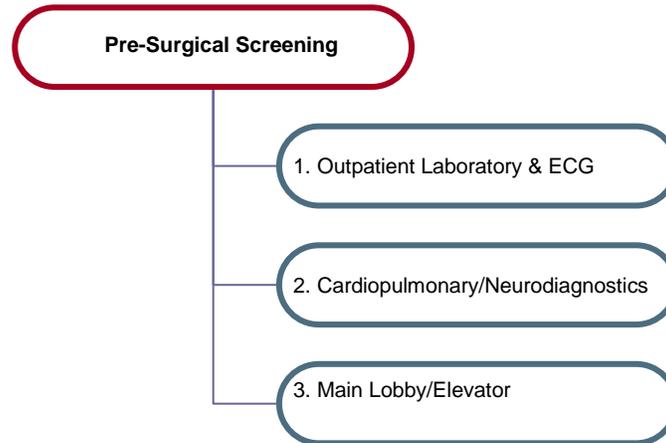
1. FTE = Full Time Equivalent
2. HCT = Headcount
3. Maximum Headcount identifies the total number of staff working in the area at a given point of time. This is an important measure to identify parking requirements.
4. PSS Nurse DC2 will not relocate to the CSB.

E. FUNCTIONAL RELATIONSHIPS

Location

- PSS must be located adjacent to Outpatient Laboratory & ECG and Cardiopulmonary/Neurodiagnostics, and as well be in an accessible location for patients.

External Relationships



1. Provide convenient access by general circulation to the Outpatient Laboratory & ECG for movement of patients.
2. Provide convenient access by general circulation to the Cardiopulmonary/ Neurodiagnostics for movement of patients.
3. Locate close to a main entrance/lobby for movement of patients.

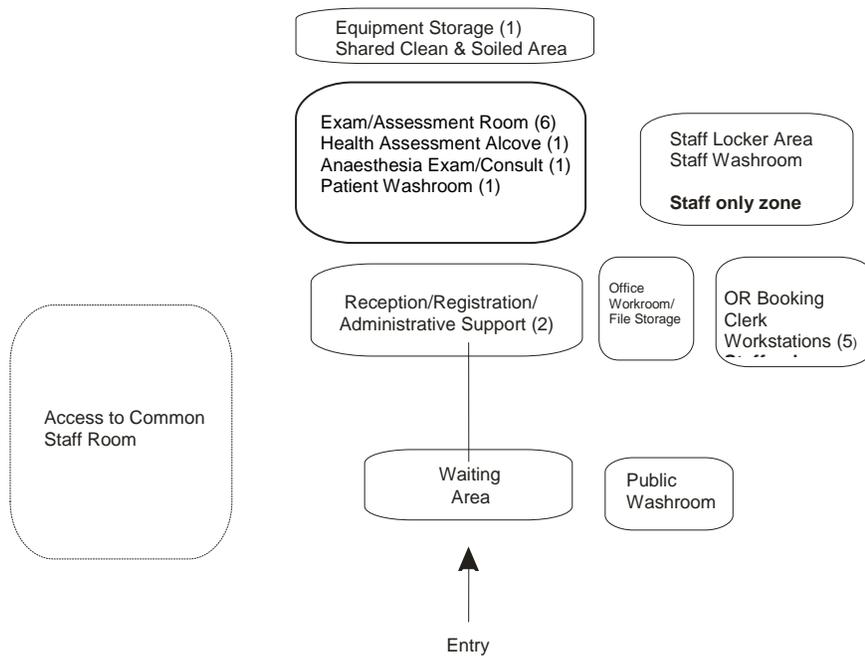
Royal Inland Hospital CSB Functional Program

5. Pre-Surgical Screening (PSS) & OR Booking

Internal Relationships

PSS should be organized in the following zones:

- Patient/Family Waiting Area
- Reception/Administrative Area
- Patient Examination / Assessment Area
- Clinical Support Area
- Staff Support Area



F. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Infection Prevention & Control

- Provide hands free hand washing stations in common areas and treatment areas.
- Examination rooms require a sink with space for soap dispenser, lotion and paper towel dispensers.

Security & Safety

One main point of entry will be controlled both visually by reception staff and by video surveillance. The main door will be open during regular hours and be in lockdown mode (night mode) after regular business hours. A staff card access system will be incorporated into the building and department entrances. The following security features will be employed in the area:

- Public access to the clinical areas and staff work areas will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to meeting spaces for after hours use by public and staff groups.
- Security and safety of staff in off hours needs to be considered.

Flexibility & Adaptability

Flexible exam and treatment space will be designed in the area to adapt to long-term growth and changes in workload. Where appropriate, exam/ treatment rooms will be centralized in clusters so various clinics can share exam rooms. Exam rooms will typically have space for an exam table, sink, cabinets, and a workspace. All exam rooms will be wired for data/telephone /nurse call systems and Telehealth. Meeting rooms and team rooms will be wired for data/telephone and Telehealth. Future flexibility will be incorporated through the following mechanisms:

- Moveable partitions and modular furnishings to create an open work environment that allows easy reconfiguration of workstations to accommodate additional staff.
- Moveable partitions could be considered in the clinical areas to allow ease of reconfiguration. Movable partitions and furnishings used in clinical areas must meet healthcare infection control guidelines.
- Ergonomics must be considered during design.

Supervision of Patients

Visual supervision is needed from reception and work alcoves of all waiting patients/patients.

Multi-disciplinary space is to be centrally located for team discussion, team consults, etc.

Patient Management

Provide a central activity area (reception) for the control of patient services. All scheduled and unscheduled patients will be received and documented at this point and information on all patients will be accessed from this point.

Royal Inland Hospital CSB Functional Program

5. Pre-Surgical Screening (PSS) & OR Booking

Access & Circulation

- Locate the exam/assessment and consultation rooms proximal to the patient entry/reception point.

Other Considerations

Privacy

- The importance of patient confidentiality and privacy will be reflected in the design of the area. Techniques that maximize acoustic and/or visual privacy will be incorporated where applicable, i.e. registration/check-in.
- Although patients will not access staff work areas, the use of computer based communication technology, e.g. electronic patient health record, may create issues related to patient privacy that will need to be addressed.

Environment

The following concepts will impact the overall environment of the space:

- Facilities for patients and families should present a calm and reassuring, yet professional environment;
- All meeting and clinical spaces should accommodate Telehealth technologies.
- All work areas must be wired to support use of networked devices e.g. computers, handheld devices.
- The colors within the area should be designed to provide a comfortable environment for staff and patients.
- Staff workstations should be configured to allow for visual as well as acoustical privacy to create a quieter work environment. Address acoustics and noise transference in open work areas by use of appropriate technologies e.g. sound dampening technology.
- Clinical spaces must be appropriate for a variety of ages to accommodate paediatric to geriatric patients and special needs populations, e.g. bariatric patients.

Special Requirements

- The exam/assessment room requires the typical exam room set-up, patient stretcher or chair area, sink, flexible storage and staff workstation.
- A health assessment alcove that contains a height measuring instrument and floor scale should be located in proximity to the exam/assessment rooms.
- The consultation room should be located near the exam/assessment rooms. The consultation space should include a workstation and 2 chairs. This space should also include a sink.
- A bookable education space is required for pre-surgery patient education.
- PSS will share clean utility and soiled utility space with an adjacent program.
- The OR Booking work space will be located in a staff only quiet zone.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	240.9
Waiting/Reception/Administrative Support	
Total Net Square Metre (NSM)	85.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>114.8</u>
Patient Examination & Education Area	
Total Net Square Metre (NSM)	72.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	<u>100.8</u>
Clinic Support Area	
Total Net Square Metre (NSM)	10.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	<u>14.0</u>
Staff Support Area	
Total Net Square Metre (NSM)	8.4
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>11.3</u>

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Waiting/Reception/Administrative Support					
5 - 1	Waiting Area	36.0	1	36.0	
	• seats	18	@ 1.5		
	• wheelchairs	2	@ 3.0		
	• education material alcove	1	@ 3.0		
5 - 2	Reception/Administrative Workstation	6.0	2	12.0	Locate proximal to waiting area
5 - 3	Office Workroom/File Storage	10.0	1	10.0	Work counter with upper and lower cabinets; photocopier, printer/scanner, office supplies, file storage etc.; locate proximal to reception workstations; door into office work/file storage from the clerk area; pneumatic tube to open inside room
5 - 4	OR Booking Clerks	4.5	5	22.5	Require 5 workstations (4 currently & 1 future) in an enclosed, quiet area
5 - 5	Client/Patient Washroom	4.5	1	4.5	Includes infant change table; barrier-free
	Subtotal			85.0	

Royal Inland Hospital CSB Functional Program

5. Pre-Surgical Screening (PSS) & OR Booking

No.	Space Name / Function	NSM	Qty	Total	Comments
Patient Examination Area					
5 - 6	Nurse Exam/Assessment Room	10.0	6	60.0	Includes a client exam area, sink, counter with cupboards, staff workstation and chair
5 - 7	Scale Alcove	2.0	1	2.0	Includes a height measuring instrument wall mounted and a floor scale
5 - 8	Anaesthesia Exam/Consult Room	10.0	1	10.0	Consult room with soft seating and a sink; could be converted to exam room if required
	Subtotal			72.0	
Clinic Support Area					
5 - 9	Clean Utility Room	0.0	0	0.0	Shared with an adjacent program
5 - 10	Soiled Supply Area	0.0	0	0.0	Shared with an adjacent program
5 - 11	Bookable Education Area	10.0	1	10.0	To support pre-surgery patient education
5 - 12	Housekeeping Room	0.0	0	0.0	Shared with an adjacent program
				10.0	
Staff Support Area					
5 - 13	Staff Room	0.0	0	0.0	Will access a staff room in a common area that is shared with adjacent programs
5 - 14	Staff Washroom	4.5	1	4.5	Will share with an adjacent program
5 - 15	Locker Area	0.3	13	3.9	Contains half lockers
				8.4	

6. MEDICAL OUTPATIENT SERVICES

A. OVERVIEW

This component includes the following services:

- Medical Outpatient Services (OPS) will provide specialty health care services for ambulatory clients of all ages and genders.
- Medical OPS that are appropriately located in a tertiary level health care facility.

The following service planning assumptions apply to this component:

- Medical OPS will provide specialty health care services for ambulatory clients of all ages and genders.
- A key planning assumption for the services planned for the Clinical Services Building (CSB) is that services that are procedural, require sedation or imaging support will not be located in the CSB. Therefore, the follows services are excluded: minor surgery, endoscopic procedures, orthopedic clinic, and any other service requiring access to procedural space. The service scope also excludes Primary Care services.
- It is assumed there will be rotational use of this clinic space.

Scope of Services

- Medical OPS will provide specialty health care services for ambulatory clients of all ages and genders. The December 2010 master program documented the need to expand tertiary level speciality outpatient services at RIH.
- This functional program document lays the foundation for the future growth of these services.
- The Clinics will be a teaching site for health sciences students (including medical students) and residents.
- A team approach will be used to deliver patient-centered care. The composition of the team will depend on the population needs and availability of health care providers.
- In developing the scope of service definition for this area, the following scope of services table was constructed with extensive input from program leads and physicians.
- Additional operational planning work must be undertaken to further define the scope of services and staff support requirements for this program.

Medical Outpatient Services	New/Existing Service/Location	# of Days per Week	Projected Staffing	Comments
Breast Clinic	New		1 physician 1 nurse coordinator	To assist women to access required services after an abnormal mammography
Chronic Neurologic Disease Clinic	Existing Community	5 days	1 physician 1 nurse practitioner plus 2 other team members	Includes dementia, Movement Disorders, MS, Epilepsy clinic and Neuromuscular diseases; require access 2 exam rooms + swing office/consult space
Chronic Pain Management	New	3 days	1 physician 1 psychologist 1 visiting consultant 1 nurse	Require 3 exam rooms

Royal Inland Hospital CSB Functional Program

6. Medical Outpatient Services

Medical Outpatient Services	New/Existing Service/Location	# of Days per Week	Projected Staffing	Comments
Geriatric/Dementia Clinic	New	1 day	1 physician 1 nurse 1 social worker 1 psychiatrist	Strong link with Neurology services. RIH has recruited a gerontologist.
Hepatology Clinic	Existing Community	5 days	2 physicians 1 nurse	Further service scope development required. Located in the PH bldg.
Infectious Disease Clinic	New	.5 x 5 days	1 physician 1 Clinical	
Outpatient Hospitalist Clinic	New	.5 days	1 physician	Follow-up of discharge complex patients.
Pediatric GI Clinic	New	.5 days	1 physician 1 nurse	
Pre-Surgical Screening (PSS) This is a separate functional program.	Existing	5 days	7 nurses 2 physicians 2 clerks	Refer to component #5 – PSS
Rapid Access Specialty Clinics	New	5 days	1 physician 1 nurse	Includes rapid access specialty clinics for Internal Medicine, GI, etc.
Rheumatology Clinic	Existing	.5 days	1 physician	
VIP This is a separate functional program.	Existing	5 days per week	See VIP notes	Refer to component # 7 – VIP

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
UBC Medical School	X	Locating this program with UBC supports student education.

Education Role

Education will be accommodated as follows:

- Consultation and education spaces that are Telehealth capable rooms are accessible and bookable for the education needs of patients and staff.
- Most clinical teaching will occur within available clinical spaces with convenient access to group teaching facilities required within the component.

Research Role

Specialty clinics will participate in applied health research studies as required. It is assumed that research will be conducted in the clinical area.

B. OPERATIONS

Patient Profile

- Patients will be from all age groups and some patients will have mobility issues.

Patient Flow

Service Delivery Principles & Methods

- A designated patient waiting with adjacent programs will be provided. Ensure clear sightlines from the reception workstation to this alcove.
- Decentralized reception/registration functions should be located near the entrance and have visual access to the waiting area. Patient privacy/confidentiality must be addressed in the overall design of this area. The

6. Medical Outpatient Services

meeting, counselling and clinical spaces should have generic layouts that can accommodate various needs of the programs.

- From the waiting area, patients will be directed to a clinic room or program area to receive services. Once the patient is in the clinic room or program area, they will be looked after by the appropriate staff.
- Family or support persons will be able to accompany the patient into clinical space, or will wait in the waiting area.

Patient Care Services

Every attempt will be made to coordinate diagnostic testing and clinical visits to the facility or individual departments within the facility. All efforts will be made to minimize time lost for a patient, i.e. travel time, missed work days etc.

Booking and Scheduling

Healthcare professionals will be expected to share program space (exam/ treatment/ general consult/rooms). Staff will have access to education/meeting rooms for programming on a bookable basis.

Organization & Management

The organization and management of this component requires further operational planning to identify the staffing model that will be in place to support these specialty clinics.

Clinical & Logistical Support Services

Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:

- *Patient Registration*
- *Health Records*
- *Biomedical Services*
- *Food Services*
- *Supply Chain*
- *Housekeeping Services*
- *Linen Services*
- *Plant & Maintenance*
- *Security Services*
- *IMIT*

Hours of Operation

Hours of operation: Monday to Friday from 0700 to 1800 hours. There is the potential to operate after hour and weekend clinics depending on the operational dollars available.

C. WORKLOAD

Table 1: Historical and Projected Workload

Workload Measure	Historical			Projected (see notes)		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
Ear, Nose & Throat Clinic	317	145	173	330	360	383
Rheumatology Clinic	1,377	1,300	1,229	1,280	1,562	1,664
Gynecology	409	291	360	425	464	494
New Tertiary Clinic Visits per Year	n/a	n/a	n/a	22,000	23,040	30,720

Notes:

1. Projections for ENT, Rheumatology and Gynecology from December 2010 master program and updated by IH for the last 2 fiscal years.
1. As noted in an earlier section, future tertiary level clinics that are currently not in place are planned. Additional specialists are being recruited and it is expected that specialty clinics will only grow to meet the needs of the growing population coupled with the significant growth of the aging population, i.e. over 65 population in IH West with a 41.7% growth by 2021/22 and a total of 59.6% growth by 2026/27.
2. Projected visits for new clinics based on the following planning assumption: an average of 16 clinic visits per day x 6 full day clinics (assumes 48 weeks of operation) by 2021/22 and 8 full day clinics per day by 2026/27. The space is planned to provide flexible growth space for specialty clinics that are anticipated to grow especially with RIH becoming a UBC affiliated academic site.

D. STAFFING

Table 2: Current and Projected Staffing

Position	Current			Projected – 2015		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
Registered Nurse (PCC)	0.0	0	0	1.0	1	1
Registered Nurse	0.0	0	0	1.0	1	1
Licensed Practical Nurse	0.0	0	0	1.0	1	1
Social Worker	0.0	0	0	0.5	1	1
Unit Clerk	0.0	0	0	1.0	1	1
TOTAL	0.0	0	0	4.5	5	5

Notes:

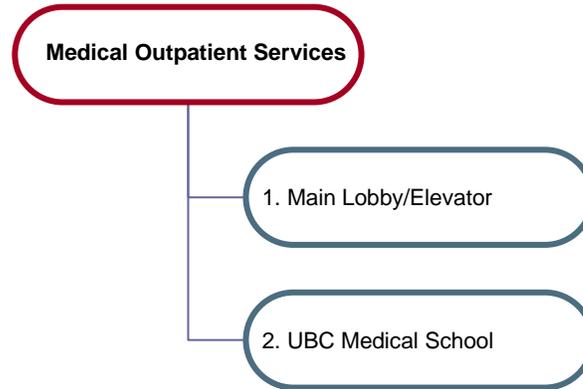
1. FTE = Full Time Equivalent HCT = Headcount
2. Maximum Headcount identifies the total number of staff working in the area at a given point of time. This is an important measure to identify parking requirements.
3. Staffing is for administration of the program.

E. FUNCTIONAL RELATIONSHIPS

Location

- Medical OPS should be in an accessible location for patients.

External Relationships



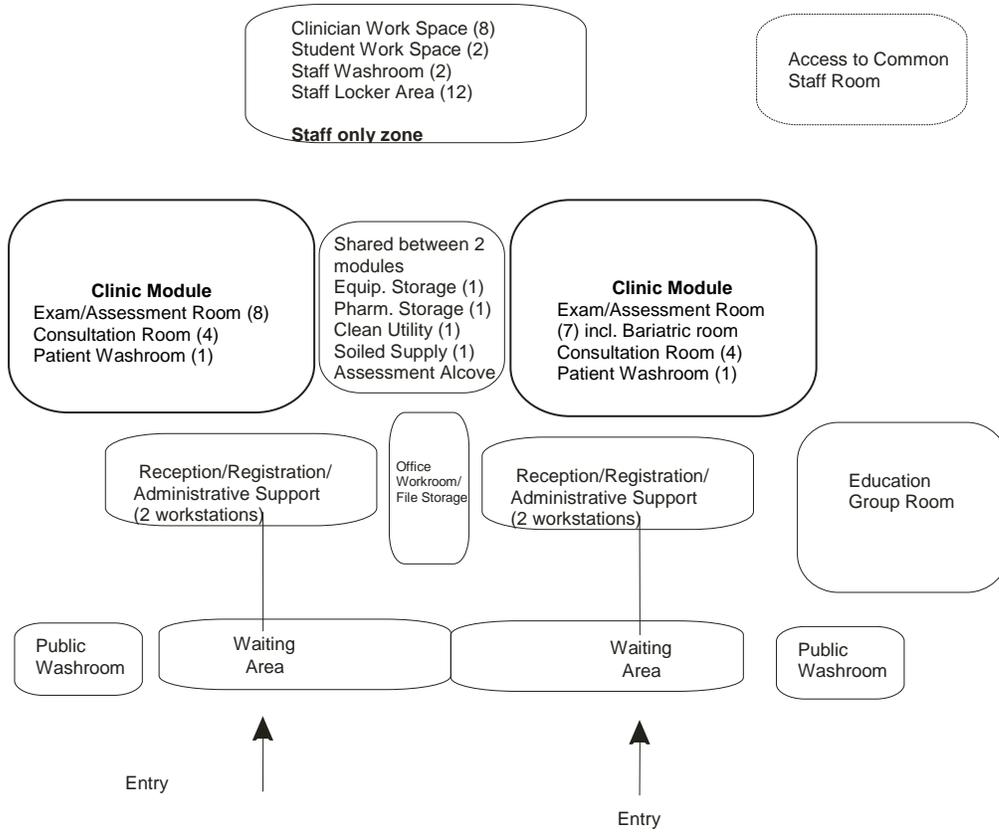
1. Locate close to a main entrance/lobby for movement of patients.
2. Locate close to UBC student space to promote involvement of learners in specialty clinic work.

Internal Relationships

Medical OPS should be organized in the following zones:

- Patient/Family Waiting Area
- Reception/Administrative Area
- Patient Examination & Education Area
- Clinical Support Area
- Staff Support Area

6. Medical Outpatient Services



F. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Infection Prevention & Control

- Provide hands free hand washing stations in common areas and treatment areas.
- Examination rooms require a sink with space for soap dispenser, lotion and paper towel dispensers.

Security & Safety

One main point of entry will be controlled both visually by reception staff and by video surveillance. The main door will be open during regular hours and be in lockdown mode (night mode) after regular business hours. A staff card access system will be incorporated into the building and department entrances. The following security features will be employed in the area:

- Public access to the clinical areas and staff work areas will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to meeting spaces for after hours use by public and staff groups.
- Security and safety of staff in off hours needs to be considered.

Flexibility & Adaptability

Flexible exam and treatment space will be designed in the area to adapt to long-term growth and changes in workload. Where appropriate, exam/ treatment rooms will be centralized in clusters so various clinics can share exam rooms. Exam rooms will typically have space for an exam table, sink, cabinets, and a workspace. All exam rooms will be wired for data/telephone /nurse call systems and Telehealth. Meeting rooms and team rooms will be wired for data/telephone and Telehealth. Future flexibility will be incorporated through the following mechanisms:

- Moveable partitions and modular furnishings to create an open work environment that allows easy reconfiguration of workstations to accommodate additional staff.
- Moveable partitions could be considered in the clinical areas to allow ease of reconfiguration. Movable partitions and furnishings used in clinical areas must meet healthcare infection control guidelines.
- Ergonomics must be considered during design.

Supervision of Patients

Visual supervision is needed from reception and work alcoves of all waiting patients/patients.

Multi-disciplinary space is to be centrally located for team discussion, team consults, etc.

Patient Management

Provide a central activity area (reception) for the control of patient services. All scheduled and unscheduled patients will be received and documented at this point and information on all patients will be accessed from this point.

Access & Circulation

- Locate the exam/assessment and consultation rooms proximal to the patient entry/reception point.

Other Considerations

Privacy

- The importance of patient confidentiality and privacy will be reflected in the design of the area. Techniques that maximize acoustic and/or visual privacy will be incorporated where applicable, i.e. registration/check-in.
- Although patients will not access staff work areas, the use of computer based communication technology, e.g. electronic patient health record, may create issues related to patient privacy that will need to be addressed.

Environment

The following concepts will impact the overall environment of the space:

- Facilities for patients and families should present a calm and reassuring, yet professional environment;
- All meeting and clinical spaces should accommodate Telehealth technologies.
- All work areas must be wired to support use of networked devices e.g. computers, handheld devices.
- The colors within the area should be designed to provide a comfortable environment for staff and patients.
- Staff workstations should be configured to allow for visual as well as acoustical privacy to create a quieter work environment. Address acoustics and noise transference in open work areas by use of appropriate technologies e.g. sound dampening technology.
- Clinical spaces must be appropriate for a variety of ages to accommodate paediatric to geriatric patients and special needs populations, e.g. bariatric patients.

Special Requirements

- It is envisioned that the clinical space will be arranged into 2 clinic modules with one module having 8 exam rooms and 4 consult rooms and the other module having 6 typical exam rooms, 1 bariatric exam room and 4 consult rooms. The support space (e.g. 1 clean and soiled utility, 1 pharmaceutical supply storage, 1 equipment storage, and 1 health assessment alcove) will support the two clinic modules.
- The exam/assessment room requires the typical exam room set-up, patient stretcher or chair area, sink, flexible storage and staff workstation. There will be 1 larger examination room for special needs populations, e.g. bariatric patients, family appointments, etc.
- The consultation room should be located near the exam/assessment room. The consultation space should include a workstation and 2 chairs. This space should also include a sink.
- The clinician work area and staff support space (i.e. lockers) should be located in a staff only zone.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	635.1
Waiting/Reception/Administrative Support	
Total Net Square Metre (NSM)	82.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>110.7</u>
Patient Examination & Education Area	
Total Net Square Metre (NSM)	312.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	<u>436.8</u>
Clinic Support Area	
Total Net Square Metre (NSM)	51.0
Net to Gross Ratio	1.40
Component Gross Area (CGSM)	<u>71.4</u>
Staff Support Area	
Total Net Square Metre (NSM)	12.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>16.2</u>

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Waiting/Reception/Administrative Support					
6 - 1	Waiting Area	30.0	1	30.0	
	• seats	16	@ 1.5		
	• wheelchairs	2	@ 3.0		
6 - 2	Reception/Registration Workstation	12.0	2	24.0	2 workstations; locate proximal to waiting area
6 - 3	Patient File Storage	10.0	1	10.0	Consider high density shelving for patient files
6 - 4	Office Workroom	9.0	1	9.0	Work counter with upper and lower cabinets; photocopier, printer/scanner, office supplies, etc.; locate proximal to reception workstations (shared)
6 - 5	Client/Patient Washroom	4.5	2	9.0	Includes infant change table; barrier-free
	Subtotal			<u>82.0</u>	

Royal Inland Hospital CSB Functional Program

6. Medical Outpatient Services

No.	Space Name / Function	NSM	Qty	Total	Comments
Patient Examination & Education Area					
6 - 6	Exam Room, Typical	10.0	14	140.0	Includes a patient exam area, sink, flexible supply storage, staff workstation and chair
6 - 7	Exam Room, Bariatric	20.0	1	20.0	Includes a patient exam area, sink, flexible supply storage, staff workstation and chair; for special needs population, e.g. bariatrics, families, etc.
6 - 8	Consultation Room	10.0	8	80.0	Consult room with soft seating and a sink; could be converted to exam room if required
6 - 9	Education Group Room	22.0	1	22.0	To accommodate 10 persons @ 2.0 sqm per person for group patient teaching and staff education (shareable)
6 - 10	Clinician Work Space	4.5	8	36.0	Workstation with storage, chair, computer, phone; locate with exam/consult room space
6 - 11	Student Work Space	2.5	2	5.0	Touch down desk with space for a phone and computer
6 - 12	Patient Washroom	4.5	2	9.0	Barrier-free; locate 1 washroom per 12 exam/ consult rooms
	Subtotal			312.0	
Clinic Support Area					
6 - 13	Clean Utility Room	12.0	1	12.0	Storage of clean medical supplies
6 - 14	Pharmaceutical Supply Storage	6.0	1	6.0	Require a lockable space for storage of samples
6 - 15	Scale Alcove	5.0	1	5.0	Alcove with a height measure, weigh scale, etc.
6 - 16	Office, Clinic Manager	9.0	1	9.0	Workstation with storage, chair, computer, phone and seating for 1-2
6 - 17	Equipment Storage Area	10.0	1	10.0	Storage of medical equipment, e.g. IV pumps, crutches, wheelchairs, etc.
6 - 18	Soiled Supply Area	9.0	1	9.0	Accommodates soiled linen / medical supplies
6 - 19	Housekeeping Room	0.0	0	0.0	There will be strategically located housekeeping rooms on each level of the CSB.
				51.0	
Staff Support Area					
6 - 20	Staff Room	0.0	0	0.0	Will access a staff room in a common area that is shared with adjacent programs
6 - 21	Staff Washroom, Barrier-free	4.5	2	9.0	Staff washroom, Barrier-free; staff only zone
6 - 22	Locker Area	0.3	10	3.0	Contains half lockers; staff only zone
				12.0	

7. VASCULAR IMPROVEMENT PROGRAM (VIP)

A. OVERVIEW

The Vascular Improvement Program (VIP) includes the following services:

- Heart Function Clinic
- Transient Ischemic Attack (TIA) Clinic
- Specialist Clinics
- Nurse Case Management and Multidisciplinary Team Visits for primary and secondary prevention of cardiovascular disease: Education, Lifestyle coaching risk factor reduction using both individual and group counselling formats.

The following service planning assumptions apply to this component:

- The demand for Chronic Disease Management services will only increase as the population ages.
- Services for diseases of the circulatory system should be clustered together.
- Functions such as reception, waiting and staff facilities can be shared with other programs.
- It is assumed that technology such as Telehealth and webinars could be used for some group education events. This approach will be helpful to patients living in outlying communities. It is acknowledged that face-to-face sessions are required for initial patient assessment and treatment as well as follow-up in some cases for rural patients.
- It is assumed that group education space will be a shared resource.
- It is assumed that group education and group exercise programs currently located in the community will continue to operate from these community-based locations, e.g. CDM exercise programs offered in partnership with the City of Kamloops, etc.
- Patient group visits is a growing trend and therefore access to group meeting space is important.
- The TIA Rapid Access Clinic must be a rapid response service. Patients must be assessed within 24 to 72 hours, which is best practice for stroke prevention.

B. SERVICES / FUNCTIONS

Scope of Services

- VIP started in 2003. It is a multi-factoral risk factor reduction clinic for both primary and secondary prevention of cardiovascular disease with a significant medical component.

VIP Services

- VIP focuses on the maintenance and improvement of both cardiac and vascular health through a multidisciplinary program of health education, counselling and intervention. Every participant is assigned a program nurse and depending on their needs may also meet with a dietitian, exercise specialist or pharmacist. Specialized physician evaluation and management is available for cardiovascular risk assessment including advanced lipid measurement and cardiac diagnostics. The program offers a supervised "Cardiac Rehab" exercise and information program led by ACSM Exercise Specialists (Physiotherapists/Kinesiologists) and Registered Nurses. The "Cardiac Rehabilitation component of VIP is held at the Tournament Capital Centre. VIP follows participants over a one year period as they work on self-management strategies for health.

Royal Inland Hospital CSB Functional Program

7. Vascular Improvement Program (VIP)

- The VIP primary and secondary prevention program currently receives 40-60 new referrals per month and currently has approximately 600 active patients. Patients typically attend about 5 times, including the initial assessment and follow-up visits in 2 weeks, 1 month, 3 months and 6 months. As well as in person visits, VIP conducts telephone follow-up with patients.
- VIP has 10-12 specialist clinics per month (1-2 days per week), which includes specialists such as internists and family physician with cardiovascular specialty. Each clinic averages a half-day with 1 specialist and a student requiring access to 2 exam rooms and 1 consult room.
- Increased use of Telehealth in this program is a key direction particularly in terms of the VIP Heart Function clinic.
- As part of the VIP umbrella, it is important to note that two services occurring out of the space defined: the TIA Rapid Access Clinic Pilot and the Heart Function Clinic are not separate entities - as they are integrated within the VIP umbrella.
- The TIA Clinic and Heart Function Clinic are clinics with dedicated staff under VIP.
 - TIA Clinic operates Monday - Friday. The primary purpose is to prevent stroke. Approximately 60% of the patients are from out of town. The RN conducts both a telephone and in-person assessment of the patient to triage each case. As required, a neurologist sees the patient. The clinic sees up to 8 patients per day. The clinic keeps active patient records in the program area.
 - The Heart Function Clinic (HFC) is staffed by a cardiologist and a nurse. The clinic has a strong connection with Cardiopulmonary/ Neurodiagnostics and Respiratory Services. The clinic supports in-home monitoring of cardiac patients. The clinic monitors patients remotely with the patient using in-home equipment provided by the clinic in addition to in-person clinic visits and phone visits.
- As mentioned above, there is a supervised exercise program in the community (cardiac rehab) and this service will remain in the community.
- Patients seen for primary prevention are seen in a group visit format for education and lifestyle counselling.
- VIP / TIA / Heart Function physician clinics as described above may be held on the same days.

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
Community RT	X	Co-location of this program with Community RT will support an integrated team approach to patient service delivery including sharing space, e.g. patient education group room.
Cardiopulmonary/ Neurodiagnostics	X	Locating this program with the Cardiopulmonary/ Neurodiagnostics supports seamless access to patient diagnostics services.

Education Role

Education will be accommodated as follows:

- Consultation and education spaces that are Telehealth capable rooms are accessible and bookable for the education needs of patients and staff.
- Most clinical teaching will occur within available clinical spaces with convenient access to group teaching facilities required within the component.

Royal Inland Hospital CSB Functional Program

7. Vascular Improvement Program (VIP)

Research Role

VIP will participate in applied health research studies as required. No additional space is projected to support research activities. It is assumed that research will be conducted in the clinical area.

C. OPERATIONS

Patient Profile

- Patients will be from all age groups and some patients will have mobility issues.

Patient Flow

Service Delivery Principles & Methods

- A designated patient waiting with adjacent programs will be provided. Ensure clear sightlines from the reception workstation to this alcove.
- Decentralized reception/registration functions should be located near the entrance and have visual access to the waiting area. Patient privacy/confidentiality must be addressed in the overall design of this area. The meeting, counselling and clinical spaces should have generic layouts that can accommodate various needs of the programs.
- From the waiting area, patients will be directed to a clinic room or program area to receive services. Once the patient is in the clinic room or program area, they will be looked after by the appropriate staff.
- Family or support persons will be able to accompany the patient into clinical space, or will wait in the waiting area.

Future Patient Journey

Referrals for all VIP services will be referred via multiple channels (self, primary care provider, tertiary care, specialists), and these referrals will originate from anywhere in BC but primarily IH-West. Referred VIP patients are first screened by clinical coordinator to stream them into the different programs. Lab and ECG requisitions are sent to the patient for pre-diagnostic work-up, and other records are retrieved and collated if/as available (e.g. Pacemaker Clinic reports, Catheterization reports, etc.).

The patients will be phoned by VIP clinic staff to book initial and follow-up appointments with the clinic, as well as specialist appointments and exercise programming. VIP staff will also co-ordinate the patient booking with any required diagnostics (i.e. Echo/Stress testing / MIBI / lab).

Patients arrive and are registered at the VIP clinic front reception area. Patient education DVDs are available for viewing in the reception and waiting area. The patient is taken into a treatment room or group education room for the encounter, which could include physical assessment and history, medication titration, consults, group visit, counselling, and/or education. Upon completion of the exam, test, or education session, the patient will be able to book any follow-up appointment at the VIP Clinic reception area, before departing.

Transient Ischemic Attack (TIA) / Minor Stroke Clinic

The VIP TIA clinic is meant to be a “fast track” for patients at high risk for imminent TIA/Minor Stroke. Referrals can come from RIH ED, a primary care provider from community, anywhere across IH-West. These patient referrals are triaged on the day received and are then referred to a screening nurse who will contact the patient within 24 to 72 hours (Monday through Friday). The patient journey is coordinated with Admitting, Lab, Cardiopulmonary diagnostics, DI, and the Neurologist on-call.

Royal Inland Hospital CSB Functional Program

7. Vascular Improvement Program (VIP)

As with all other VIP Services above, patients arrive and will be registered at a decentralized registration location for first visit, and at the VIP TIA clinic reception area for subsequent visits. Patients will be seen in multiple visits in a short period of time, both in the clinic and via telephone, to receive VIP risk factor and lifestyle patient education and counselling.

Patient Care Services

Every attempt will be made to coordinate diagnostic testing and clinical visits to the facility or individual departments within the facility. All efforts will be made to minimize time lost for a patient, i.e. travel time, missed work days etc.

Booking and Scheduling

Healthcare professionals will be expected to share program space (exam/ treatment/ general consult/rooms). Staff will have access to education/meeting rooms for programming on a bookable basis.

Organization & Management

- VIP has both functional and operational reporting relationships to RIH and Community Integrated Health Services.

Clinical & Logistical Support Services

- Locating VIP adjacent to Community RT and Cardiopulmonary/ Neurodiagnostics will support the seamless delivery of services.
- Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:
 - *Patient Registration*
 - *Health Records*
 - *Biomedical Services*
 - *Food Services*
 - *Supply Chain*
 - *Housekeeping Services*
 - *Linen Services*
 - *Plant & Maintenance*
 - *Security Services*
 - *IMIT*

Hours of Operation

Hours of operation: Monday to Friday from 0800 to 1630 hours.

Clinics schedules are variable day-to-day and VIP staff may be onsite for shifts ranges from 0730-1730

Royal Inland Hospital CSB Functional Program

7. Vascular Improvement Program (VIP)

D. WORKLOAD

Table 1: Historical and Projected Workload

Workload Measure	Historical			Projected (see notes)		
	2009/10	2010/11	2011/12	2015/16	2021/22	2026/27
VIP Visits per Year (see note 3)	3,808	4,220	5,136	5,350	7,306	8,197

Notes:

1. Projections from December 2010 master program.
2. Projections based on projected population growth of the over 65 population in IH West with a 41.7% growth by 2021/22 and a total of 59.6% growth by 2026/27.
3. The TIA Clinic was piloted in 2009/10 and the Heart Function Clinic in 2010/11.

E. STAFFING

Table 2: Current and Projected Staffing

Position	Current			Projected - 2015		
	FTE	Headcount	Max Hct	FTE	Headcount	Max Hct
Registered Nurse	2.75	4	4	4.0	6	6
Program Assistants	1.4	2	2	2.0	2	2
Dietitian	0.2	1	1	0.5	1	1
Exercise Specialist	0.4	1	1	0.5	1	1
Clinical Coordinator	0.9	1	1	0.9	1	1
Program Coordinator	0.8	1	1	0.8	1	1
TOTAL	6.45	10	10	8.7	12	12

Notes:

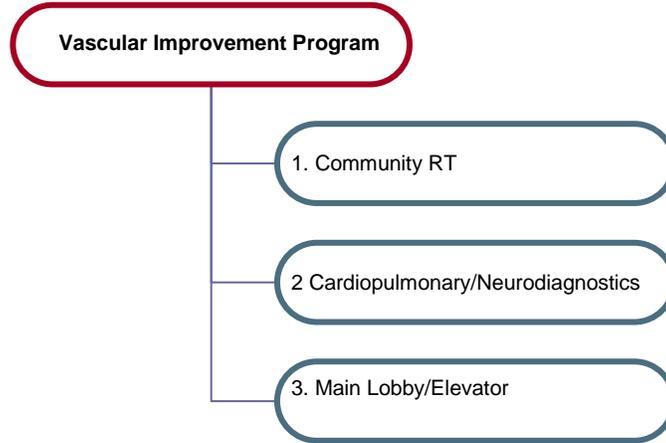
1. FTE = Full Time Equivalent HCT = Headcount
2. Maximum Headcount identifies the total number of staff working in the area at a given point of time. This is an important measure to identify parking requirements.
3. 4 Volunteers support clinics equivalent to 3 half days per week.
4. Two Cardiologists, 4-5 Internal Medicine specialists, 1 GP Specialist and 4 Neurologists work in the VIP. An average of 12 physician clinics per month plus on call VIP (Monday-Friday). On call Neurologist attends daily Neurology clinics for TIA Monday – Friday. Note: VIP has casual program assistant staff that does workload and relief. There may be a headcount of 3 for program assistants using the available space at times.

F. FUNCTIONAL RELATIONSHIPS

Location

- VIP must be located adjacent to Community RT and near Cardiopulmonary/Neurodiagnostics, and as well be in an accessible location for patients.

External Relationships

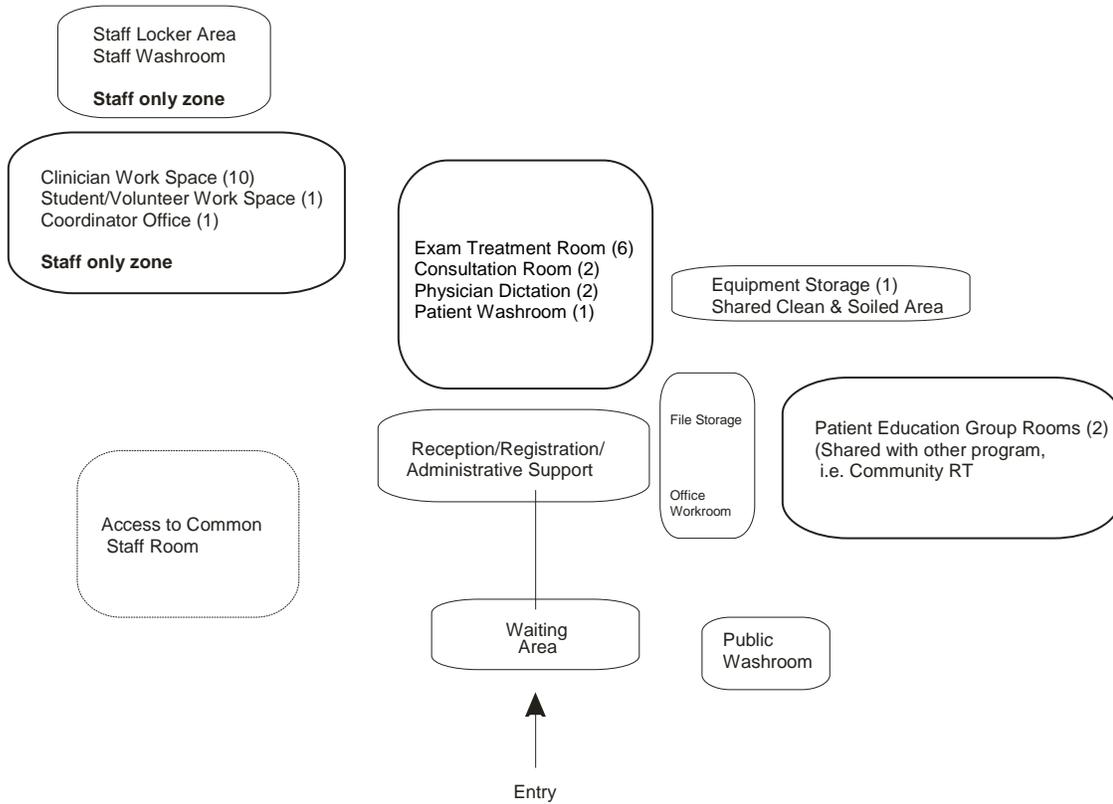


1. Provide convenient access by internal circulation to Community RT for movement of staff, and convenient access by general circulation for movement of patients. (Note: VIP and Community RT have separate staff but may have shared patients. The internal circulation for staff may not be as high a priority as patient flow.)
2. Provide convenient access by general circulation to the Cardiopulmonary/Neurodiagnostics for movement of staff and patients.
3. Locate close to a main entrance/lobby for movement of patients.

Internal Relationships

VIP should be organized in the following zones:

- Patient/Family Waiting Area
- Reception/Administrative Area
- Patient Examination & Education Area
- Clinical Support Area
- Staff Support Area



G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Infection Prevention & Control

- Provide hands free hand washing stations in common areas and treatment areas.
- Examination rooms require a sink with space for soap dispenser, lotion and paper towel dispensers.

Security & Safety

One main point of entry will be controlled both visually by reception staff and by video surveillance. The main door will be open during regular hours and be in lockdown mode (night mode) after regular business hours. A staff card access system will be incorporated into the building and department entrances. The following security features will be employed in the area:

- Public access to the clinical areas and staff work areas will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to meeting spaces for after hours use by public and staff groups.
- Security and safety of staff in off hours needs to be considered.

Flexibility & Adaptability

Flexible exam and treatment space will be designed in the area to adapt to long-term growth and changes in workload. Where appropriate, exam/ treatment rooms will be centralized in clusters so various clinics can share exam rooms. Exam rooms will typically have space for an exam table, sink, cabinets, and a workspace. All exam rooms will be wired for data/telephone /nurse call systems and Telehealth. Meeting rooms and team rooms will be wired for data/telephone and Telehealth. Future flexibility will be incorporated through the following mechanisms:

- Moveable partitions and modular furnishings to create an open work environment that allows easy reconfiguration of workstations to accommodate additional staff.
- Moveable partitions could be considered in the clinical areas to allow ease of reconfiguration. Movable partitions and furnishings used in clinical areas must meet healthcare infection control guidelines.
- Ergonomics must be considered during design.

Supervision of Patients

Visual supervision is needed from reception and work alcoves of all waiting patients/patients.

Multi-disciplinary space is to be centrally located for team discussion, team consults, etc.

Patient Management

Provide a central activity area (reception) for the control of patient services. All scheduled and unscheduled patients will be received and documented at this point and information on all patients will be accessed from this point.

Access & Circulation

- Locate the exam/assessment and consultation rooms proximal to the patient entry/reception point.

Other Considerations

Privacy

- The importance of patient confidentiality and privacy will be reflected in the design of the area. Techniques that maximize acoustic and/or visual privacy will be incorporated where applicable, i.e. registration/check-in.
- Although patients will not access staff work areas, the use of computer based communication technology, e.g. electronic patient health record, may create issues related to patient privacy that will need to be addressed.

Environment

The following concepts will impact the overall environment of the space:

- Facilities for patients and families should present a calm and reassuring, yet professional environment;
- All meeting and clinical spaces should accommodate Telehealth technologies.
- All work areas must be wired to support use of networked devices e.g. computers, handheld devices.
- The colors within the area should be designed to provide a comfortable environment for staff and patients.
- Staff workstations should be configured to allow for visual as well as acoustical privacy to create a quieter work environment. Address acoustics and noise transference in open work areas by use of appropriate technologies e.g. sound dampening technology.
- Clinical spaces must be appropriate for a variety of ages to accommodate paediatric to geriatric patients and special needs populations, e.g. bariatric patients.
- Environment that continues to support patient access to information in the waiting space i.e. TV/DVD; pamphlets/ resources, etc.

Special Requirements

- The exam rooms require the typical exam room set-up, with a patient stretcher or chair area, sink, flexible storage and staff workstation.
- The consultation rooms should be located near the exam rooms. The consultation space should include a staff workstation and 2 chairs. This space should also include a sink. This space can also be used for team teleconferencing.
- An equipment storage space is required for remote cardiac telephone monitoring equipment and medical supplies.
- VIP will share clean utility and soiled utility space with an adjacent program.
- A patient education group room to accommodate 10-12 people has been included in this component. This space is a shareable space especially in relation to the group meeting requirements of Community RT. This space will be Telehealth equipped.
- The clinician work space will be located in a staff only zone.
- Heart Function Clinic staff will access a sink in an adjacent soiled utility to clean the cardiac monitoring equipment.
- Physician dictation space should be located in a quiet, private area.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	355.7
Waiting/Reception/Administrative Support	
Total Net Square Metre (NSM)	50.5
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	68.2
Patient Examination & Education Area	
Total Net Square Metre (NSM)	189.5
Net to Gross Ratio	<u>1.40</u>
Component Gross Area (CGSM)	265.3
Clinic Support Area	
Total Net Square Metre (NSM)	10.0
Net to Gross Ratio	<u>1.40</u>
Component Gross Area (CGSM)	14.0
Staff Support Area	
Total Net Square Metre (NSM)	6.1
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	8.2

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Waiting/Reception/Administrative Support					
7 - 1	Waiting Area	15.0	1	15.0	Must be a bariatric friendly area
	• seats	6	@ 1.5		
	• wheelchairs	2	@ 3.0		
7 - 2	Reception/Registration Workstation	6.0	2	12.0	Locate proximal to waiting area
7 - 3	Patient File Storage	10.0	1	10.0	Consider high density shelving for patient files
7 - 4	Office Workroom	9.0	1	9.0	Work counter with upper and lower cabinets; photocopier, printer/scanner, office supplies, etc.; locate proximal to reception workstations
7 - 5	Client/Patient Washroom	4.5	1	4.5	Barrier-free
	Subtotal			50.5	

Royal Inland Hospital CSB Functional Program

7. Vascular Improvement Program (VIP)

No.	Space Name / Function	NSM	Qty	Total	Comments
Patient Examination Area					
7 - 6	Exam Room	10.0	6	60.0	Includes a client exam area or treatment chair, sink, flexible storage, staff workstation and chair
7 - 7	Consultation Room	10.0	2	20.0	Consult room with soft seating and a sink; could be converted to exam room if required; can be used for team teleconferencing
7 - 8	Patient Education Group Room	24.0	2	48.0	To accommodate 10 to 12 persons @ 2.0 sqm per person for group patient teaching (shareable)
7 - 9	Clinician Work Space	4.5	10	45.0	Workstation with storage, chair, computer, phone; locate with exam/consult room space
7 - 10	Student/Volunteer Work Space	2.5	1	2.5	Touch down desk with space for a phone and computer
7 - 11	Coordinator Office	9.0	1	9.0	Enclosed space with a workstation with file storage, chair, computer, phone; small meeting table at end of workstation
7 - 12	Physician Dictation Area	2.5	2	5.0	Desk with space for a phone and computer; quiet zone to support dictation requirement
7 - 13	Patient Washroom	0.0	0	0.0	Shared
	Subtotal			189.5	
Clinic Support Area					
7 - 14	Clean Utility Room	0.0	0	0.0	Shared with an adjacent program
7 - 15	Equipment Storage Area	10.0	1	10.0	Storage of medical equipment, e.g. remote cardiac telephone monitoring equipment, etc.
7 - 16	Soiled Supply Area	0.0	0	0.0	Shared with an adjacent program
7 - 17	Housekeeping Room	0.0	0	0.0	Shared with an adjacent program
				10.0	
Staff Support Area					
7 - 18	Staff Room	0.0	0	0.0	Shared with an adjacent program
7 - 19	Staff Washroom	4.5	1	4.5	
7 - 20	Locker Area	0.3	12	3.6	Contains half lockers
				8.1	

8. UBC MEDICAL SCHOOL – KAMLOOPS AFFILIATED REGIONAL CENTRE

A. OVERVIEW

A functional program for the UBC Medical School - Distributed Medical Program Kamloops Affiliated Regional Centre developed by RPG Resource Planning Group Inc. (September 6, 2012) is the seminal planning document that must be followed (attached). It is not the intent to replicate the information contained in that report in this document. This front-end summary captures additional information that the UBC Medical School representatives provided to the consultants to better inform the next stage of the planning

The following planning assumptions apply to this component:

- The UBC Medical School scope of services will be as defined in the September 6, 2012 functional program document.
- The UBC Medical School will be located on Level 1 of the Clinical Services Building (CSB).
- In regards to the UBC space to be excluded in the CSB, the only sub-component not to be included in the CSB is the inpatient related space that equates to 53.7 nsm (refer to page 19 of the functional program). The academic space for a direct entry Psychiatry residency program (10 residents, 2 per year for 5 years) will need to be accommodated in one of the other locations that comprise the RIH campus – Hillside, South Hills, Ref 33, page 20 in the Functional Program.
- In addition, should there be an expansion of other Royal College residency programs as identified on page 2&4 of the Functional Program, they will need to be accommodated in subsequent phases of the RIH site
- It is assumed the IH Library will continue to support the UBC learner requirements in its current location.
- It is assumed the UBC on call rooms (5) will be for UBC medical learners only. The on call rooms must be located in a quiet yet be in an accessible and safe location in the CSB during off hours.
- The area requires a convenient space to refill water bottles. There is infection control issues related to drinking fountains and therefore another solution will be required. UBC will work with IH during the detailed design phase to find an acceptable solution.
- It is assumed that the UBC space currently located on the lower level next to Health Records will revert back to RIH once the space in the CSB is available.
- It is assumed the IH will provide housekeeping services included the required space for the UBC Medical School area.

B. SERVICES / FUNCTIONS

Scope of Services

Refer to attached document.

Royal Inland Hospital CSB Functional Program

8. UBC Medical School – Kamloops Affiliated Regional Centre

C. OPERATIONS

Refer to attached document.
Medical learners will require 24 hour access to the UBC space.

D. WORKLOAD

Not applicable

E. STAFFING

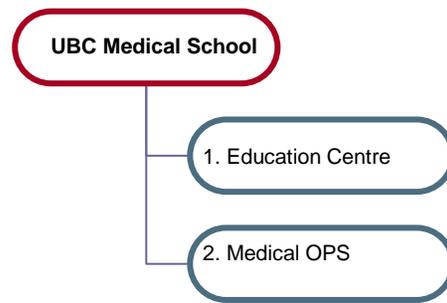
Refer to attached document.

F. FUNCTIONAL RELATIONSHIPS

Location

- The UBC Medical School space should be located adjacent to the IH Education Centre and Medical Outpatient Services on Level 1 of the CSB.

External Relationships



5. Provide convenient access by general circulation to the Education Centre space to support movement of staff and learners attending educational events. Note: Medical learners will require 24 hour access to the UBC Space (except for the administration area).
6. Locate close to a Medical Outpatient Services component for ease of movement of staff and learners to this clinical area.

Internal Relationships

The UBC Medical School space should be organized into the following zones:

- Teaching & Learning Area (require 24 hours access)
- Administration Offices (requires separation from the learner zones because confidential learner files are kept in this are)
- Family Practice Offices (clustered together)
- Learner Locker and On call area (require 24/7 access)

G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Security & Safety

The following security features will be employed in the area:

- Flow and access will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to learner on call, locker and lounge space for after hours use, and secure passage to the main hospital.

Special Requirements

- Locate the Teaching & Learning area in a zone that is accessible to learners and allows a view of this area from the reception desk in Administration.
- The learner on call, lockers and lounge should be in an area that is accessible 24/7.
- The Administration area must be designed in a manner that allows the area to be closed after hours. As mentioned above, this area has confidential learner records that must be secured.
- The Clinical Skills/Simulation spaces must include a hand wash sink.
- The on call rooms are for learner use only and must have a separate temperature control in each space.
- Please refer to the September 6, 2012 functional program for further information.

Royal Inland Hospital CSB Functional Program

8. UBC Medical School – Kamloops Affiliated Regional Centre

H. UBC SPACE ALLOCATION SUMMARY

	CGSM
Total Component Gross Area (square metres)	527.6
Centralized Areas	
Total Net Square Metre (NSM)	168.4
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	227.3
Centralized Areas - Locker & On-Call	
Total Net Square Metre (NSM)	115.1
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	155.4
Administration Offices	
Total Net Square Metre (NSM)	81.3
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	109.8
Family Practice	
Total Net Square Metre (NSM)	26.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	35.1

Notes: The current IH Library will be accessed by UBC. The recommended inpatient space contained in the September 6, 2012 functional program document is not applicable to the CSB but will be applicable when the acute care tower is planned.

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Centralized Area - Teaching & Learning					
8 - 1	Small Meeting Room/Video Conference	44.0	1	44.0	16 seats; shared Administrative and Teaching role; additional shared capacity w/ Administration (see below)
8 - 2	Small Meeting Room/Video Conference	16.0	2	32.0	4 seats per meeting room; shared Administrative and Teaching role; additional shared capacity w/ Administration (see below)

Royal Inland Hospital CSB Functional Program

8. UBC Medical School – Kamloops Affiliated Regional Centre

No.	Space Name / Function	NSM	Qty	Total	Comments
8 - 3	Video Conference Rack Room	12.0	1	12.0	1 rack
8 - 4	AV Storage Closet	8.0	1	8.0	
8 - 5	Clinical Skills/Simulation Room, Single Bed Surgical Type	18.0	2	36.0	See Clinical Skills Room description in the design criteria section for additional information; initial configuration w/1 @ clinical skills/simulation surgical type & 1 @ ambulatory/examination room type. Both rooms equipped to accommodate clinical skills / simulation surgical type.
8 - 6	Control/Viewing Room	9.0	1	9.0	Locate between the 2 clinical skills/simulation rooms w/ one way glass & or video observation capacity into both rooms.
8 - 7	Storage Room	9.0	1	9.0	As above
8 - 8	Patient Waiting	13.9	1	13.9	6 seats; locate proximal to a reception area
8 - 9	Washroom	4.5	1	4.5	Wheelchair accessible washroom
	Subtotal			168.4	
Centralized Area - Locker & On-Call					
8 - 10	On-Call Room, PGrad Trainee/ UGrad Student	7.0	5	35.0	For use by students only; require 24 hour access
8 - 11	Locker Area - Female	23.1	1	23.1	15 half height lockers & 18 full lockers (ugrads, grads), benches, mirrors
8 - 12	Locker Area - Male	14.0	1	14.0	10 half height lockers & 10 full lockers (ugrads, grads), benches, mirrors
8 - 13	Washroom, Unisex, Wheelchair Type	4.5	2	9.0	WC, sink; subject to Code/design
8 - 14	Shower Area, Unisex	2.0	2	4.0	WC, sink, shower; subject to Code/design
8 - 15	Housekeeping Closet	5.0	1	5.0	
8 - 16	Lounge	25.0	1	25.0	Assumes up to 25% of ugrads & post grads at any one time; mixed tables 7 chairs & comfortable seats, kitchenette, TV w/cable, internet access, power points; may not be required if existing includes ~5 of the total of ~10 required study stations, w/ remaining 5 stations already located with the IH Library
	Subtotal			115.1	Subject to confirmation that existing space is inadequate & that this space will be added to UBC Space Inventory

Royal Inland Hospital CSB Functional Program

8. UBC Medical School – Kamloops Affiliated Regional Centre

No.	Space Name / Function	NSM	Qty	Total	Comments
Administration Offices					
8 - 17	Office, Faculty	11.2	3	33.6	1 workstation, may be shared among a number of individuals.
8 - 18	Work Area, Administrative Support/ Reception	11.2	1	11.2	Office area, may be shared among a number of individuals; locate near Patient Waiting (#8-8)
8 - 19	Waiting	3.0	1	3.0	2 seats
8 - 20	Kitchenette	4.0	1	4.0	
8 - 21	Storage, Files	3.0	1	3.0	Lockable, secure, 2 lateral files
8 - 22	Work Area, Copier/Fax/Supplies	2.5	1	2.5	Small counter top photocopier, counter w/ cabinets over & under, recycling bins
8 - 23	Meeting/Video Conference Room (8 seats)	24.0	1	24.0	Shared Administrative, Teaching & General Student Exams use: minimum required 8 seat room area
8 - 24	Mail Slots (Post-Grad Trainees, UGrad Students)	0.0		0.0	53 vertical slots (2.5" x 12") accessible from corridor, space developed as part of gross up factor
	Subtotal			81.3	Note: Administrative zone must have some separation from the student zone
Family Practice					
8 - 25	Office, Program Director	13.0	1	13.0	1 workstation & 2-4 person meeting table
8 - 26	Workstation, Staff / Swing	6.5	4	26.0	May be 1 room 2/ 2 workstations or 2 open area workstations
8 - 27	Distance Education/Video Conference	0.0		0.0	Shared - see Administration Offices section above
8 - 28	Support	0.0		0.0	Shared - see Administration Offices section above
	Subtotal			39.0	



Distributed Medical Program

FACULTY OF
MEDICINE

*Kamloops
Affiliated Regional Centre*

*Functional Program: Parameters
Update, August 2012*

Resource Planning Group Inc.

Vancouver, British Columbia

September 6, 2012



*Distributed Medical
Program*

*Kamloops
Affiliated Regional Centre*

*Functional Program:
Parameters Update, August 2012*

Resource Planning Group Inc.
Vancouver, British Columbia
September 6, 2012

Royal Inland Hospital CSB Functional Program

8. UBC Medical School – Kamloops Affiliated Regional Centre



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Royal Inland Hospital CSB Functional Program

8. UBC Medical School – Kamloops Affiliated Regional Centre

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INTRODUCTION AND SPACE SUMMARY

INTRODUCTION

This document is subject to a review of the limited available space at the Kamloops ARC site. In addition, post-graduate trainee enrolments, site capacity assumptions and space needs will need to be reviewed as more information is developed and should be reviewed periodically in any event, perhaps in 2 to 3 year intervals.

Table 1: Undergraduates and Post-Graduates Update

The updated table indicates that total net expansion year 2014/15 trainee projection figures (or within a few years after that date) will have increased from 47 to 53. In addition, the projected distribution of undergraduates and other trainees (PGY 1-5 and Family Practice) has changed.

It should be emphasized that the projected numbers of learners are considered conservative gross planning estimates.

These estimates will be utilized for estimating space requirements in this document. In addition, there should be consideration for opportunities for additional transfers of other students subject to available medical clerkships, funding and space.

All numbers of positions were provided by UBC MD Undergraduate Expansion and UBC Post-Graduate representatives.

This document includes August 2012 parameters update information for the original Kamloops Affiliated Regional Centre Medical School Expansion Functional Program, previously updated in July 2010. For reference, earlier versions of this document were developed in early 2008 and early 2009, based on estimates by program directors at the time.

The functional program describes the Kamloops Affiliated Regional Centre (ARC) academic teaching facilities required to support the Medical School Expansion, as well as related Royal College components and related Family Practice and other post-graduate trainee programs. The ARC is located at Royal Inland Hospital (RIH). Updated information was developed at the request of the UBC Faculty of Medicine during August of 2012, and is intended to supplement the original functional programs. The August 2012 update was based on revised assumptions and new information provided by the UBC Faculty of Medicine and meetings with representatives of Interior Health and Royal Inland Hospital.

In the following table, the milestone years 2009/10 and 2014/15 (or within a few years after that date) summarize the estimated potential net expansion numbers of undergraduates and post-graduates expected to be on site at any one time. The milestone year 2014/15 (or within a few years of that date) is assumed to reflect potential full expansion, and 2009/10 a reference earlier year of the expansion, with 2009/10 figures increasing progressively through to the full expansion. For comparison, summary figures from the interim July 2010 update and the most recent August 2012 update are included.

Trainee	July 2010 Parameters Update		August 2012 Parameters Update	
	Actual 2009/10	Full Expansion, 2014/15+	Actual 2009/10	Full Expansion, 2014/15+
3rd Yr UGrad Clinical Clerks	1	8	1	8
4th Yr UGrad Clinical Clerks	3	4	3	4
Visiting Ugrads	2	4	2	4
Subtotal	6	16	6	16
Post-Grad. Trainees (PGY2-)	2	13	2	14
Post-Grad. Trainees (PGY1)	-	4	-	5
Family Practice (FP1)	-	8	-	8
Family Practice (FP2)	-	4	-	8
Other/Visiting	1	2	1	2
Subtotal	3	31	3	37
Total	9	47	9	53

All figures in the above table are working assumptions for this document only, and are subject to review by the UBC Faculty of Medicine. It should be noted that though the aggregate number of learners is expected to be 53, the mix may vary somewhat depending on how the site develops.

It should be noted that there is an expectation that there will be an increase in the number of Nursing and other Health Professional students and related academic activities at the Kamloops ARC, in addition to what is proposed herein for the Medical School Expansion. As a result, the number of Medical School Expansion trainees described herein is not a reflection of total academic space and activity requirements.

Table 2: Estimated Projected Royal College Residents by Discipline

Estimated numbers of Royal College residents by discipline are included in the following table for the year 2014/15 (or within a few years of that date).

Discipline	Full Expansion, Yr 2014/15+		
	PGY 1	PGY 2-5	Total
Psychiatry Pediatrics	2	8	10
Obstetrics/Gynecology	-	1	1
Surgery (Snrs)	1	1	2
General Internal Medicine	-	2	2
Other/Visiting	1	1	2
	1	1	2
Total	5	14	19

SPACE REQUIREMENTS SUMMARY

The following table summarizes projected academic teaching space requirements for the Medical School Expansion at the Kamloops ARC. Details are included in the Component Planning Criteria - Space Requirements section of this document.

Centralized undergraduate and post-graduate trainee space will be required for administration offices, lockers, on-call sleeping, library and study areas. In addition, a small amount of work space and patient confidentiality meeting space will be required in the inpatient areas of the hospital. However, it should be noted that the requirements for this work and meeting space are somewhat flexible and should not displace any inpatient beds.

Table 3: Space Requirements Summary

Expansion related academic space requirements for the 2014/15 milestone year are summarized in the table below in terms of net square metres (NSM) and component gross square metres (CGSM).¹ For comparison, summary figures from the July 2010 update and the most recent August 2012 update are included.

	Space Requirements Summary			
	July 27, 2010, Parameters Update		August 28, 2012 Parameters Update	
	NSM	CGSM	NSM	CGSM
Centralized Areas	204.9		296.7	
Library and Study	34.5		-	
Administration Offices	67.9		78.4	
Inpatient Areas	53.7		53.7	
Family Practice ²	26.0		26.0	
Total (Square Metres)	388.0	522	454.8	614

¹ NSM (Net Square Metres) – the actual “occupiable” area of each room or space as measured to the interior finished surfaces of all walls, partitions, or mechanical enclosures.

CGSM (Component Gross Square Metres) – that portion of the building assigned to a specific component (a cohesive group of activities or spaces related by service or physical arrangement), including net areas, internal circulation, partitions, building structure and small mechanical shafts/areas as measured from the inside face of exterior walls and to the centre line of partitions adjoining other components or general circulation space.

² Post-graduate trainee administration only.

COMPONENT PLANNING CRITERIA

FUNCTIONAL DESCRIPTION

Updated information was developed at the request of the UBC Faculty of Medicine during August of 2012, and is intended to supplement the original functional programs. The August 2012 update was based on revised assumptions and new information provided by the Faculty of Medicine and meetings with representatives of Interior Health and Royal Inland Hospital. For reference, a still earlier version of this document was also developed in early 2008, based on estimates by program directors at that time.

This document includes August 2012 parameters update information for the original Kamloops Affiliated Regional Centre Medical School Expansion Functional Program, originally prepared in January 2009 and updated in July 2010. The functional program describes the Kamloops Affiliated Regional Centre (ARC) academic teaching facilities required to support the proposed Medical School Expansion, as well as related Royal College components and related Family Practice and other post-graduate trainee programs. The ARC is located at Royal Inland Hospital (RIH).

For the purposes of this document, assumptions regarding the basic structure of the Medical School Expansion at the Kamloops ARC are outlined in the following tables 4, 5 and 6. For reference, 1st Year and most 2nd Year undergraduate education activities are expected to be at the University Academic Campus; 3rd and 4th Year undergraduate education activities will be at the Kamloops ARC RIH and other Clinical Academic Campuses. It should be emphasized that these are working assumptions for this document only, and are subject to review by the UBC Faculty of Medicine.

The milestone year 2014/15 is assumed to reflect potential full expansion, and 2009/10 a reference earlier year of the expansion, with 2009/10 figures increasing progressively through to 2014/15. It should be noted that though the aggregate number of learners is expected to be 53, the mix may vary somewhat depending on how the site develops.

It should be noted that there is an expectation that there will be an increase in the number of Nursing and other Health Professional students and related academic activities at the Kamloops ARC, in addition to what is proposed herein for the Medical School Expansion. As a result, the potential number of Medical School Expansion trainees described herein is not a reflection of total academic space and activity requirements.

It is understood that additional planning for research space that may be required as a consequence of the Medical School Expansion will occur at a later date.

Table 4: Undergraduates and Post-Graduates³

For reference, the milestone years in the adjacent table summarize the estimated potential net expansion numbers of undergraduates and post-graduates expected to be on site at any one time.

It should be emphasized that the projected numbers of learners are considered conservative gross planning estimates.

Trainee	July 2010		August 2012	
	Actual 2009/10	Full Expansion, 2014/15+	Actual 2009/10	Full Expansion, 2014/15+
3rd Yr UGrad Clinical Clerks	1	8	1	8
4th Yr UGrad Clinical Clerks	3	4	3	4
Visiting Ugrads	2	4	2	4
Subtotal	6	16	6	16
Post-Grad. Trainees (PGY2-)	2	13	2	14
Post-Grad. Trainees (PGY1)	-	4	-	5
Family Practice (FP1)	-	8	-	8
Family Practice (FP2)	-	4	-	8
Other/Visiting	1	2	1	2
Subtotal	3	31	3	37
Total	9	47	9	53

These estimates will be utilized for estimating space requirements in this document. In addition, there should be consideration for opportunities for additional transfers of other students subject to available medical clerkships, funding and space.

Table 5: Estimated Projected Royal College Residents by Discipline

Estimated numbers of Royal College residents by discipline are included in the following table for the year 2014/15 (or within a few years of that date).

Discipline	Full Expansion, Yr 2014/15+		
	PGY 1	PGY 2-5	Total
Psychiatry Pediatrics	2	8	10
Obstetrics/Gynecology	-	1	1
Surgery (Snrs)	1	1	2
General Internal Medicine	-	2	2
Other/Visiting	1	1	2
	1	1	2
Total	5	14	19

Table 6: Key Activities

For reference, key activities for the 3rd and 4th Years Undergraduates as well as for Post-Graduate/ Resident Trainees are as follows:

Key Activity	Undergraduates		Post- Graduate/ Resident Trainee
	3rd Year	4th Year	
- Core Clerkships & Rural Family Practice		- Electives	- Residency Rotations & Home Site for Family Practice
- Academic Half-Days ⁴		- On-Call	- Residence Program
- Bedside Teaching		- Study	- Teaching ⁵
- On-Call			- Academic Half-Days
- Study			- On-Call
			- Study

³ Provided by UBC MD Undergraduate Expansion and UBC Post-Graduate representatives.

⁴ Academic Half-Days: weekly departmental/discipline sessions taken by both undergraduates and post-graduate trainees. Though AHDs are not currently part of 4th Yr curriculum, they may be in the future. Though AHDs are currently scheduled only on Tuesdays, Wednesdays and Thursdays, often with different disciplines scheduling at the same time, it is expected that this schedule will change in the future to improve utilization and flexibility.

⁵ Typically, post-graduate trainees meet with their teams, including undergraduates, once to twice daily for 1 to 2 hours.

Medical School Expansion

For the purposes of this document, academic activities of the Medical School Expansion and post-graduate trainee programs at the Kamloops ARC have been categorized as follows:

- Administration;
- Teaching and learning (lectures, clinical skills, clinic instruction, video conferencing);
- Lockers, on-call, lounge;
- Library and study.

Administration

An administrative presence is required at the Kamloops ARC to support administering the Medical School Expansion. Key administrative activities that may need to be accommodated within this component are summarized below.

- Program administration and coordination:
 - 3rd and 4th Year undergraduate clinical activities;
 - post-graduate trainees program expansion;
 - undergraduate and post-graduate trainee education leadership;
 - faculty development;
 - curriculum management;
 - undergraduate and post-graduate trainees orientation and advising.
- Liaison (e.g., telcons, correspondence, video-conferencing):
 - Interior Health clinical units, undergraduates, post-graduate trainees;
 - other Health Authorities and clinical units;
 - local Affiliated Regional Centres (ARCs) and Clinical Academic Campuses (CACs) and/or communities that may accommodate rotation trainees;
 - DHCC (Diamond Health Care Centre, VGH Site);
 - UBCV, UBCO, UVic, UNBC.
- General office:
 - reception, waiting and meetings;
 - mail handling and deliveries;
 - general office support (records and files storage, photocopying, fax and office supplies storage).

For the purposes of this document, Medical School Expansion administrative positions that will need to be accommodated in the Kamloops ARC include undergraduate and post-graduate trainee education leaders, as well as professional staff for clinical program, advanced electives and post-graduate expansion coordination, and for curriculum management and faculty development.

Academic and administrative liaison activities will require access to videoconference facilities. These facilities may be shared with telehealth and tele-education activities.

Teaching & Learning

Teaching and learning will include centralized, decentralized and tele-learning activities in order to support the required undergraduate, post-graduate trainee and distributed elements of the Medical School Expansion. These activities will occur in centralized Medical School Expansion academic space as well as in clinical settings combined with patient care.

The majority of these activities will take place in multipurpose seminar/video-conference rooms.

In summary, key activities include:

- Video-conference and meeting activities (e.g. clinic instruction, lectures, demonstrations, presentations to other sites) including 2-way/ real-time distributed learning for academic half-days, academic rounds, case studies, etc.
- Informal seminars, discussions and team meetings in a flexible, multipurpose environment.
- General student examinations (e.g., individual or small group; may include general electronic/on-line and/or written exams), typically taking place within the study area/ library.
- Teaching/ conferences:
 - team meetings/conferences (typically up to 4 post-graduate trainees, undergraduate students and others to review, discuss and present cases);
 - student meetings w/post-graduate/trainees;
 - presentations and teleconferencing;
 - patient interviews and history taking;
 - internet access and reference storage,
 - digital radiology image receipt and display,
 - clinical teaching w/clinicians and their patients;
 - clinical skills/simulation;
 - bedside teaching rounds (occurring in existing inpatient rooms, typical maximum of 4 undergraduates/post-graduate trainees + tutor).

Regarding team meetings/conferences noted above, small group team conference areas are required in the inpatient areas, subject to available space and without reducing the number of existing inpatient beds. In general, it is assumed that 1 of these areas per 1 or 2 inpatient unit floors will be sufficient. These areas may be configured minimally as small rooms or alcoves, large enough to accommodate brief meetings of 3 to 4 people, or if practical as enclosed rooms for up to 12 people. Patient confidentiality is important.

In addition, 1 to 2 small, sit-down type trainee workstations per inpatient unit/ward will be required for internet, patient records and hospital systems access.

For reference, 1st and 2nd year clinical skills activities will take place at UBC Okanagan, and at the Clinical Academic Campus sites. At the Kamloops ARC, a significant demand for clinical skills/simulation room type activities is expected to support all learner and particularly IMGs, Family Practice, Faculty development and to some extent 3rd and 4th year students. These activities are initially expected to be focused on surgical skills and ambulatory/examination/interview skills type simulations, with opportunities for instructors to discreetly view trainees while they are engaged in simulation scenarios.

OSCEs (Objective Structured Clinical Examinations) and Standardized Patient Program Examinations for the Medical School Expansion will be undertaken by 3rd year students at one of the clinical sites of the Medical Program.

Videoconference and clinical skills/simulation rooms must be booked through the online FoM Resource Scheduler.

Additional Parameters Update information includes:

- Psychiatry: requirement to add in 1 office per two PGY 2-3 Psychiatry resident trainees plus 1 office per PGY 4-5 Psychiatry resident trainee, as follows:
 - RIH inpatient area: 1 to 2 offices, with at least 1 office located within or adjacent to the Psychiatry inpatient area,
 - Other locations outside the scope of this document:
 - Hillside Mental Health Centre: 1 to 2 offices ⁶,
 - South Hills Centre for Psychiatric Rehabilitation: 1 office,
 - Community Mental Health: 2 offices.
- Pediatrics: the vision for Pediatrics medical school teaching includes a mix of hospital-centric inpatient and emergency learning experiences, as well as community outpatient learning experiences. This vision is part of a larger vision for Pediatric services at RIH including a redesigned Pediatrics Ward/Ambulatory Unit on 5 South, that should be considered during the RIH Site Master Planning study⁷, including:
 - Teaching/ education/ interview/ team conference room, located on the Pediatric inpatient floor,
 - Consult/interview rooms located on the ward;
 - Access to other enhanced Pediatrics ambulatory clinic space of sufficient size to accommodate trainees.

⁶ For reference, for the July 2010 Update, it was noted by Psychiatry representative Dr. P. Dagg that the 1st floor of Hillside may have space to accommodate 1 to 2 additional offices.

⁷ For reference, a complete description of the vision for Pediatrics services at RIH, plus a preliminary proposal for an RIH pediatrics inpatient unit redesign was prepared and submitted by the department under separate cover earlier in 2010.

- Surgery: though not specifically part of Medical School Expansion space requirements, overall RIH planning should consider including video-monitoring and screening equipment for surgical procedures such as endoscopic procedures, so that more than one person, including trainees, can review the procedure. Video monitoring equipment would be located within the OR and/or procedure room(s) and screening equipment in one or more teaching or video conference/ meeting room. Inclusion of this equipment would provide enhanced learning opportunities for trainees and comply with current standards of practice.
- Lecture theatre: though not specifically part of Medical School Expansion space requirements, planning should consider overall RIH requirements for a modest sized lecture theatre to support rounds, conferences, etc.

Lockers, On-Call, Lounge

Medical School Expansion undergraduates and post-graduate trainees require support resources for locker (e.g., street clothes, books, stethoscope), relaxation and networking, and on-call activities. Each student and trainee will require a locker. Integrating these functions is essential for interaction, learning experience and to minimize duplication of resources. As a result, these resources should be organized in the form of a centralized suite, ideally proximate to or integrated with the medical staff lounge area.

Undergraduates and post-graduate trainees will utilize both any existing medical staff lounge as well as any new space identified in this component for informal relaxation, networking, socializing, coffee and meals/snacks preparation.

Students utilizing wheelchairs will be accommodated in existing facilities as required.

Anticipating full expansion by the Year 2014/15 (or within a few years after), the estimated workload for on-call rooms in the Kamloops ARC assumes a maximum of 1 post-graduate trainee or 1 undergraduate requiring on-call rooms for each of the core rotations that require rooms for on-call at any one time. As a result, a requirement for access to 5 on-call rooms has been estimated. These rooms will be shared between the rotations and disciplines.

On-call rooms must be booked through the online FoM Resource Scheduler.

Library and Study

An estimated total of ~10 (year 2014/15) informal study stations will be required to support the combined net expansion positions.⁸ Students are expected to be the major users of these stations. Approximately 50% of these stations (5) should be located in the Lounge and 50% (5) located in the Library.

⁸ Accommodates up to ~25% 3rd and 4th Year undergraduate students + ~25% post-graduates/residents at any one time.

In 2010, UBC enhanced the existing Kamloops library resources in order to support its expanded academic role. A group study room was created, library bays were relocated, and several study stations were reconfigured.

Though outside the scope of this document, it should be noted that there is additional need for access to selected electronic databases for all learners, typically copied to PDAs. These databases require annual updating to remain current and typically include "clinical pocket book" and pharmacopeia type information (e.g. Hippocrates Software™, UpToDate™).

A key principal for the Medical School Expansion is that core undergraduate instruction, objectives and exams will be equivalent for students at all sites in the Province and therefore, equitable access to required print and online library resources is necessary.

Though not intended to be comprehensive, the following points summarize some key operational criteria related to library and study resources:

- UBC will provide interlibrary loan/ document delivery.
- On-line journal access via UBC will reduce the need for some ILL/document deliveries, but the various Medical School Expansion sites will nevertheless need to coordinate their systems.
- Undergraduates, post-graduate trainees and related faculty and health professionals at the Medical School Expansion sites, participating Health Authorities, and rural and community facilities participating in the Medical School Expansion will have access to a core suite of online resources.
- UBC will provide online reserve collection access to support clerkships and clinical skills based curricula.
- To the extent required, given increasing access to on-line resources, Kamloops ARC library print resources will be augmented and updated w/ appropriate clinical titles and references to support its expanded academic role, in support of the undergraduate program plus additional titles as appropriate; print journal collection is expected to increase the number of titles/size.
- Individual student and group web-enabled learning may take place at study stations and group study tables.

Occasional library instruction of on-line resource and research techniques will require access to a suitable teaching area. To optimize opportunities for training, design should consider organizing the study area described in this document so that users can see an adjacent projection screen.

Family Practice

Family Practice post-graduate trainee programs will have an administrative presence at the Kamloops ARC. Activities will include support of student assessment, curriculum management, site direction and related clerical activities. In addition, a Medical Program Librarian, based in Kelowna or Vancouver, will periodically visit the Kamloops ARC library facilities to provide supporting librarian functions.

Given the expanding teaching role of the Kamloops ARC and its distance from the Kelowna and Vancouver campuses, on-site clinical academic appointments are expected. For educational administrative purposes, some of these individuals may require access to the shared office and video-conference/meeting space in order to fulfill the requirements of their appointments.

The presence of these programs will require access to shared video-conference and meeting room resources to support Academic-Half-Days. For reference, it is assumed that Academic Half-Days occur weekly and involve up to 2 groups including residents, the presenter and a faculty member for each group; both groups meet at the same time and may occasionally all meet together. It is assumed that these activities could take place in shared videoconference room space.

Royal College of Physicians and Surgeons of Canada

The Royal College is not expected to require an administrative presence at the Kamloops ARC, to support its projected PGY1 and PGY2-5 positions.

Research

It is expected that there will be additional requirements for research facilities in the Kamloops ARC in the future. However, a separate process and analysis will be required to describe these needs, outside the scope of this document.

STAFFING ESTIMATES

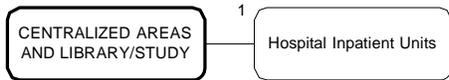
The following table summarizes estimated staff headcounts and related workstation requirements for this component, subject to further refinement of the academic program. For reference, in the table, "private" refers to a desk/workstation within an enclosed office and "open" refers to an open area/ systems furniture type desk/ workstation. In each case, the workstation may be shared among a number of individuals, depending on how the academic program is ultimately administered.

Table 7: Staffing Estimates

Staff	Headcount		No. Required Workstations	
	Existing	Future		
<u>Medical School Expansion</u>				
Undergraduate Education Leadership	-	1	1	private
Post-graduate Education Leadership	-	1	1	private
Swing, UGrad/Grad Professional Staff	-	2	2	open
Clerical, Shared	-	1	1	open
Subtotal	-	5	5	
<u>Family Practice</u>				
Program Director	-	1	1	private
Support Staff	-	2	2	open
Subtotal	-	3	3	-
Total	-	8	8	-

DESIGN CRITERIA

External Relationships



- 1 Provide the Centralized Areas and Library/Study with convenient access by general circulation to inpatient areas to support the movement of undergraduates, post-graduate trainees, clinicians and others.



- 1 If practical, locate the Team Conference Rooms and Trainee Workstations within inpatient units to support on-call rooms for LDR which should be within the department.

Internal Relationships/ Concepts

Functional Zones

For the purposes of access, functional relationships and security, this component has organized space into the following zones:

- Medical School Expansion and Family Practice:
 - Centralized Areas
 - Administration Offices,
 - Teaching and Learning,
 - Locker and On-Call;
 - Library and Study;
 - Inpatient Areas.

Though all parts of the Medical School Expansion space are preferably co-located in a single area, excepting those that must be located within or nearby inpatient areas, and all VC rooms should be clustered to optimize utilization and technical infrastructure, some space needs can be decentralized according to the following criteria:

- Teaching & Learning: may be located anywhere on the RIH campus;
- Lounge, Locker and On-Call: must be located within a 5 minute walk of inpatient areas and with a minimum of 2 of the 5 required On-Call rooms located within the 3rd floor inpatient tower;⁹
- Library and Study: integrate within the existing RIH Library;
- Administration Offices: may be located anywhere on the RIH campus;
- Inpatient Areas: must be located within or immediately adjacent to inpatient areas;
- Family Practice: must be located with Administration Offices noted above.

⁹ An upper level(s) Alumni Tower location for On-Call rooms is not recommended due to concerns regarding Accreditation safety requirements compliance for on-call student movement at night. Currently, travel between upper levels of the Alumni Tower at night requires use of a locked access elevator, followed by basement (tunnel) access to the inpatient area, followed by elevator to the inpatient floor. The experience at RIH is that some students are reluctant to travel this route at night due to concerns for safety and as a result, some students are going home and missing key clinical experiences such as late night deliveries.

PAR BC On-Call Areas: Suitable on-call areas for those Residents who are on-site for assigned duties. On-call rooms for LDR should be within the department. The Hospital recognizes that it is desirable to have such on-call areas located in proximity to certain critical patient care units.

Access

General

All areas within this component must meet all *Building Code*, UBC, hospital and IHA guidelines regarding accessibility and safety.

All areas within this component require Wi-Fi network access, to provide students and residents with access to university learning resources, the learning management system, video repositories, and general internet access.

As previously noted and repeated here for reference, an upper level(s) Alumni Tower location for On-Call rooms is not recommended due to concerns regarding safety and related Accreditation requirements compliance for on-call student movement at night. Currently, travel between upper levels of the Alumni Tower at night requires use of a locked access elevator, followed by basement (tunnel) access to the inpatient area, followed by elevator to the inpatient floor. The experience at RIH is that some students are reluctant to travel this route at night due to concerns for safety and as a result, some students are going home and missing key clinical experiences such as late night deliveries. It is recommended that minimally, at least 2 of the 5 required On-Call rooms should be located within the 3rd floor inpatient areas. However, if the Alumni Tower to inpatient tower tunnel route must be used, then mitigating design should be carefully considered.

On-Call Suite

This area requires secure, 24/7 access via swipe or proximity card system for on-call post-graduate trainees and undergraduates. The location of the on-call suite should be carefully considered so that the route between the suite and inpatient units or Emergency Department is safe, particularly after hours. There should be one LDR on-call room within the department.

Administration Offices

This area must be lockable/ securable as it will contain evaluations and personal records. The area does not require a public profile, and should be reasonably close to but not adjacent to the main student areas. Undergraduate, post-graduate trainee mail slots can be located along one wall of an adjacent general corridor. A kitchenette is required.

Library and Study

Post-graduate trainees and undergraduates require secure, 24/7 access to library and study areas via swipe or proximity card system.

Multipurpose Video Conference/ Meeting Rooms

The proposed 16, 8 and 4 seat multipurpose video-conference/ meeting rooms must be designed and equipped to comply with the "BC Medical School Expansion AV Room Criteria – Guidelines" document developed by McSquared System Design Group Inc., for the UBC Faculty of Medicine.

Notwithstanding this requirement, general criteria are summarized below.

- These rooms will be developed to similar IT and design standards as those developed for other Medical School Expansion components located in other health authorities.
- Seminar/video conference rooms will support “Academic Half-Days” (1/2 to 1 day per week for each of 3rd and potentially 4th Year), other academic units as well as other activities. These rooms will support both teaching and administrative functions.
- Fixed or moveable tables and moveable chairs are required, subject to the function of the space.
- A videoconferencing system with dual wall mounted display will be utilized for these rooms. The size of the monitors and the choice of plasma or LCD technology is a function of the room size, viewing angles and available technology.
- All of the required VC enabled rooms will require appropriately sized and positioned displays (monitors and/or projection) and required VC equipment. The size, number and type of displays will be a function of the technology available at the time of procurement, as well as viewing aspect ratios and distances.
- A small AV equipment storage room is required.
- Whiteboards are required (electronic or standard, subject to further review).
- As previously noted, Wi-Fi network access required, based on UBC access standards, to provide students and residents with access to university learning resources, the learning management system, video repositories, and general internet access.
- Access to power for laptops is required at all seats in video conference rooms.

Clinical Skills/Simulation Rooms

Though it is not expected that a fully capable high fidelity simulation facility will be needed at the outset, it is expected that a general clinical skills facility with more basic simulation models (e.g. phlebotomy, surgical suturing, rectal examination, etc.) will be required. This facility should be configured with the appropriate space, layout, power, data and security infrastructure to support repurposing to a high fidelity simulation facility consistent with the "Patient Simulation Mannequin Laboratories Facility Infrastructure Design Guidelines" as prepared for the UBC Faculty of Medicine by AMBIT Consulting Inc. Notwithstanding this requirement and for reference, key criteria for this space as a future simulation facility include:

- Space and access
 - Lockable millwork for a significant quantity of equipment, accessories and disposables.
 - One doorway to corridor to accommodate a medical stretcher and one standard size doorway to viewing room.

- Access card required for corridor doorway. Use should be logged for accountability purposes.
- Technology
 - Sufficient power and data infrastructure should be included to support multiple cameras, microphones and other equipment for future audio-visual purposes.
 - 4 additional power plugs along the walls of the CSR beyond regular code requirements.
 - Specialized, dimmable pot lighting required. Lighting controls should be located in both CSR and viewing room.
 - Backing for a 50" flat screen display.
- Viewing room
 - A viewing room is required that is suitable in size to hold two observers, desk and floor-to-ceiling cabinets along back wall (10 nsm minimum recommended).
 - A one-way glass window must look out towards the feet of the patient bed and provide an unobstructed view of the entire CSR.
 - One door to the corridor with access card control.
 - Sufficient power for computers, servers and specialized AV equipment.
 - A wide-angle, push-to-talk microphone for communication with trainers in the CSR.
- Other
 - Patient waiting area is required.
 - A Sound Transmission Class (STC) rating of no less than 45 between the CSR, corridor, and adjacent rooms.
 - A sink for hand washing and cleaning materials.
 - Compressed air must be supplied to regular medical gas outlets on a standard headwall, regulated at max 50 psi.

Ambulatory Clinic Instruction Rooms

If practical, access to a teaching clinic type environment with learner oriented exam and consult rooms, in an ambulatory setting should be provided, particularly in support of Family Practice accreditation requirements and increased primary care accreditation training requirements.¹⁰ This area would provide an opportunity for students to view and interact with clinicians seeing patients, and for instructors to view students. This area would require up to 3 clusters of rooms, with each cluster typically including 2 "learner" oriented exam rooms plus a consult room, for 9 rooms in total. Access to a common waiting and reception desk would be required.

Note: dedicated space for this area is not included in this document as it is understood that this type of space is generally viewed as clinical rather than academic and that this activity will take place elsewhere in the hospital or another ambulatory setting within the community. However, it should be

¹⁰ The CFPC accreditation requirement for primary care training is increasing to at least 12 months, double the current UBC requirement of 6 – 8 months. This means an increase in the amount of required training in ambulatory settings.

noted that similar space has been included in principle at other sites such as has been referenced in the "DRAFT KGH Principles for Space Allocation".

Inpatient Areas

Team Conference Areas

Access to unit-based team conference rooms should be provided near to the inpatient areas, and will be used by both undergraduates and post-graduate trainees. These conference rooms should each accommodate up to 3 to 4 people around a central table. As noted previously, formal Medical School Expansion team conferences will typically occur 1 to 2 hours per day, 5 days per week. These areas will also be used for a range of *ad hoc* and informal activities and will be available for other programs/activities when not in use by the Medical School Expansion.

Though unit-based team conference areas are described below and defined in the space requirements list that follows, these resources must not displace the aggregate requirements for patient care beds in the Kamloops ARC. If such displacements would result from development of these areas, then the requirements for these rooms should be modified or additional discussion should take place. These areas may be located anywhere in the hospital, but are ideally located within the inpatient areas, ideally one per 1 or 2 inpatient floor.

Additional criteria for these rooms include:

- High acoustical separation for patient confidentiality.
- Instructor table, bookcase, sink.
- Up-to-date clinical imaging display equipment to assist in teaching.
- Large wall mounted flat panel display with audio capabilities for local presentations. The size of the monitor and the choice of plasma or LCD technology is a function of the room size, viewing angles and available technology.
- Teleconferencing capabilities, future videoconferencing capacity.
- Hospital dictation system capable.
- Whiteboard and flip chart.
- Video recording equipment or one-way mirror to adjacent patient interview space, to record and observe patient:physician:trainee interactions for viewing elsewhere or later playback/viewing within the room (e.g. Psychiatry, Pediatrics inpatient areas).

Trainee Workstations

One to two student/trainee workstations per inpatient unit floor are required. These small, sit-down stations require a PC or terminal and writing surface. The PC or terminal requires internet, patient records, and appropriate library data-base and hospital systems access. Additional power above desk is required to connect electrical devices.

Other Teaching & Learning Requirements

Though outside the scope of this document, it should be noted that there is also a need for WiFi access at all existing nursing stations (e.g. surgical and medical floors).

Library Study

As previously noted, additional study stations will be provided to support the expansion. Each station requires a power point and 2 data ports for a computer plus a port for a user owned device. Study space should be quiet. Approximately half of these study stations should be provided with PCs, recognizing that PCs may well be "phased out" in the future as trainees increasingly have their own devices. As previously noted, approximately 50% of these stations are already integrated with the existing Kamloops ARC library stations. The remaining required 50% should be integrated within the proposed Lounge area. Study station areas require wireless service.

Individual student and group web-enabled learning may take place at study stations and group study tables.

Locker Area

A central, common locker area is required for undergraduates and post-graduate trainees in order to secure coats, books and personal items. A central, common facility will optimize flexibility in locker assignments. Each student and post-graduate trainee will be assigned one full-height locker.

Male and female change areas may also be required in the locker area. However, if the locker area is adjacent to public washrooms, these washrooms may be sufficient for changing – otherwise, small change rooms will be required, ideally, each with a single shower area to support cyclists, joggers, etc.

Lounge

Access to relaxation/ networking space will be required for undergraduates and post-graduate trainees, including those on-call. Additional criteria include:

- Compliance with any existing Collective Agreement(s) and any hospital standards that may be applicable¹¹.
- Sufficient comfortable seating for conversation and TV watching;
- Work table w/computer, 2 duplex power and 2 internet data ports.
- Kitchenette for snack preparation w/fridge, microwave, coffee maker, sink, dishwasher, durable and easily cleaned surface cabinets and countertop;
- Capacity for vending machines;
- Natural light and windows.

On-Call Suite

On-call resources should be organized into a suite. The rooms within the suite will not necessarily be dedicated to a particular department or service but will have flexible assignment to those house staff required to be on-call at any particular point in time. Design should consider the following criteria:

- Compliance with any existing Collective Agreement(s), hospital standards and any other regulatory frameworks that may be applicable¹².
- On-call rooms should be private bedrooms with locking doors in order to optimize opportunities for rest and study, and should be provided with the following:
 - clean sheets and towels changed on a 24-hour basis;
 - light over bed or bedside lamp;
 - lockable cupboard for personal belongings;
 - telephone in room, voice and data capabilities;
 - small desk with lamp, 2 data ports and power above desk height and lamp;
 - room should be wheelchair accessible;
 - dead bolt on inside with "available/occupied" indicator from the outside that is connected to the deadbolt;
 - red flashing light located outside of room, above the door with the operating button located on the inside of the room.
- Access to non-public shower, sink, toilet:
 - shower/toilet facilities should be designated as male or female, and are shared by on-call post-graduate trainees and undergraduate students;
 - washroom should be wheelchair accessible.
- Acoustic separation between on-call rooms and between on-call rooms and adjacent spaces.

SPACE REQUIREMENTS (academic requirements only)

Ref	Space	Area Requirements			Remarks
		units	nsm/unit	nsm	
CENTRALIZED AREAS					
<u>Teaching & Learning</u>					
01	Small Meeting Room/ Videoconference Room, 16 Seats	1		44.0	Shared Administrative and Teaching role; additional shared capacity w/ Administration (see below).
02	Small Meeting Room/ Videoconference Room, 4 Seats	2	13.2	26.4	Shared Administrative and Teaching role; additional shared capacity w/ Administration (see below).
03	Video Conference Rack Room	1		12.0	1 rack
04	AV Storage Closet	1		8.0	
05	Clinical Skills/Simulation Room, Single Bed Surgical Type	2	18.0	36.0	See Clinical Skills Room description in the previous Design Criteria section for additional information. Initial configuration w/ 1 @clinical skills/ simulation surgical type and 1 @ambulatory/ examination room type. Both rooms equipped to accommodate clinical skills/ simulation surgical type.
06	Control Room	1		9.0	As above.
07	Storage Room	1		9.0	As above.
08	Viewing Room	1		6.8	Locate between the 2 clinical skills/simulation rooms w/ one way glass and or video observation capacity into both rooms.
09	Patient Waiting	1		13.9	6 seats
10	Washroom			0.0	Assumes will utilize existing general washrooms and/or that any additional required general washroom requirements will be developed as part of the building gross-up factor.
Subtotal, Teaching & Learning				165.1	
<u>Locker, On-Call</u>					
11	On-Call Room, PGrad Trainee/ UGrad Student	5	7.0	35.0	
12	Locker Area	1		37.1	53 full height lockers (ugrads, grads) , benches, mirrors
13	Change Room	2	7.5	15.0	Shower, change area; may not be required if this area is adjacent to washrooms.
14	Washroom, Unisex, Wheelchair Type	3	4.5	13.5	WC, sink; subject to Code/ design; 1 per 2 on-call rooms, subject to further review.
15	Shower Area, Unisex	3	2.0	6.0	WC, sink; subject to Code/ design; 1 per 2 on-call rooms, subject to further review.
16	Housekeeping Closet			0.0	Assumes this area will be provided by the hospital; mop sink, shelving
17	Lounge	1		25.0	Assumes up to 25% of ugrads and post grads at any one time; mixed tables 7 chairs and comfortable seats, kitchenette, TV w/cable, internet access, power points; may not be required if existing Medical Staff Lounge has sufficient capacity. Also includes ~5 of the total of ~10 required study stations, w/ remaining 5 stations located below with the Library.
Subtotal - Locker, On-Call				131.6	Subject to confirmation that existing space is inadequate and that this space will be added to UBC Space Inventory.
Subtotal, Centralized Areas				296.7	

SPACE REQUIREMENTS (academic requirements only)

Ref	Space	Area Requirements			Remarks
		units	nsm/unit	nsm	
LIBRARY AND STUDY					
18	Collection	1		(4.5)	Area indicated in brackets and not included in subtotal as already developed in RIH library to include 5 bays for Medical Program Expansion related collection materials
19	Multipurpose, Study/Distance Education & Videoconference Rooms, 4 Seats			0.0	See Ref 01, 02 above and Ref 23 below, shared use.
20	Study Stations (also used for limited videoconferencing)	1		(15.0)	Area indicated in brackets and not included in subtotal as already developed in RIH library to include ~5 stations (w/ PCs, power & data for laptops), may be used for limited individual videoconferencing if it is determined that additional capacity is required. Additional 5 stations located w/ Lounge area above.
21	Workstation, Librarian			0.0	Assumes shared use of one of the Study Workstations or Administration Clerical Workstation.
Subtotal, Library and Study				0.0	
ADMINISTRATION OFFICES					
22	Office, Faculty	2	11.2	22.4	1 workstation, may be shared among a number of individuals.
23	Workstation, Administrative Support/ Reception	1		6.5	1 workstation, may be shared among a number of individuals
24	Workstation, Swing Support Waiting	2	6.5	13.0	1 workstation Shared w/ Family Practice below.
25	Kitchenette	1		3.0	2 seats
26	Storage, Files	1		4.0	
27	Work Area, Copier/Fax/Supplies	1		3.0	Lockable, secure, 2 lateral files
28	Meeting/Videoconference Room (8 Seats)	1		2.5	Small counter top photocopier, counter w/ cabinets over and under, recycling bins
29		1		24.0	Shared Administrative, Teaching and General Student Exams use; minimum required 8 seat room area.
30	Mail Slots (Post-Grad Trainees, UGrad Students)			0.0	53 vertical slots (2.5"x12") accessible from corridor, space developed as part of gross up factor

Subtotal, Administration				78.4	
INPATIENT AREAS					
31	Trainee Workstations	5	2.5	12.5	<i>Assumes 1 to 2 per inpatient floor over 3 to 4 floors (therefore ~3 to 8 required w/ 5 as a mid-point); sit down type carrols w/ PCs.</i>
32	Team Conference Room or Alcove (3 to 4 seats)	3	10.0	30.0	<i>Assumes 1-2 per inpatient floor over 3-4 floors (min. of 3 included, if practical design to consider additional/ larger units); patient confidentiality and proximity to inpatient areas required. Technology requirements require discussion but will include playback/ viewing capacity of recorded patient:physician:trainee interviews, and video recording capacity or one-way mirror to adjacent patient interview space, to record and observe patient:physician:trainee interactions for viewing elsewhere or later playback/viewing within the room (e.g. Psychiatry, Pediatrics inpatient areas). As examples, 1 room to be located on each of Pediatrics, Psychiatry and Surgery inpatient wards.</i>

SPACE REQUIREMENTS (academic requirements only)

Ref	Space	Area Requirements			Remarks
		units	nsm/unit	nsm	
33	Office, Psychiatry Resident Trainee: RIH Psychiatry Inpatient Area	1	11.15	11.15	1 office minimally at RIH Psychiatry Inpatient Unit as part of 1 to 2 offices at RIH overall, plus an additional 4 to 5 offices (to a total of 6) are to be located at: Hillside (1 to 2 offices), South Hills (1 office), Community Mental health (2 offices).
34	Consult/Interview Rooms			0.0	Though not within the scope of this document, overall RIH planning, in consultation with Pediatrics and Surgery representatives in particular, should consider integrating selected outpatient facilities such as consult/interview rooms within inpatient areas as part of a broader unit redesign. This concept would support more integrated clinical and teaching roles, supported by inclusion of video recording equipment.
Subtotal, Inpatient Areas				53.7	
FAMILY PRACTICE					
35	Office, Program Director	1	13.0	13.0	1 workstation and 2-4 person meeting table
36	Workstation, Staff	2	6.5	13.0	May be 1 room w/ 2 workstations or 2 open area workstations.
37	Distance Education/Videoconference			0	Shared - see Administration Offices section above
38	Support			0	Shared - see Administration Offices section above
Subtotal, Family Practice				26.0	Integrate w/ Administration Offices section above
AMBULATORY CLINIC ROOMS					
39	Examination Rooms, Learner	(6)	(12.0)	(72.0)	Area not included in Total below as it is generally
40	Examination Rooms, Consult	(3)	(12.0)	(36.0)	viewed as clinical space rather than academic.
41	Clinic Support Areas		as required		
Subtotal, Ambulatory Clinic Rooms				(108.0)	
TOTAL, MEDICAL SCHOOL EXPANSION, KAMLOOPS				454.8 (+108.0)	Est. component gross area (CGSM) @1.35 = 614 (146)

9. EDUCATION CENTRE

A. OVERVIEW

This functional program describes the requirements for the Education Centre in the Clinical Services Building (CSB). The December 2010 master program identified the requirement for additional educational facilities including a large lecture theatre and a skills lab.

The following planning assumptions apply to this component:

- The lecture theatre and skills lab will be an IH managed resource available to support student and staff learners, and will also be a resource for the community.

B. SERVICES / FUNCTIONS

Scope of Services

- The Education Centre will be an IH managed resource available to support student and staff learners, and will also be a resource for the community.
- The lecture space must support conferences as well as educational events (e.g. CME sessions).
- The skills laboratory will be designed as a simulation laboratory supporting continued clinician competence as well as student learning.

Figure 1: Proposed Scope of Services and Integration/Partnership Opportunities

Services	New	Integration/Partnership Opportunities
UBC Medical School	X	Co-location of this program with the UBC medical School allows opportunities to partner on education events.

C. OPERATIONS

Booking and Scheduling

RIH Administration will be responsible for booking education/meeting rooms.

Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:

- *Food Services*
- *Supply Chain*
- *Housekeeping Services*
- *Linen Services*
- *Plant & Maintenance*
- *Security Services*
- *IMIT*

Hours of Operation

Hours of operation: Monday to Friday from 0800 to 1800 hours plus access for evening and weekend educational events.

D. WORKLOAD

Not applicable

E. STAFFING

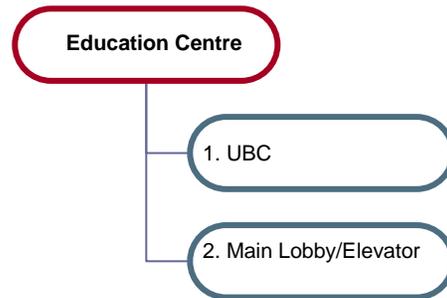
Not applicable

F. FUNCTIONAL RELATIONSHIPS

Location

- The Education Centre should be located adjacent to the UBC Medical School space on Level 1 of the CSB.

External Relationships

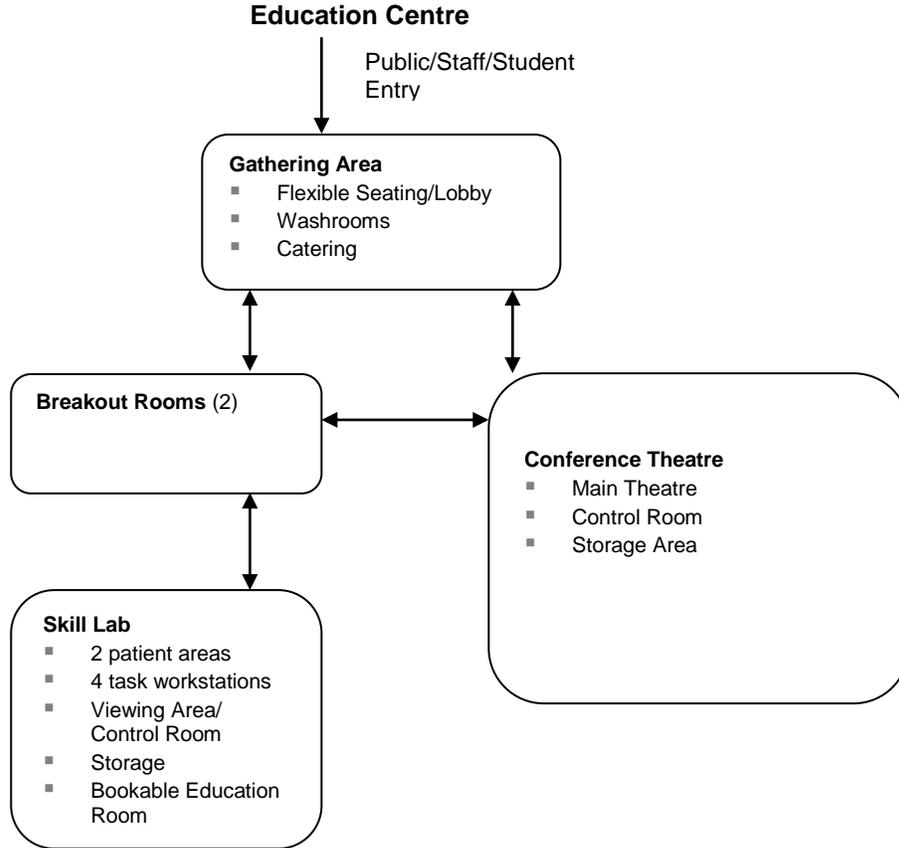


1. Provide convenient access by general circulation to the UBC Medical School space to support movement of staff, students and the public attending educational events.
2. Locate close to a main entrance/lobby for movement of staff, students and the public.

Internal Relationships

The Education Centre should be organized in the following zones:

- Entry/Gathering Area
- Lecture Theatre and Breakout Rooms
- Skills Lab



G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Security & Safety

The following security features will be employed in the area:

- Flow and access will be controlled through design.
- Entrances to the component will be equipped with automated card readers.
- Provide secure access to meeting spaces for after hours use by public and staff groups.

Flexibility & Adaptability

Future flexibility will be incorporated through the following mechanisms:

- Modular furnishings in the skills lab to create an open work environment that allows easy reconfiguration of workstations to accommodate additional task stations as required.
- Ergonomics must be considered during design.

Access & Circulation

- Locate the education rooms proximal to the lobby / elevators.

Other Considerations

The document entitled *UBC Faculty of Medicine Design Guidelines for Learning Space AV Systems & Associated Infrastructure S-M Lecture Lectures* is a useful reference guide that identifies the key requirements for a lecture theatre. This reference document has been included with the project documentation and will be very useful in the detailed planning phase of the capital project.

Acoustics

- In regards to the acoustics, the following information is from this UBC reference document:
 - Room acoustics play a key role in ensuring presenter and audience speech intelligibility. There are three key parameters:
 - Background noise which considers ambient noise from HVAC and other systems that may create continuous/intermittent noise in the space,
 - Sound isolation which considers noise transfer from outside the space to inside the space, and
 - Interior acoustics which considers the movement and reflection of sound waves within the room.

Environment

The following concepts will impact the overall environment of the space:

- Facilities should present a calm yet professional environment;
- All meeting spaces should accommodate Telehealth technologies.
- All areas must be wired to support use of networked devices e.g. computers, handheld devices.
- The colors within the area should be designed to provide a comfortable environment.

Special Requirements

- The Education Centre must support large and small group interaction, e.g. good sight lines, ability for small group discussion (tables with chairs that swivel), quality acoustics, audio-visual supports, and flexible use of the space.
- The ability to broadcast to the sites and receive broadcasts essential.
- The lecture theatre requires a small catering area outside the space.
- The entry to the lecture theatre and related space must be wheelchair accessible.
- The gathering/lobby space must be of sufficient size to allow people to gather outside the lecture room.
- The space includes 2 breakout rooms that could be designed as flexible space opening onto the lobby/gathering area in order to provide a larger gathering area and/or space for vendor displays.
- Additional washroom space is planned, e.g. a multi-stall space rather than individual washrooms located proximal to the lecture theatre.
- In regard to the Skills/Simulation lab area, secure storage of the simulation models is essential. The demand for simulation lab space will grow and therefore additional expansion space should be located with the SIM lab to support future growth. The area should be organized with a viewing/control room looking into the simulation patient areas. A small bookable education room is included with this area.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	612.2
Entry and Catering Area	
Total Net Square Metre (NSM)	87.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>117.5</u>
Lecture Theatre	
Total Net Square Metre (NSM)	228.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>307.8</u>
Education Breakout Area	
Total Net Square Metre (NSM)	30.0
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>40.5</u>
Skills Lab	
Total Net Square Metre (NSM)	108.5
Net to Gross Ratio	1.35
Component Gross Area (CGSM)	<u>146.5</u>

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Entry & Catering Area					
9 - 1	Gathering Area	66.0	1	66.0	
	• <i>flexible seating area</i> 24 @ 1.5				
	• <i>female multi-stall washroom</i> 1 @ 15.0				Includes 1 accessible stall; require 2 hand wash sinks
	• <i>male multi-stall washroom</i> 1 @ 15.0				Includes 1 accessible stall; require 2 hand wash sinks
9 - 2	Catering Area	9.0	1	9.0	
	• <i>nourishment counter area</i> 1 @ 6.0				Could include an under counter dishwasher and fridge
	• <i>supply storage alcove</i> 1 @ 3.0				To hold catering carts & related supplies; require utility sink
9 - 3	Housekeeping Room	12.0	1	12.0	Includes floor sink, 2-4 carts and supply storage on shelves; to service Level 5
	Subtotal			87.0	

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9. Education Centre

No.	Space Name / Function	NSM	Qty	Total	Comments
Lecture Theatre					
9 - 4	Lecture Theatre	237.6	1	237.6	Assumes fixed table, fixed chair that swivel
	<ul style="list-style-type: none"> • <i>main theatre with 120 seats</i> 120 @ 1.9 • <i>control room</i> 1 @ 12.0 • <i>storage area</i> 1 @ 10.0 				
	Subtotal			237.6	
Education Breakout Area					
9 - 5	Breakout Meeting Room	15.0	2	30.0	Used as breakout rooms supporting lecture theatre and skills lab; each room seats 10 @ 1.5 per person; a-v supports & data ports; plan to open onto gathering area
	Subtotal			30.0	
Skills Lab					
9 - 6	Skills Lab Area	80.0	1	80.0	Includes 2 patient bed areas @ 16 sqm each and 4 task workstations @ 9 sqm each and a seminar table with 8 chairs
9 - 7	Viewing Area and Control Room	10.0	1	10.0	
9 - 8	Bookable Education Room	8.5	1	8.5	Will also use the breakout meeting space listed above
9 - 9	Storage area	10.0	1	10.0	
	Subtotal			108.5	

10. STAFF & SUPPORT SPACE

A. OVERVIEW

This functional program describes the staff room requirements and the common support space needs, i.e. Housekeeping rooms, IT Telecom rooms, lobby and retail space.

The following planning assumptions apply to this component:

- The staff room space will be shared staff resource located in an accessible staff only location.
- It is assumed there will be 4 housekeeping rooms, i.e. 2 on Level 2 and 2 on Level 1. Space for 2 housekeeping rooms are included in this component. Space for two additional rooms is included in component # 9. Education Centre and #4. IV Therapy. The retail area will be responsible for their own housekeeping requirements within their defined space.
- IT Telecom space will be required to support the retail level as well as clinical levels of the CSB.
- The street level of the CSB will contain retail space.

B. SERVICES / FUNCTIONS

Scope of Services

- In regards to the retail space, 600 sqm of space on the ground level has been identified. Potential services include a pharmacy, a food outlet and other health related retail opportunities.
- There will be a lobby with access to the elevator bank (180 sqm has been allocated for this function as per the IH Short Form Business Case submission). There will be an information/volunteer desk located in this area.
- Two staff rooms have been included in this functional program. Each staff room space will include flexible seating for 30 and a kitchen area that includes a sink, counter, storage cupboards, dishwasher and fridge. Depending on the location, it might be desirable to combine the rooms into 1 larger space.
- IT Telecom space will be required on the retail level as well as Level 1 and Level 2 of the CSB. The main computer room will be located on Level 2. A total of 4 IT Telecom rooms are required.

C. OPERATIONS

Booking and Scheduling

RIH Administration will be responsible for overseeing the staff rooms. IMIT will be responsible for the Telecom space.

Support Services will be provided for all CSB services within the overall IH service delivery strategy. A summary of these services can be found in the Functional Program Summary which includes:

- *Food Services*
- *Supply Chain*
- *Housekeeping Services*
- *Linen Services*
- *Plant & Maintenance*
- *Security Services*
- *IMIT*

Hours of Operation

Hours of operation: Staff rooms must be available 7 days per week.

D. WORKLOAD

Not applicable

E. STAFFING

Not applicable

F. FUNCTIONAL RELATIONSHIPS

Location

- The staff room space must be in a staff only zone.
- Housekeeping rooms must be in a central location.
- IT Telecom rooms must be centrally located.

G. DESIGN CRITERIA / PHYSICAL REQUIREMENTS

Security & Safety

- Flow and access will be controlled through design and technology.
- Interior space shall be designed so as to provide staff the ability to impose a secure physical barrier between the public and staff/operational areas therefore providing the ability to control who is granted access.
- Identified entrances to the spaces will be equipped with proximity card reader technology. The access control system shall be integrated into the site's existing system.
- Provide secure meeting spaces that allow for after hour access by public and staff groups through the use of appropriate technology such as coded door locks.
- Video images of all public areas, corridors, entrances/exits and lobbies/vestibules shall be recorded. Video surveillance system technology shall be integrated into the site's existing system infrastructure. Camera placement and video quality shall provide high quality images that provide true representation of colours, facial features and overall details within the environment in all expected lighting conditions.
- Specifically addressed emergency duress alarms shall be incorporated throughout the facility including; pedestrian routes throughout the parkade, all pay station equipment locations, bike storage, parkade stairwell entrances and vestibule areas, reception areas and areas where staff work in isolation and other areas identified during the design process. Duress alarms shall be integrated into the site's existing system and, depending on specific deployment, may or may not provide local annunciation, but all alarms shall transmit an immediate signal to the onsite security staff.
- Parkade lighting shall provide white coloured light in order to enable true colour rendering for security cameras and shall of a sufficient level so as to achieve a minimum of 5 foot-candles (horizontally and vertically) of illumination uniformly throughout the parking structure.

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10. Staff & Support Space

- Blind corners shall be minimized to the extent practical and convex mirrors of sufficient size shall be used to help mitigate safety risk relating to both vehicle and pedestrian traffic areas where they do exist.
- Pedestrian routes within the parkade that traverse sloped surfaces or stairs shall be well marked and incorporate anti-slip surfaces.

Flexibility & Adaptability

Future flexibility will be incorporated through the following mechanisms:

- Modular furnishings in the staff room to create an open work environment that allows easy reconfiguration of workstations to accommodate additional task stations as required.
- Ergonomics must be considered during design.

H. SPACE ALLOCATION SUMMARY

	<u>CGSM</u>
Total Component Gross Area (square metres)	1,283.2
Staff Area	
Total Net Square Metre (NSM)	161.5
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	218.0
Lobby	
Total Net Square Metre (NSM)	189.0
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	255.2
Retail Area	
Total Net Square Metre (NSM)	600.0
Net to Gross Ratio	<u>1.35</u>
Component Gross Area (CGSM)	810.0

SCHEDULE OF ACCOMMODATION

No.	Space Name / Function	NSM	Qty	Total	Comments
Staff Area & Common Support Space					
10 - 1	Staff Room	60.0	1	60.0	Assumes 1 staff room on each level
	• flexible seating area 30 @ 1.5				Includes flexible seating area for up to 30 staff
	• kitchen area 1 @ 15.0				Includes counter area with sink, storage cupboards, fridge, microwave and dishwasher
10 - 1	Staff Room	37.5	1	37.5	
10 - 2	Housekeeping Room	12.0	2	24.0	Includes floor sink, 2-4 carts and supplies stored on shelves; assumes these 2 rooms on Level 2; Education Centre and IV Therapy components contains housekeeping rooms for Level 1
10 - 3	IT Telecom Room	10.0	4	40.0	Assumes the main computer room will be located on CSB Level 2 and will have the main and redundant conduit from this room through the pedway to the main bldg.
	Subtotal			161.5	
Lobby Area					
10 - 4	Information/Volunteer Desk	8.0	1	8.0	Locate in the lobby area near elevators
10 - 5	Public Washroom, Accessible	4.5	4	18.0	Locate 2 washrooms on the clinical levels of the building
10 - 6	Lobby Area	163.0	1	163.0	Wheelchair accessible washroom located in lobby
	Subtotal			189.0	
Retail Area					
10 - 7	Assumes up to 3 retail spaces	200.0	3	600.0	Each retail module at 200 nsm; this level requires a telecommunication room that can be used for any vendor that requires communications and must have riser conduit up to the main computer room on Level 2 - refer to #10-3.
	Subtotal			600.0	
Mechanical Penthouse					
10 - 8	Washroom 1 @ 4.5	4.5	1	4.5	
	Subtotal			4.5	

Royal Inland Hospital CSB Functional Program

1. Existing Space

The following table showing the existing space inventory for the programs/services planned to be included in the CSB project. Please note that some programs do not have existing space, e.g. Medical Outpatient Services. The current space inventory was compiled by IH staff.

Room Code	Existing Space - Space Description	Units of Space	NSM	Total	Remarks/Comments
1. Outpatient Lab & ECG					
Patient Intake					
1.1	Waiting Area	1	27.4	27.4	19 seats
1.2	Reception/Communication/Staff Station	0	0.0	0.0	No Designated Space
	Sub Total:	1	27.4	27.4	
Lab Patient Collection & Processing Area					
1.3	Specimen Collection Area	3	6.3	18.9	
1.4	ECG Room	0	0.0	0.0	Non Existent
1.5	Specimen Collection Washroom	1	5.6	5.6	
1.6	Specimen Collection Washroom	0	0.0	0.0	Non Existent
	Sub Total:	4	11.9	24.5	
Lab Supply Area					
1.7	Supplies Storage	0	0.0	0.0	Shared Space
	Sub Total:	0	0.0	0.0	
Other Support Areas (shared w/adjacent program)					
1.8	Soiled Utility	0	0.0	0.0	Non Existent
1.9	Housekeeping Room	0	0.0	0.0	Non Existent
1.10	Lab Coat Storage & Coat Closet	0	0.0	0.0	Shared Space
1.11	Locker Area	0	0.0	0.0	Shared Space
1.12	Staff Washroom	0	0.0	0.0	Shared Space
1.13	Staff Room	0	0.0	0.0	Shared Space
	Sub Total:	0	0.0	0.0	
Lab Existing Total Space		5		51.9	
2. Cardiopulmonary/Neurodiagnostics					
Waiting/Reception/Administrative Support					
2.1	Waiting Area	0	0.0	0.0	Shared Space
2.2	Reception / Administrative Support	1	5.0	5.0	
2.3	Patient File Storage	1	8.5	8.5	Plus hallway storage 16 file cabinets
2.4	Office Workroom	0	0.0	0.0	Non Existent
2.5	Client/Patient Washroom	1	7.0	7.0	Only used for Neuro Patients
	Sub Total:	3	20.5	20.5	
Cardiology Diagnostics					
2.6	Patient Change Cubicle	0	0.0	0.0	Shared Space with Dr. Consult
2.7	Accessible Patient Change Cubicle	0	0.0	0.0	Non Existent
2.8	Stress test Lab	2	30.8	30.8	There are 2 rooms, one is 11.2 sqm and one is 19.6 sqm
2.9	Consultation Room	0	0.0	0.0	Shared Space with Stress Test Lab
2.10	Holter Monitoring Work Area	1	7.0	7.0	
2.11	Pacemaker Clinic Exam Room	1	12.0	12.0	
2.12	Linen Cart Alcove	0	0.0	0.0	No Designated Space - located in Hallway
2.13	Staff Work Area	1	11.6	11.6	
2.14	Code Cart Alcove	0	0.0	0.0	No Designated Space - located in Hallway
2.15	Physician Dictation Area	1	8.0	8.0	Shared Space with Pulmonary
2.16	Practice Leader Work Area	1	8.4	8.4	
2.17	Patient Washroom	0	0.0	0.0	Non Existent
	Sub Total:	7	77.8	77.8	
Pulmonary Diagnostics					
2.18	Pulmonary Function Lab (PFT)	2	31.9	31.9	19.9 room is dedicated the 12m room is shared space
2.19	Consultation Room	0	0.0	0.0	Non Existent
2.20	Physician Dictation Area	0	0.0	0.0	Shared Space with Cardio
2.21	Patient Washroom	0	0.0	0.0	Non Existent
	Sub Total:	2	31.9	31.9	

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1. Existing Space

Neurodiagnostics					
2.22	Combination EEG/EMG & Sleep Lab Space with ensuite bathroom	6	10.6	63.6	Shared Space with EMG/EEG; the rooms have no ensuite bathrooms
2.23	Combination EMG & Sleep Lab Space with ensuite bathroom	0	0.0	0.0	Refer to information in 2.22
2.24	Combination EMG & Sleep Lab Space with ensuite bathroom for bariatric patients	0	0.0	0.0	Refer to information in 2.22
2.25	Patient Shower Room	1	7.0	7.0	
2.26	Consultation Room	0	0.0	0.0	Non Existent
2.27	Sleep Lab Monitoring Area	1	21.7	21.7	
2.28	Physician & Staff Testing Monitoring Work Area	0	0.0	0.0	Refer to information in 2.27
2.29	Practice Leader Work Area	0	0.0	0.0	Non Existent
	Sub Total:	8	39.3	92.3	
Clinic Support Area					
2.30	Office, Manager	1	10.3	10.3	
2.31	Student Work Space	0	0.0	0.0	Non Existent
2.32	Clean Utility Room	0	0.0	0.0	Non Existent
2.33	Cylinder Storage for Compressed Air	0	0.0	0.0	Non Existent
2.34	Equipment Storage Area	0	0.0	0.0	Non Existent
2.35	Soiled Supply Area	0	0.0	0.0	Non Existent
2.36	Housekeeping Room	0	0.0	0.0	Non Existent
	Sub Total:	1	10.3	10.3	
Staff Support Area					
2.37	Staff Room	1	5.3	5.3	
2.38	Staff Washroom	1	3.7	3.7	
2.39	Locker Area	0	0.0	0.0	Non Existent
	Sub Total:	2	9.0	9.0	
Cardiopulmonary/Neurodx Existing Total Space		23	188.79	241.8	
3. Community Respiratory Therapy (RT)					
Waiting/Reception/Administrative Support					
3.1	Waiting Area	0	0.0	0.0	Non Existent
3.2	Reception/Registration Workstation	1	21.0	21.0	
3.3	Office Workroom/File Storage	0	0.0	0.0	Non Existent
	Sub Total:	1	21.0	21.0	
Patient Examination & Education Area					
3.4	Exam/Assessment Room	0	0.0	0.0	Non Existent
3.5	Consultation Room	3	30.4	30.4	
3.6	Patient Education Group Room	0	0.0	0.0	Non Existent
3.7	Clinician Work Space	3	10.0	30.0	
3.8	Patient Washroom	1	11.3	11.3	Shared Space with both sexes and Staff
	Sub Total:	7	51.7	71.7	
Clinic Support Area					
3.9	Clean Utility Room	0	0.0	0.0	Non Existent - Stored in Hallways
3.10	Equipment Storage Area	0	0.0	0.0	Non Existent - Stored in Hallways
3.11	Soiled Supply Area	0	0.0	0.0	Non Existent - Stored in Hallways
3.12	Housekeeping Room	0	0.0	0.0	Non Existent - Stored in Hallways
	Sub Total:	0	0.0	0.0	
Staff Support Area					
3.13	Staff Room	0	0.0	0.0	Non Existent
3.15	Staff Washroom	0	0.0	0.0	Non Existent
3.16	Locker Area	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Community RT Existing Total Space		8	72.7	92.7	

Royal Inland Hospital CSB Functional Program

1. Existing Space

Room Code	Existing Space - Space Description	Units of Space	NSM	Total	Remarks/Comments
4. IV Therapy / PICC					
Waiting/Reception/Administrative Support					
4.1	Waiting Area	0	0.0	0.0	Shared Space with all of the Ambulatory Department
4.2	Reception/Registration Workstation	0	0.0	0.0	Shared Space with all of the Ambulatory Department
4.3	Office Workroom/File Storage	0	0.0	0.0	Shared Space with all of the Ambulatory Department
	Sub Total:	0	0.0	0.0	
Patient Treatment Area					
4.4	Patient Treatment Bay & PICC Room	7	20.9	20.9	There are 6 IV Therapy Rooms at 4.5 nsm and 1 PICC
4.5	Patient Teaching Room	0	0.0	0.0	Non Existent
4.6	Care Station	2	1.0	2.0	One for IV Therapy and one for PICC
4.7	Medication Room	0	0.0	0.0	Shared Space with all of the Ambulatory Department
4.8	Clean Linen Alcove	0	0.0	0.0	No Designated Space
4.9	Hand Wash Sink	3	0.0	0.0	Two are for PICC and one is for IV Therapy
4.10	Patient Washroom	2	5.3	5.3	Shared Space with all of the Ambulatory Department
	Sub Total:	14	27.2	28.2	
Clinic Support Area					
4.11	Clean Utility Room	0	0.0	0.0	Non Existent
4.12	Soiled Supply Area	0	0.0	0.0	Shared Space with all of the Ambulatory Department
4.13	Equipment Storage Area	0	0.0	0.0	Non Existent - Hallway Storage
4.14	Housekeeping Room	1	4.6	4.6	Shared Space with all of the Ambulatory Department
	Sub Total:	1	4.6	4.6	
Staff Support Area					
4.15	Staff Room	1	26.0	26.0	Shared Space with all of the Ambulatory Department
4.16	Staff Washroom	0	0.0	0.0	Shared Space with the all of the 2nd floor (10+)
4.17	Locker Area	0	0.0	0.0	See 4.15
	Sub Total:	1	26.0	26.0	
	IV Therapy Existing Total Space	16	57.8	58.8	
5. Pre-Surgical Screening (PSS)					
Waiting/Reception/Administrative Support					
5.1	Waiting Area	0	0.0	0.0	No Designated Space, 2 chairs located in an
5.2	Reception/Administrative Workstation	1	5.7	5.7	
5.3	Office Workroom/File Storage	1	11.8	11.8	File Storage is located in Hall
5.4	OR Booking Clerks	1	24.2	24.2	Three persons working in 1 room and the supervisor working in the hallway
5.5	Client/Patient Washroom	0	0.0	0.0	Non Existent
	Sub Total:	3	41.67	41.7	
Patient Examination Area					
5.6	Nurse Exam/Assessment Room	3	7.8	23.4	
5.7	Health Assessment Alcove	0	0.0	0.0	Located in Hallway
5.8	Anaesthesia Exam/Consult Room	1	8.7	8.7	
	Sub Total:	4	16.49	32.1	
Clinic Support Area					
5.9	Clean Utility Room	0	0.0	0.0	No Designated Space
5.10	Soiled Supply Area	0	0.0	0.0	No Designated Space
5.11	Equipment Storage	0	0.0	0.0	No Designated Space
5.12	Housekeeping Room	0	0.0	0.0	No Designated Space
	Sub Total:	0	0.0	0.0	
Staff Support Area					
5.13	Staff Room	0	0.0	0.0	Located in Hallway
5.14	Staff Washroom	0	0.0	0.0	Non Existent
5.15	Locker Area	0	0.0	0.0	Located in Hallway
	Sub Total:	0	0.0	0.0	
	PSS Existing Total Space	7	58.16	73.8	

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1. Existing Space

Room Code	Existing Space - Space Description	Units of Space	NSM	Total	Remarks/Comments
6. Medical Outpatient Services					
Waiting/Reception/Administrative Support					
6.1	Waiting Area	0	0	0	Non Existent
6.2	Reception/Registration Workstation	0	0	0	Non Existent
6.3	Patient File Storage	0	0	0	Non Existent
6.4	Office Workroom	0	0	0	Non Existent
6.5	Client/Patient Washroom	0	0	0	Non Existent
	Sub Total:	0	0.0	0.0	
Patient Examination & Education Area					
6.6	Exam Room	0	0	0	Non Existent
6.7	Consultation Room	0	0	0	Non Existent
6.8	Education Group Room	0	0	0	Non Existent
6.9	Clinician Work Space	0	0	0	Non Existent
6.10	Student Work Space	0	0	0	Non Existent
6.11	Patient Washroom	0	0	0	Non Existent
	Sub Total:	0	0.0	0.0	
Clinic Support Area					
6.12	Clean Utility Room	0	0.0	0.0	Non Existent
6.13	Pharmaceutical Supply Storage	0	0.0	0.0	Non Existent
6.14	Office, Clinic Manager	0	0.0	0.0	Non Existent
6.15	Equipment Storage Area	0	0.0	0.0	Non Existent
6.16	Soiled Supply Area	0	0.0	0.0	Non Existent
6.17	Housekeeping Room	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Staff Support Area					
6.18	Staff Room	0	0.0	0.0	Non Existent
6.19	Staff Washroom	0	0.0	0.0	Non Existent
6.20	Staff Washroom, Barrier-Free	0	0.0	0.0	Non Existent
6.21	Locker Area	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Medical OPS Existing Total Space		0	0	0	
7. Vascular Improvement Program (VIP)					
Waiting/Reception/Administrative Support					
7.1	Waiting Area	1	20.1	20.1	Shared Space with Diabetes Education (50/50 split)
7.2	Reception/Registration Workstation	1	21.0	21.0	Shared Space with Diabetes Education (50/50 split)
7.3	Patient File Storage	1	10.1	10.1	Shared Space with Diabetes Education (50/50 split)
7.4	Office Workroom	0	0.0	0.0	Non Existent
7.5	Client/Patient Washroom	1	11.4	11.4	Shared Space with Diabetes Education/Patients and Staff
	Sub Total:	4	62.6	62.6	
Patient Examination Area					
7.6	Exam Room	2	9.9	19.8	
7.7	Consultation Room	5	10.0	50.0	
7.8	Patient Education Group Room	1	43.0	43.0	Shared Space with Diabetes Education (50/50 split)
7.9	Clinician Work Space	0	0.0	0.0	No designated space, shared with the Consultation Rooms
7.10	Student/Volunteer Work Space	0	0.0	0.0	No designated space, shared with the Consultation Rooms
7.11	Coordinator Office	1	10.3	10.3	
7.12	Physician Dictation Area	0	0.0	0.0	Non Existent
7.13	Patient Washroom	0	0.0	0.0	Refer to 7.5
	Sub Total:	9	73.2	123.1	
Clinic Support Area					
7.14	Clean Utility Room	0	0.0	0.0	Non Existent
7.15	Equipment Storage Area	0	0.0	0.0	Non Existent
7.16	Soiled Supply Area	0	0.0	0.0	Non Existent
7.17	Housekeeping Room	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	

Royal Inland Hospital CSB Functional Program

1. Existing Space

Room Code	Existing Space - Space Description	Units of Space	NSM	Total	Remarks/Comments
Staff Support Area					
7.18	Staff Room	0	0.0	0.0	Shared Space with Meeting Room (refer to 7.8)
7.19	Staff Washroom	0	0.0	0.0	Non Existent (refer to 7.5)
7.20	Locker Area	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Medical OPS Existing Total Space		13	135.8	185.7	
II. UBC Space					
Centralized Area - Teaching & Learning					
8.1	Small Meeting Room/Video Conference	0	0	0	Non Existent
8.2	Small Meeting Room/Video Conference	0	0	0	Non Existent
8.3	Video Conference Rack Room	0	0.0	0	Non Existent
8.4	AV Storage Closet	1	6.0	6.0	
8.5	Clinical Skills/Simulation Room, Single Bed Surgical Type	0	0.0	0.0	Non Existent
8.6	Control Room	0	0	0	Non Existent
8.7	Storage Room	0	0	0	Non Existent
8.8	Viewing Room	0	0	0	Non Existent
8.9	Patient Waiting	0	0	0	Non Existent
8.10	Washroom	0	0	0	Non Existent
	Sub Total:	1	6.0	6.0	
Centralized Area - Locker & On-Call					
8.11	On-Call Room, Ugrad Trainee/ Grad Student	0	0.0	0.0	Non Existent
8.12	Locker Area	0	0.0	0.0	Non Existent
8.13	Change Room	0	0.0	0.0	Non Existent
8.14	Washroom, Unisex, Wheelchair Type	0	0.0	0.0	Non Existent
8.15	Shower Area, Unisex	0	0.0	0.0	Non Existent
8.16	Housekeeping Closet	0	0.0	0.0	Non Existent
8.17	Lounge	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Administration Offices					
8.18	Office, Faculty	2	16.6	16.6	Two offices: 1 @ 6.9 sqm and 1 at 9.7 sqm
8.19	Workstation, Administrative Support/ Reception	1	9.6	9.6	
8.20	Workstation, Swing	0	0.0	0.0	Non Existent
	Support	0	0.0	0.0	Non Existent
8.21	Waiting	0	0.0	0.0	Non Existent
8.22	Kitchenette	1	1.3	1.3	
8.23	Storage, Files	0	0.0	0.0	Non Existent
8.24	Work Area, Copier/Fax/Supplies	0	0.0	0.0	Non Existent
8.25	Meeting/Video Conference Room (8 seats)	1	23.9	23.9	
8.26	Mail Slots (Post-Grad Trainees, Ugrad Students)	0	0.0	0.0	Non Existent
	Sub Total:	5	51.4	51.4	
Family Practice					
8.27	Office, Program Director	0	0.0	0.0	Non Existent
8.28	Workstation, Staff	0	0.0	0.0	Non Existent
8.29	Distance Education Video/Conference	0	0.0	0.0	Non Existent
8.30	Support	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
UBC Existing Total Space		6	57.4	57.4	

Royal Inland Hospital CSB Functional Program

1. Existing Space

Room Code	Existing Space - Space Description	Units of Space	NSM	Total	Remarks/Comments
9. Education					
Entry & Catering Area					
9.1	Gathering Area	0	0.0	0.0	Non Existent
9.2	Catering Area	0	0.0	0.0	Non Existent
9.3	Housekeeping Room	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Lecture Theatre					
9.4	Lecture Theatre	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Education Breakout Area					
9.5	Breakout Meeting Room	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Skills Lab					
9.6	Skills Lab Area	0	0.0	0.0	Non Existent
9.7	Viewing Area & Control Room	0	0.0	0.0	Non Existent
9.8	Breakout/Debriefing Area	0	0.0	0.0	Non Existent
9.9	Storage Area	0	0.0	0.0	Non Existent
	Sub Total:				
Education Existing Total Space		0	0.0	0.0	
10. Staff Support & Retail					
Staff Area & Common Support Space					
10.1	Staff Room	0	0.0	0.0	Non Existent
10.2	Housekeeping Room	0	0.0	0.0	Non Existent
10.3	IT Telecom Room	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Lobby Area					
10.4	Lobby Area	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Retail Area					
10.5	Assumes up to 3 retail spaces	0	0.0	0.0	Non Existent
	Sub Total:	0	0.0	0.0	
Staff & Common Area Existing Total Space		0	0.0	0.0	
TOTAL - EXISTING SPACE		78	570.65	762.1	

Units of Space = Quantity of rooms

NSM = Net Square Meters

Royal Inland Hospital CSB Functional Program

2. Phasing Plan

Draft Phasing Plan Overview

The consultants were asked by Interior Health to identify what space could be in a later phase of the project.

The attached table shows the space that could be developed in a later phase. The spaces that could be included in a later phase are shown in **RED** font and the amount of space that could be introduced at a later date is described in the COMMENT section of the table. For example, 6 of the 12 IV Therapy treatment spaces could be developed at a later date. One (1) clinic module of the Medical Outpatient Service could be opened at a later date, i.e. 8 exam rooms, 4 consult rooms and required support space. The Education Centre in its entirety could be developed at a later date. The other clinical programs will require the projected space on opening, i.e. 2015.

Room Code	Space Description	Units of Space	NSM Per Unit	Total NSM	Phasing
1. Outpatient Lab & ECG					
Patient Intake					
1.1	Waiting Area	1	27.0	27.0	Will be required on opening
1.2	Reception/Communication/Staff Station	1	7.5	7.5	Will be required on opening
	Sub Total:			34.5	
Lab Patient Collection & Processing Area					
1.3	Specimen Collection Area	1	50.0	50.0	Will be required on opening
1.4	ECG Room	1	10.0	10.0	Will be required on opening
1.5	Specimen Collection Washroom	2	4.5	9.0	Will be required on opening
	Sub Total:			69.0	
Lab Supply Area					
1.6	Supplies Storage	1	9.0	9.0	Will be required on opening
	Sub Total:			9.0	
Other Support Areas (shared w/adjacent program)					
1.7	Soiled Utility	0	0.0	0.0	
1.8	Housekeeping Room	0	0.0	0.0	
1.9	Lab Coat Storage & Coat Closet	1	6.0	6.0	Will be required on opening
1.10	Locker Area	6	0.3	1.8	Will be required on opening
1.11	Staff Washroom & Staff Room	0	0.0	0.0	
	Sub Total:			7.8	

Royal Inland Hospital CSB Functional Program

2. Phasing Plan

2. Cardiopulmonary/Neurodiagnostics					
Waiting/Reception/Administrative Support					
2.1	Waiting Area	1	27.0	27.0	Will be required on opening
2.2	Reception / Administrative Support	4	6.0	24.0	Will be required on opening
2.3	Patient File Storage	1	10.0	10.0	Will be required on opening
2.4	Office Workroom	1	9.0	9.0	Will be required on opening
2.5	Client/Patient Washroom	1	4.5	4.5	Will be required on opening
	Sub Total:			74.5	
Cardiology Diagnostics					
2.6	Patient Change Cubicle	1	1.5	1.5	Will be required on opening
2.7	Accessible Patient Change Cubicle	1	4.0	4.0	Will be required on opening
2.8	Stress test Lab	2	20.0	40.0	Will be required on opening
2.9	Consultation Room	1	10.0	10.0	Will be required on opening
2.10	Holter Monitoring Work Area	2	4.5	9.0	Will be required on opening
2.11	Holter Monitoring Prep Room	2	4.5	9.0	Will be required on opening
2.12	Pacemaker Clinic Exam Room	2	10.0	20.0	Will be required on opening
2.13	Linen Cart Alcove	1	2.5	2.5	Will be required on opening
2.14	Staff Work Area	3	4.5	13.5	Will be required on opening
2.15	Code Cart Alcove	1	1.5	1.5	Will be required on opening
2.16	Physician Dictation Area	4	2.5	10.0	Will be required on opening
2.17	Practice Leader Work Area	1	7.5	7.5	Will be required on opening
2.18	Physician Reading Room	1	7.0	7.0	Will be required on opening
2.19	Patient Washroom	1	4.5	4.5	Will be required on opening
	Sub Total:			140.0	
Pulmonary Diagnostics					
2.20	Pulmonary Function Lab (PFT)	2	20.0	40.0	Will be required on opening
2.21	Consultation Room	1	10.0	10.0	Will be required on opening
2.22	Physician Dictation Area	2	2.5	5.0	Will be required on opening
2.23	Patient Washroom	0	0.0	0.0	
	Sub Total:			55.0	
Neurodiagnostics					
2.24	Combination EEG/& Sleep Lab Space with ensuite bathroom	3	18.0	54.0	Will be required on opening
2.25	Combination EMG & Sleep Lab Space with ensuite bathroom	2	18.0	36.0	Will be required on opening
2.26	Combination EMG & Sleep Lab Space with ensuite bathroom for bariatric patients	1	22.0	22.0	Will be required on opening
2.27	Patient Shower Room	1	7.0	7.0	Will be required on opening
2.28	Consultation Room	1	10.0	10.0	Will be required on opening
2.29	Sleep Lab Monitoring Area	6	4.5	27.0	Will be required on opening
2.30	Practice Leader Work Area	1	7.5	7.5	Will be required on opening
	Sub Total:			163.5	

Royal Inland Hospital CSB Functional Program

2. Phasing Plan

Clinic Support Area					
2.31	Office, Manager	1	9.0	9.0	Will be required on opening
2.32	Student Work Space	1	2.5	2.5	Will be required on opening
2.33	Clean Utility Room	1	12.0	12.0	Will be required on opening
2.34	Cylinder Storage for Compressed Air	1	3.0	3.0	Will be required on opening
2.35	Equipment Storage Area	1	10.0	10.0	Will be required on opening
2.36	Soiled Supply Area	1	9.0	9.0	Will be required on opening
2.37	Housekeeping Room	0	0.0	0.0	
	Sub Total:			45.5	
Staff Support Area					
2.38	Staff Room	1	0.0	0.0	
2.39	Staff Washroom	0	0.0	0.0	
2.40	Locker Area	24	0.3	7.2	Will be required on opening
	Sub Total:			7.2	
3. Community Respiratory Therapy (RT)					
Waiting/Reception/Administrative Support					
3.1	Waiting Area	1	6.0	6.0	Will be required on opening
3.2	Reception/Registration Workstation	1	6.0	6.0	Will be required on opening
3.3	Office Workroom/File Storage	1	10.0	10.0	Will be required on opening
	Sub Total:			22.0	
Patient Examination & Education Area					
3.4	Exam/Assessment Room	1	10.0	10.0	Will be required on opening
3.5	Consultation Room	1	10.0	10.0	Will be required on opening
3.6	Patient Education Group Room	1	0.0	0.0	
3.7	Clinician Work Space	4	7.5	30.0	Will be required on opening
3.8	Clinician Touchdown Work Space	4	2.5	10.0	Will be required on opening
3.9	Patient Washroom	1	4.5	4.5	Will be required on opening
	Sub Total:			64.5	
Clinic Support Area					
3.10	Clean Utility Room	0	0.0	0.0	
3.11	Equipment Storage Area	1	10.0	10.0	Will be required on opening
3.12	Soiled Supply Area	0	0.0	0.0	
3.13	Housekeeping Room	0	0.0	0.0	
	Sub Total:			10.0	
Staff Support Area					
3.14	Staff Room	0	0.0	0.0	
3.15	Staff Washroom	0	0.0	0.0	
3.16	Locker Area	8	0.3	2.4	Will be required on opening
	Sub Total:			2.4	
4. IV Therapy					
Waiting/Reception/Administrative Support					
4.1	Waiting Area	1	18.0	18.0	Will be required on opening
4.2	Reception/Registration Workstation	0	0.0	0.0	
4.3	Office Workroom/File Storage	1	10.0	10.0	Will be required on opening
	Sub Total:			28.0	

Royal Inland Hospital CSB Functional Program

2. Phasing Plan

Patient Treatment Area					
4.4	Patient Treatment Bay	12	9.5	114.0	Require 6 stretcher spaces now and 6 treatment spaces will be required in the next 5-7 years
4.5	Patient Teaching Room	1	12.0	12.0	Will be required on opening
4.6	Care Station	1	12.0	12.0	Will be required on opening
4.7	PICC Insertion Procedure Room	2	12.0	24.0	Will be required on opening
4.8	PICC Supply Storage	1	6.0	6.0	Will be required on opening
4.9	PICC & Home IV Staff Work Area	3	4.5	13.5	Will be required on opening
4.10	Medication Room	1	9.0	9.0	Will be required on opening
4.11	Clean Linen Alcove	2	2.5	5.0	Will be required on opening
4.12	Hand Wash Sink	4	0.5	2.0	1 sink per 3 treatment spaces; will require 2 sinks on opening and 2 sinks with the other 6 treatment spaces
4.13	Patient Washroom	2	4.5	9.0	Will be required on opening
	Sub Total:			206.5	
Clinic Support Area					
4.14	Clean Utility Room	1	12.0	12.0	Will be required on opening
4.15	Soiled Supply Area	1	9.0	9.0	Will be required on opening
4.16	Equipment Storage Area	1	10.0	10.0	Will be required on opening
4.17	Housekeeping Room	1	12.0	12.0	Will be required on opening
	Sub Total:			43.0	
Staff Support Area					
4.18	Staff Room	0	0.0	0.0	
4.19	Staff Washroom	1	4.5	4.5	Will be required on opening
4.20	Locker Area	6	0.3	1.8	Will be required on opening
	Sub Total:			6.3	
5. Pre-Surgical Screening					
Waiting/Reception/Administrative Support					
5.1	Waiting Area	1	36.0	36.0	Will be required on opening
5.2	Reception/Administrative Workstation	6	2.0	12.0	Will be required on opening
5.3	Office Workroom/File Storage	1	10.0	10.0	Will be required on opening
5.4	OR Booking Clerks	5	4.5	22.5	Will be required on opening
5.5	Client/Patient Washroom	1	4.5	4.5	Will be required on opening
	Sub Total:			85.0	
Patient Examination Area					
5.6	Nurse Exam/Assessment Room	6	10.0	60.0	Will be required on opening
5.7	Scale Alcove	1	2.0	2.0	Will be required on opening
5.8	Anaesthesia Exam/Consult Room	1	10.0	10.0	Will be required on opening
	Sub Total:			72.0	
Clinic Support Area					
5.9	Clean Utility Room	0	0.0	0.0	
5.10	Soiled Supply Area	0	0.0	0.0	
5.11	Bookable Education Area	1	10.0	10.0	Will be required on opening
5.12	Housekeeping Room	0	0.0	0.0	
	Sub Total:			10.0	
Staff Support Area					
5.13	Staff Room	0	0.0	0.0	
5.14	Staff Washroom	1	4.5	4.5	Will be required on opening
5.15	Locker Area	13	0.3	3.9	Will be required on opening
	Sub Total:			8.4	
6. Medical Outpatient Services					
Waiting/Reception/Administrative Support					
6.1	Waiting Area	1	30.0	30.0	
6.2	Reception/Registration Workstation	2	12.0	24.0	1 area (12 sqm) required on opening; assumes 1 clinic module on opening and the 2nd module of 12 exam/consult rooms opened at a later date
6.3	Patient File Storage	1	10.0	10.0	Will be required on opening
6.4	Office Workroom	1	9.0	9.0	Will be required on opening
6.5	Client/Patient Washroom	2	4.5	9.0	1 washroom required on opening
	Sub Total:			82.0	

Royal Inland Hospital CSB Functional Program

2. Phasing Plan

Patient Examination & Education Area					
6.6	Exam Room	14	10.0	140.0	One clinic module required on opening; therefore 6 exam rooms of the 14 required on opening
6.7	Exxam Room, Bariatric	1	20.0	20.0	As above
6.8	Consultation Room	8	10.0	80.0	4 consult rooms required on opening to support 1 clinic module
6.9	Education Group Room	1	22.0	22.0	This space could be in a later phase
6.10	Clinician Work Space	8	4.5	36.0	Require one-half of the workstations (i.e. 4 workstations) to support 1 clinic module
6.11	Student Work Space	2	2.5	5.0	1 student work space required on opening
6.12	Patient Washroom	2	4.5	9.0	1 washroom required on opening
	Sub Total:			312.0	
Clinic Support Area					
6.13	Clean Utility Room	1	12.0	12.0	Will be required on opening
6.14	Pharmaceutical Supply Storage	1	6.0	6.0	Will be required on opening
6.15	Scale Alcove	1	5.0	5.0	
6.16	Office, Clinic Manager	1	9.0	9.0	Will be required on opening
6.17	Equipment Storage Area	1	10.0	10.0	Will be required on opening
6.18	Soiled Supply Area	1	9.0	9.0	Will be required on opening
6.19	Housekeeping Room	0	0.0	0.0	
	Sub Total:			51.0	
Staff Support Area					
6.20	Staff Room	1	0.0	0.0	
6.21	Staff Washroom, Barrier-Free	2	4.5	9.0	Will be required on opening
6.22	Locker Area	10	0.3	3.0	Will be required on opening
	Sub Total:			12.0	
7. Vascular Improvement Program (VIP)					
Waiting/Reception/Administrative Support					
7.1	Waiting Area	1	15.0	15.0	Will be required on opening
7.2	Reception/Registration Workstation	2	6.0	12.0	Will be required on opening
7.3	Patient File Storage	1	10.0	10.0	Will be required on opening
7.4	Office Workroom	1	9.0	9.0	Will be required on opening
7.5	Client/Patient Washroom	1	4.5	4.5	Will be required on opening
	Sub Total:			50.5	
Patient Examination Area					
7.6	Exam Room	6	10.0	60.0	Will be required on opening
7.7	Consultation Room	2	10.0	20.0	Will be required on opening
7.8	Patient Education Group Room	2	24.0	48.0	Will be required on opening
7.9	Clinician Work Space	10	4.5	45.0	Will be required on opening
7.10	Student/Volunteer Work Space	1	2.5	2.5	Will be required on opening
7.11	Coordinator Office	1	9.0	9.0	Will be required on opening
7.12	Physician Dictation Area	2	2.5	5.0	Will be required on opening
7.13	Patient Washroom	0	0.0	0.0	Will be required on opening
	Sub Total:			189.5	
Clinic Support Area					
7.14	Clean Utility Room	0	0.0	0.0	
7.15	Equipment Storage Area	1	10.0	10.0	Will be required on opening
7.16	Soiled Supply Area	0	0.0	0.0	
7.17	Housekeeping Room	0	0.0	0.0	
	Sub Total:			10.0	
Staff Support Area					
7.18	Staff Room	0	0.0	0.0	
7.19	Staff Washroom	1	4.5	4.5	Will be required on opening
7.20	Locker Area	12	0.3	3.6	Will be required on opening
	Sub Total:			8.1	

Royal Inland Hospital CSB Functional Program

2. Phasing Plan

8. UBC Space- ALL THE UBC SPACE REQUIRED ON OPENING

Centralized Area - Teaching & Learning						
8.1	Small Meeting Room/Video Conference	1	44.0	44.0		
8.2	Small Meeting Room/Video Conference	2	16.0	32.0		
8.3	Video Conference Rack Room	1	12.0	12.0		
8.4	AV Storage Closet	1	8.0	8.0		
8.5	Clinical Skills/Simulation Room, Single Bed Surgical Type	2	18.0	36.0		
8.6	Control / Viewing Room	1	9.0	9.0		
8.7	Storage Room	1	9.0	9.0		
8.8	Patient Waiting	1	13.9	13.9		
8.9	Washroom	1	4.5	4.5		
	Sub Total:			168.4		
Centralized Area - Locker & On-Call						
8.10	On-Call Room, Ugrad Trainee/ Grad Student	5	7.0	35.0		
8.11	Locker Area - Female	1	23.1	23.1		
8.12	Locker Area - Male	1	14.0	14.0		
8.13	Washroom, Unisex, Wheelchair Type	2	4.5	9.0		
8.14	Shower Area, Unisex	2	2.0	4.0		
8.15	Housekeeping Closet	1	5.0	5.0		
8.16	Lounge	1	25.0	25.0		
	Sub Total:			115.1		
Administration Offices						
8.17	Office, Faculty	3	11.2	33.6		
8.18	Work Area, Administrative Support/ Reception	1	11.2	11.2		
8.19	Waiting	1	3.0	3.0		
8.20	Kitchenette	1	4.0	4.0		
8.21	Storage, Files	1	3.0	3.0		
8.22	Work Area, Copier/Fax/Supplies	1	2.5	2.5		
8.23	Meeting/Video Conference Room (8 seats)	1	24.0	24.0		
8.24	Mail Slots (Post-Grad Trainees, UGrad Students)		0.0	0.0		
	Sub Total:			81.3		
Family Practice						
8.25	Office, Program Director	1	13.0	13.0		
8.26	Workstation, Staff	4	6.5	26.0		
8.27	Distance Education Video/Conference		0.0	0.0		
8.28	Support		0.0	0.0		
	Sub Total:			39.0		
9. Education						
Entry & Catering Area						
9.1	Gathering Area	1	66.0	66.0		Will require on opening
9.2	Catering Area	1	9.0	9.0		Will require on opening
9.3	Housekeeping Room	1	12.0	12.0		Will require on opening
	Sub Total:			87.0		
Lecture Theatre						
9.4	Lecture Theatre	1	228.0	228.0		Will require on opening
	Sub Total:			228.0		
Education Breakout Area						
9.5	Breakout Meeting Room	2	15.0	30.0		Will require on opening
	Sub Total:			30.0		
Skills Lab						
9.6	Skills Lab Area	1	80.0	80.0		Will require on opening
9.7	Viewing Area & Control Room	1	10.0	10.0		Will require on opening
9.8	Bookable Education Room	1	8.5	8.5		Will require on opening
9.9	Storage Area	1	10.0	10.0		Will require on opening
	Sub Total:			108.5		

Royal Inland Hospital CSB Functional Program

2. Phasing Plan

10. Staff Support & Retail						
Staff Area & Common Support Space						
10.1	Staff Room	1	60.0	60.0		Assumes 1 staff room on each level
10.1	Staff Room	1	37.5	37.5		
10.2	Housekeeping Room	2	12.0	24.0		Includes floor sink, 2-4 carts & supplies stored on shelves; assumes 2 rooms on Level 2; Education Centre includes 1 housekeeping room for Level 1
10.3	IT Telecom Room	2	15.0	30.0		Assumes the main computer room will be located on CSB Level 2 & will have the main & redundant conduit from this room through the pedway to the main bldg. Another room stacked above the Level 2 space will be required on Level 1
	Sub Total:			151.5		
Lobby Area						
10.4	Lobby Area	1	180.0	180.0		Includes entry from parkade, information desk, elevator area
	Sub Total:			180.0		
Retail Area						
10.5	Assumes up to 3 retail spaces	3	200.0	600.0		Each retail module at 200 nsm; this level requires a telecommunication room that can be used for any vendor that requires communications & must have riser conduit up to the main computer room on Level 2 - refer to 10.3
	Sub Total:			600.0		

Appendix A – Definitions of Terms

APPENDIX A – DEFINITIONS OF TERMS

ACADEMIC SPACE DEFINITIONS (v June 2010)

Academic Space as defined in the Academic Space Protocol is based on existing legislation and regulations. Academic space and Health Authorities are defined in the BC Hospitals Insurance Act Regulations as follows:

"**academic space**" means hospital facilities dedicated primarily to:
(a) teaching medicine, nursing or another health discipline, and (b) conducting research in medicine, nursing or another health discipline and includes lecture halls, laboratory space and academic offices"

"**health authority**" means a regional health board or a community health council established under the Health Authorities Act or a community health services society incorporated under the Society Act"

Provision of academic space for teaching medical students of the University of British Columbia has been legislated in Section 45 of the Hospitals Act, wherein hospitals grant space for this purpose. Funding for this resides with the hospitals and their successor boards and authorities as determined by the Ministry of Health.

1) PARTNER ACADEMIC CAMPUSES

a) Partner University Campuses

Affiliated partner universities with defined roles in the undergraduate medical programs. Facilities constructed to accommodate students and faculty in a manner that meets accreditation standards and other statutory government and faculty requirements.

- University of British Columbia – Point Grey Campuses
- University of British Columbia – Okanagan Campus
- University of Victoria Campus
- University of Northern British Columbia Campus

b) Clinical Academic Campuses:

Affiliated partner health authority campuses with defined roles in UBC's undergraduate, postgraduate program and continuing professional development programs. Facilities are provided to UBC through contractual agreements that stipulate process and procedures which meet accreditation standards and statutory and government requirements.

- VGH campus, 12th and Oak/UBC
- Children's & Women's Hospital Campus
- St. Paul's Hospital Campus
- BC Cancer Agency – Vancouver Campus
- Prince George Regional Hospital Campus
- Royal Columbian Hospital Campus – New Westminster
- Royal Jubilee Hospital and Victoria General Hospital Campus
- Surrey Memorial Hospital
- Kelowna General Hospital

2) AFFILIATED REGIONAL CENTRES

a) Affiliated Regional Centres support mandatory clerkship and elective experiences (see item 4 below) for Years 3 & 4 respectively and postgraduate trainees in Royal Collage core specialties as well

as in Family Practice. Facilities such as call rooms, lockers, lounges; study facilities; library space; electronic information support, are required. Affiliated Regional Centres have video-conference facilities to enable distributed academic teaching. The actual academic footprint is expected to be less than the academic footprint for the partner academic campuses, reflecting a smaller number of trainees. Where trainees choose elective experiences, community supports such as housing are important success factors.

- b) Community Education Facilities** are small urban, regional and dispersed sites that accommodate students and residents for specific parts of their training or for circumscribed programs. Family Medicine postgraduate trainees are currently accommodated at these sites as are Year 3 students in longitudinal Integrated Community Clerkships and Year 4 students on elective, and, to a lesser extent, Royal College postgraduate trainees for outpatient experience or electives where the appropriate depth and breadth of experience is available.

3) CLINICAL TEACHING

Clinical Academic Campuses accommodate the teaching of **clinical skills**, which prepare first and second year students for the more intensive and demanding clinical training in their core clerkships.

Clinical Academic Campuses are also the major locus for core clerkship teaching in the third year of medical school. **Core clerkships** are rotations of varying lengths in the following disciplines: medicine, surgery, pediatrics, obstetrics and gynecology, psychiatry, emergency, orthopedics, dermatology and ophthalmology. They require access to an extensive range of patients and a large case mix of typical disorders. Clinical Academic Campuses must meet the criteria for patient numbers and case mix, as well as having sufficiently large and diverse numbers of clinical faculty on site to provide clinical teaching and experiences to meet academic accreditation standards.

Affiliated Regional Centres provide many core clerkships in collaboration with the Clinical Academic Campus. However, because of caseload and case mix issues not all clerkships for a cohort of distributed students can take place at any one affiliated regional centre.

Advanced clerkships, also known as “electives” can be undertaken at Clinical Academic Campuses and Affiliated Regional Centres with the appropriate patient numbers, case mix and clinical faculty complements to service the more in-depth needs of senior medical students. They are designed to provide clinical experiences that meet students’ personal needs and wishes and are usually self-directed and volitional. Opportunities for elective experiences are found throughout the Health Authorities, often in dispersed settings such as physicians’ offices, clinics, health centres and other agency sites. UBC students also travel nationally and internationally to take advantage of clinical education opportunities in different settings. Student choice is paramount for elective experiences. Electives can be offered in regional and dispersed settings that can provide the appropriate depth and breadth of experience.

OTHER DEFINITIONS

AV (AUDIO-VISUAL SYSTEMS) – Systems that communicate information to audiences by means of audio-supported image displays.

BGSM – Building Gross Square Metres

BUILDING GROSS SQUARE METRES – The sum of all building floor areas measured to the outside face of exterior walls for all stories or areas having floor surfaces. Gross area includes component gross areas, washrooms, telephones, general display, general circulation, mechanical and electrical space and exterior walls.

BUILDING SYSTEMS – All of the utilities and physical support systems and controls for the environmental support of all the elements of the facility, and the operational support of the delivery system, including: mechanical, electrical, structural, plumbing, circulation, cladding and interior finishing systems.

CGSM – Component Gross Square Metres

CIRCULATION – The total system of connecting links that enable movement of people and materials throughout the facility, between rather than through departments (i.e., main corridors, elevators, stairs, etc.).

CLADDING, EXTERIOR – Those components of a building which are exposed to the outdoor environment and are intended to provide protection against wind, water or vapour.

COMPONENT – A cohesive grouping of activities or spaces related by service or physical arrangement. A planning component may or may not be a department, since the term "department" refers to an administrative rather than a functional organization.

COMPONENT GROSS SQUARE METRES – That portion of a building assigned to a specific component/department, including net areas, internal circulation, partitions, building structure and small plumbing shafts. Component gross area is measured to the inside face of exterior walls and to the centre line of partitions adjoining other components/departments or general circulation space.

COMPONENT NET SQUARE METRES – That portion of a building assigned to a specific component/department but including only the net assignable areas. The internal circulation, partitions, building structure and small plumbing shafts are not included in this measurement.

EXIT – That part of a means of egress that leads from the floor area it services, including any doorway leading directly from a floor area, to a public thoroughfare or to an approved open space.

FTE – FULL TIME EQUIVALENT – For staff, a term used to express the conversion of a number of annual paid hours into the number of individuals who, if they were working a complete shift on a regular schedule basis, would be required to accommodate that number of hours; for students, a term used to express the conversion of a number of contact or course hours into a number of individuals who if they were full-time, would be required to have that many contact or course hours.

FUNCTIONAL COMPONENT – See "COMPONENT"

GROSSING FACTORS – Multiplication factors applied (1) to net areas for each room or element within a component, and (2) to gross component areas. These factors allow for space requirements not included in net element or room measurements; see "Component Gross Square Metres" and "Building Gross Square Metres".

HC – Headcount

HEADCOUNT – The number of people actually working in an area at peak utilization. This includes part-time and full-time employees.

INTERNAL RELATIONSHIPS – The functional relationship and key adjacencies/proximities between areas within one functional component.

IT – Information Technology

MAXIMUM OCCUPANCY – The maximum number of people expected to be within an area at peak utilization. This figure includes visitors, employees and students.

NSM – Net Square Metre

NET SQUARE METRES (NSM) – The horizontal area of space assignable to a specific function. The net areas of rooms are measured to the inside face of wall surfaces.

ROYAL COLLEGE - The Royal College of Physicians and Surgeons of Canada (RCPSC) is a national organization established to oversee the medical education of specialists in Canada. PGY years include:

- PGY1 - This year, encompasses several facets of clinical medicine using a standard rotation format (designed to provide the necessary core content licensing requirements for the College of Physicians and Surgeons of British Columbia).
- PGY2 - Consists of 12 months of an inpatient/outpatient rotation at one of the general hospitals.
- PGY3-4 - Consists of blocks of 3 or 6 month rotations, designed to meet the requirements of the RCPSC and the university.
- PGY5 - This year is reserved as an elective year. A wide variety of electives are offered along with flexibility in splitting these electives and/or arranging new ones. There are opportunities to spend all/part of the elective year in an approved residency program anywhere in North America or abroad.
- PGY6-7 - Canadian Trainees who have completed successfully a Canadian Residency Training Program.

VERTICAL CIRCULATION – The upward or downward movement of people and materials via elevators, stairs, etc., to connect with other floors within the building.

Appendix B – AV Design Guidelines



AV Design Guidelines v1.2

Project: UBC Faculty of Medicine, Distributed Medical Program

Re: List of recommendations for creation of suitable audio video conference rooms

v1.2

Creation Date: 6/14/2011

Author: dlampron (commissioned MCSquared)

Last saved date: July 13, 2011

Last saved by: Leone Gatt

Version	Date	Author(s)	Description of Change
1.0	August 31, 2009	Marcel Schoenenberger (McSquared System Design Group Inc.)	Creation
1.1	June 14, 2011	Leone Gatt	Re-Formatted
1.2	July 13, 2011	Teresa Marshall	Correct spelling errors & formatting

Room Environment

Based on the established UBC Medical School Expansion A/V requirement standards, this document outlines the basic parameters which are essential in optimizing the environment for functional AV technology in classrooms, lecture theatres and boardrooms. To create a usable environment in classrooms and lecture theatres for local instruction and/or distributed education delivery purposes, a variety of critical parameters have to be set correctly such as; room lighting, acoustical characteristics, the physical room layout, screen size and placement, sight lines, projection path, the colours of the walls, camera placement and sight lines.

The parameters are based on widely accepted industry standards and references (1, 2, 3)

Dedicated Videoconferencing Rooms

These parameters apply to small seminar rooms and classrooms designed for videoconferencing based distance education capabilities.

Interior Acoustics

1. Appropriate acoustical conditions are necessary to make the room functional for presentations and video conferencing. It is critical that ambient noise such as HVAC, ballast noise, etc. be controlled and that appropriate acoustical treatment be installed to control reverberation, minimize reflections, flutter echo and other acoustical issues that impair the microphone pickup.
2. Hard reflective wall or ceiling surfaces within 8' or 2500mm of lectern or table top microphones should be avoided, and may require the addition of absorption or diffusion materials. The reflections from these surfaces will create audible artifacts or lower feedback thresholds.
3. In rooms with any length or width dimension less than 15' or 5m, provide acoustical wall treatment between chair rail height and approximately 8' or 2500mm AFF, on two adjacent walls to eliminate flutter echo.
4. Noise control measures must be undertaken to achieve a low background noise criteria (NC-25 to NC 30) to provide good speech intelligibility for both the local and remote listener. This includes noise from HVAC, lighting ballasts and exterior noise.
5. The reverberation time should not exceed 0.5 seconds (mid-band), to minimize artifacts in the conference audio.

Sound Isolation

6. To reduce the noise generated by the airflow of the HVAC system, we recommend a maximum of 1.52 metres per second or 300 feet per minute airflow velocity at the face of the diffusers, diffusers selected for low noise levels, and open diffusers with no dampers (or the dampers placed upstream of the diffuser by at least 10' or 3m) and the downstream duct lined with fibreglass ductliner. Dampers should never be closed down more than 80% of maximum to prevent excess turbulence generated noise.

Lighting

7. Lighting Style and Colour Temperature must be carefully designed so that the overhead lighting has a 45-degree angle of incidence; a colour temperature of 3500 K to eliminate “raccoon eyes” & dark shadows under the chin/nose and achieve the proper reproduction of skin tones in the video images.
8. Ambient light level must be suited to video teleconferencing. A level of 80 foot candles is required on the subjects covered by the cameras, in order to achieve a minimum of video noise. A uniform backlight will also be required on the front wall (cyclorama wall wash) behind the presenters to improve the 3-D representation of presenters in the 2-D format of video.
9. For conferencing, perception (visibility, intelligibility and comfort) becomes an important factor of the design. Instructors/presenters will not feel comfortable in an overly illuminated or glaring environment and where they cannot see easily. The two main aspects of lighting for video conferencing are control of lighting in terms of quantity, color and distribution to produce a well-defined picture and the comfort of the participants.
10. The room lighting system should be zoned on separate circuits and controls, from the video-conferencing lighting. Dimming is also required.
11. For smaller rooms the use of specifically designed, compact, dimmable, fluorescent indirect video lighting system is recommended. These recessed video lighting type devices are designed to provide adequate illumination for the participants while keeping the light levels at the front wall low (location of monitors or projected image), and keep direct light of the camera.
12. Ambient light level for video lighting: 80 foot candles of lighting level are required on the subjects in the shots in order to provide adequate light levels with minimum video noise.
13. The reflected light from the walls should be slightly less than that from the faces of the individuals on camera. This is to provide some contrast while not creating exposure level difficulties for the camera.
14. A uniform video lighting backlight will also be required on the front wall (cyclorama wall wash) behind the presenters to give to help give some depth of field to the video image. These lights should be on a dimming circuit.
15. Fluorescent light ballasts should be remote mounted in an adjacent room to minimize noise in the room. If there are any low voltage lighting devices in the room with integral transformers, they should be potted to prevent airborne or structure borne transformer noise from being introduced.
16. The room lighting of the room and the video lighting systems that falls on the projection screen surface should be separately switched.
17. Energy efficient standards are usually exempted for video conferencing rooms due to their special purpose and low utilization application.
18. The increased light levels may require more light fixtures or higher power, producing an elevated HVAC load.

Interior Design

19. The colour of the walls, carpeting & furniture should be either grey or solid blue to provide visual definition to the presenter relative to the background. The purpose of the solid colour is to avoid adding unnecessary bandwidth to the video conferencing signal, and to avoid the reflected light from the background affecting colour quality of the images.
20. The cameras require wall positioning for appropriate image angles and complete visual coverage for all different educational usage scenarios. The cameras also require an appropriate housing for protection from theft and damage.
21. The colour of the table or lectern surfaces should be either antique white or a light grey colour to allow the 45-degree light to bounce off the surface and reflect light upward helping to illuminate the faces of the presenters and eliminate the dark shadows under the chin/nose. This also minimizes changes in light quality when the participants place paper in front of themselves on the desk.
22. The light from potential the exterior windows create problems for video conferencing and for video presentation. Blackout blinds will be required for these windows to make it possible to display video or use a video camera in this location.
23. The A/V system requires lockable millwork within the room.

References:

1. Architectural Acoustics by David Egan ISBN # 0-07-019111-5
2. Video Engineering by Arch Luther ISBN # 0-07-135017-9
3. ANSI S12.60-2002 Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools

Appendix C – FoM Signage Policy



Signage Guidelines for UBC Faculty of Medicine Academic Facilities and Spaces located at Health Authority Sites

Last Revision: June 2011

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Signage Guidelines

1. Overview and Purpose

With its mandates of education, research and community engagement, the UBC Faculty of Medicine has a significant presence at many clinical and research facilities across the Province. Signs at Health Authority sites that provide information about Faculty of Medicine programs form an important aspect of the UBC Faculty of Medicine identity.

In recognition of these collaborations and synergies, the following guidelines set out the design standards that will ensure that partnerships created with Health Authorities, the University, and other institutions will be acknowledged in an effective and consistent manner.

The framework of these guidelines is informed by two key relationship documents:

1. The ***Hospital Act*** of British Columbia (Chap. 200, Section 45) specifies the obligation of the health authorities to provide facilities for the clinical instruction of medical students.
2. The ***Academic Space Protocol*** provides the framework for the ongoing management of Academic Space in hospital and health care facilities used for the mandated purposes of the affiliated post secondary education partner (UBC), dedicated to teaching medicine and other health disciplines and the pursuit of research activities.

The purpose of these guidelines is to define the design and placement of UBC Faculty of Medicine signage (relating to teaching and research activities) at all UBC Faculty of Medicine academic spaces located at hospitals and any other health care facilities, facilitating their identification to students, faculty, health professionals, staff and members of the general public.

The guidelines will be included in Functional Programs for new construction and renovation projects. Sign installations of major building projects, construction and tendering documents must be approved by the UBC Faculty of Medicine through the Facilities Department.

2. Scope

The UBC Faculty of Medicine Signage Guidelines apply to all hospital and health care facilities in the Province of British Columbia which house or are affiliated with UBC Faculty of Medicine teaching and research programs, including:

- Academic facilities and sites related to the teaching of the medical program
- Academic facilities and sites accommodating teaching programs and activities of other health disciplines
- Academic research facilities and sites dedicated to conducting research in medicine or other health disciplines



3. UBC Faculty of Medicine Logo

The UBC Faculty of Medicine logo signature is the key element on all signs.

The UBC Faculty of Medicine logo signature is made up of four elements: UBC Logo (Crest), Wordmark (Faculty of Medicine), Colour and Typeface.

The primary UBC Brand colour is UBC Blue. The colours blue and white convey maximum visual recognition for the University. Whitney is the institutional typeface.

See Appendix A for additional details.



Signage Applications & Examples

1. Exterior Signage

All UBC Faculty of Medicine academic facilities and sites should be identified with exterior signage. The exterior signage recognizes the facility as a partner in teaching and research with the UBC Faculty of Medicine and the partner university, if applicable.

Each sign should include the following components:

- UBC Faculty of Medicine logo
- The academic partner logo (if applicable)

Exterior signs should be displayed in the following areas:

- Building identification signs
- Gate or entrance markers
- Entrance doors
- Outdoor information boards, bulletin boards

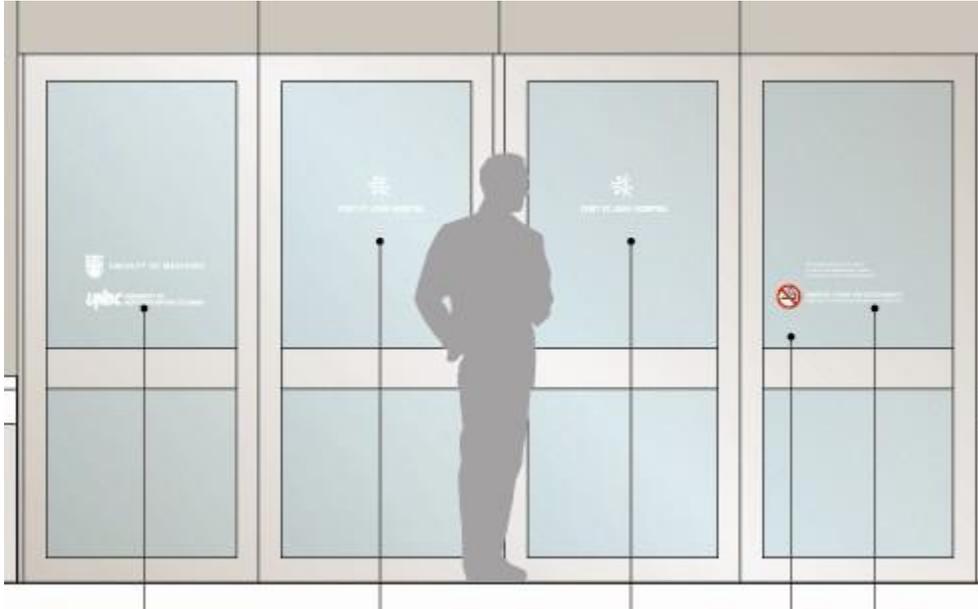
1.1 Examples of exterior signs

Ft St John Hospital Building Sign:





Ft St John Hospital Glass Door Entrance Sign:



Surrey Memorial Hospital Exterior Building Sign:



2. Wayfinding Signage

Wayfinding signage typically includes **maps**, **directories** and **directional signs** guiding staff, students and visitors to academic areas and rooms. Academic programs occupying office space (e.g., Southern Medical Program) and/or designed postgraduate training sites (e.g., Family Practice Residency Program) should be included on these signs to further enhance wayfinding.

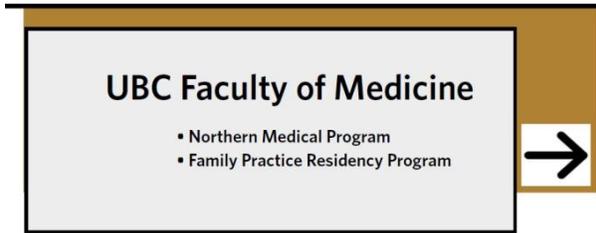
Each wayfinding sign should include the following components:

- UBC Faculty of Medicine (text format - consistent with wayfinding signage throughout the facility)
- The appropriate program(s)

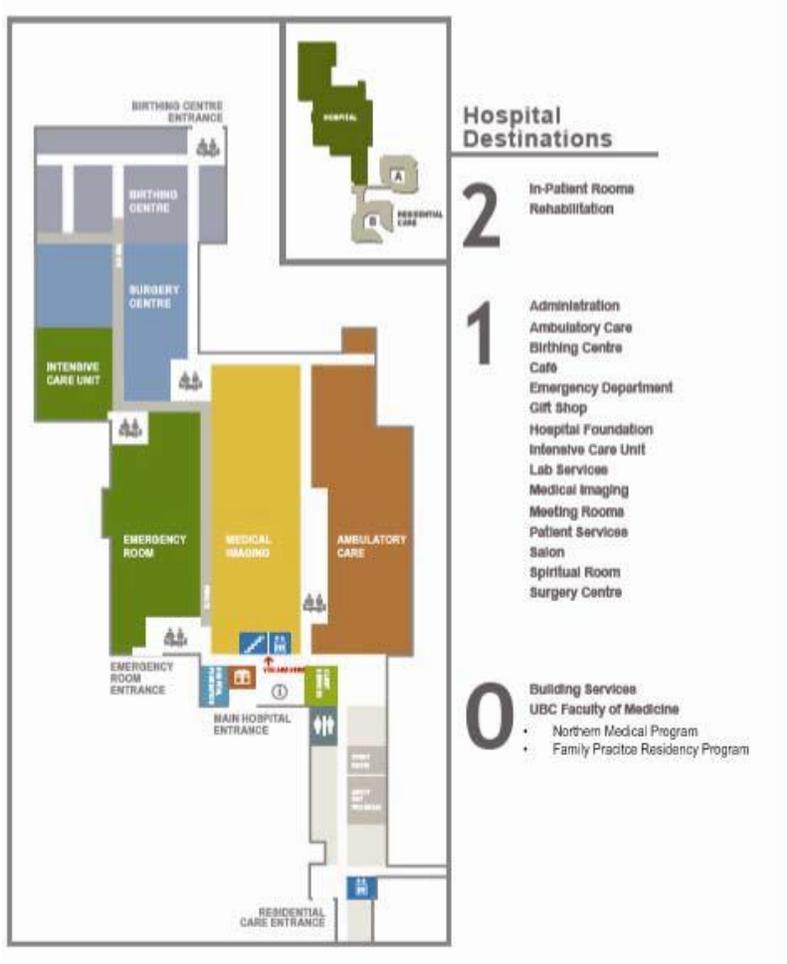


2.1 Examples of Wayfinding signs:

Ft St John Hospital Wayfinding Hanging Sign:



Ft St John Hospital Wayfinding Map Sign:





3. Interior Room Signage

Adding the UBC Faculty of Medicine logo to room signage helps identify academic space. Rooms are typically used by a variety of programs, so should not be labeled program-specific.

Room signs for academic spaces within hospitals and other health care facilities should include the following components:

- UBC Faculty of Medicine logo
- Room number (if applicable/appropriate)
- The program or room name/occupant (if appropriate)

Areas where the appropriate room signage should be displayed are as follows:

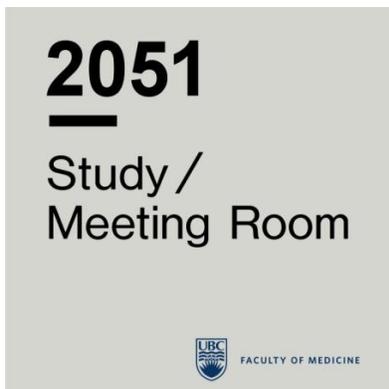
- Education rooms, Classrooms, Seminar rooms and Lecture Halls
- Clinical Skills Teaching rooms, Problem-based Learning rooms and Simulation rooms
- Laboratories
- Libraries and Study rooms
- Offices, Meeting rooms and other administrative space
- On-call rooms, Lounges, Kitchens and Locker rooms

3.1 Examples of Interior Room Sign:

Template:



Nanaimo General Regional Hospital Room Sign:





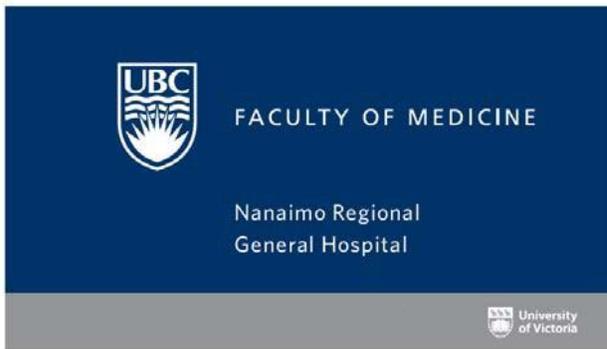
4. Digital Wayfinding/Videoconference Room Signs

Signs should be displayed in videoconference rooms to assist with virtual wayfinding, providing participants with location relevant details. These sign should also recognize the partnerships involved in using and supporting the space.

Videoconference room signs for academic spaces within hospitals and other health care facilities should include the following components:

- UBC Faculty of Medicine logo
- Site location (i.e., name of hospital)
- Academic partner logo (if applicable)

4.1 Example of Digital Wayfinding/Videoconference Room Signs:



5. Reception Signs

Reception sign identify a welcome area for visitors, learners, staff and faculty members, and should represent all programs occupying the space now and in the future. It may be appropriate for a directory to be posted in the reception area that includes a listing of staff, faculty members, programs and rooms.

Signage at designated reception areas should include the following components:

- UBC Faculty of Medicine logo
- Academic Partner logo (if applicable)



5. 1 Example of Reception Sign:

Mockup design:



Fort St. John Hospital reception area:
(Note: background colour is based on hospital area colour coordination)



6. Promotional Signs

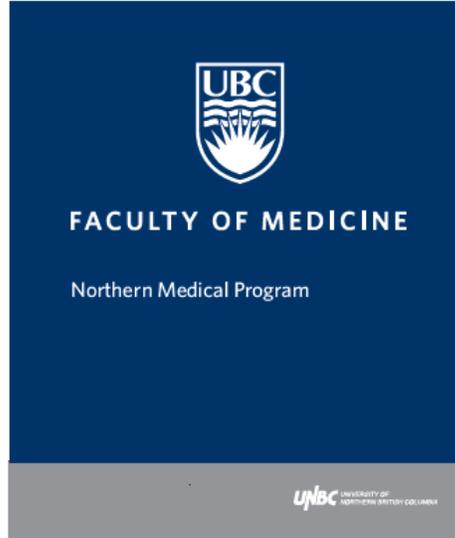
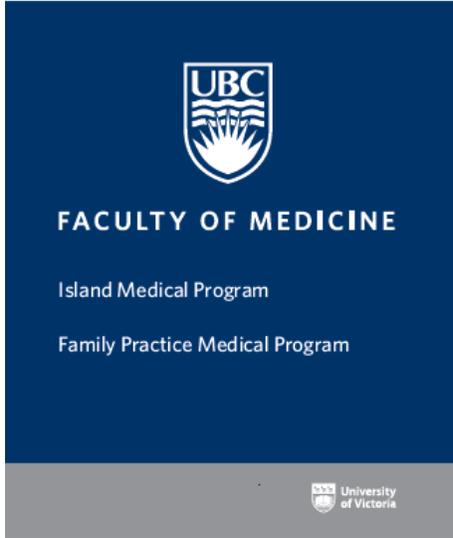
Promotional signs can be permanent wall signs or moveable signs such as pull-up banners.

Promotional signs should include the following components:

- UBC Faculty of Medicine logo
- List of primary programs using the space
- Academic partner logo (if applicable)
- Faculty of Medicine website URL (www.med.ubc.ca)



6.1 Example of Promotional Sign:





Procedures and Guidelines

1. Coordination

As part of the renovation or relocation of UBC Faculty of Medicine academic space located at hospitals or any other health care facilities, the UBC Faculty of Medicine Facilities Department will coordinate design, location and approval for new signs, or modifications to existing signs, in consultation with the UBC Faculty of Medicine Communications Department, the Faculty of Medicine site representative, the partner Health Authority Communications Department and Health Authority Facilities Department.

2. Design Specifications

All signage must conform to the current UBC Faculty of Medicine Visual Identity Guidelines (see Appendix A), and only versions of the UBC Faculty of Medicine logo supplied by the UBC Faculty of Medicine are to be used.

The version, placement, typeface, colour, size and other specifications of the UBC Faculty of Medicine logo must be appropriate to the size, purpose and location of the sign.

Consult with the UBC Faculty of Medicine Communications Department regarding the use of a partner logo. Like UBC, each partner university has graphic standards and visual identity policies governing use of their logos and symbols.

Any deviation from the standards set by the UBC Faculty of Medicine Visual Identity Guidelines must be approved by the UBC Faculty of Medicine Communications Department.

3. Approval

Prior to installation by Health Authority site facilities personnel, all proposed signage design, content, format, size, and location must be reviewed and approved by UBC Faculty of Medicine Facilities, the Faculty of Medicine Site Director and Faculty of Medicine Communications.

Any changes or removal of existing signs must be reviewed and approved by the UBC Faculty of Medicine Facilities, the Faculty of Medicine Site Director and Faculty of Medicine Communications.



Appendix A: UBC Faculty of Medicine Logo & Visual Identity Guidelines

1. UBC Faculty of Medicine logo



2. Colour:

The primary Brand colour is UBC Blue. The colours blue and white convey maximum visual recognition for the university.



The **secondary** colour is UBC Grey



3. Positive Signature:

UBC signatures in the positive form are available only in the colour combinations as provided: UBC Blue, UBC Grey, and Black.

4. Reverse Signature:

All signatures can be reversed in white out of solid Black, UBC Blue or UBC Grey.

5. Typeface:

Whitney is the institutional typeface used in all UBC Brand signatures and applications.

6. Let the Brand breathe:

Attention to the space that surrounds the signature allows the UBC Brand to stand out among other elements, thus promoting recognition of the UBC Brand. White space surrounding the signature will visually protect it from infringement by other text and graphic elements in the layout.

Appendix D – Equipment List



FACULTY OF MEDICINE

Equipment/Furniture List and Requirements for UBC Faculty of Medicine Academic Facilities and Spaces

(Non Video-Conference related equipment)

Last Revision: September 2012

Contact:

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Room Name	Equipment & Furniture	Power	Data Drop	Acoustical Properties	Operating Hours
Workstation	Furniture/millwork desk, chair (with arms), guest chair (without arms), computer, phone, lockable 4 drawer cabinet	Hospital standard	Hospital standard	Hospital standard	0700-1900 7 days per week
Study station	Furniture/millwork desk, chair (with arms), computer	Hospital standard Plugs to be located above desk	Hospital standard. Plugs' location above desk	Hospital standard	24/7
Inpatient Team Conference Room	AV equipment - separate guidelines Secured access with card reader Table (stackable if possible), stackable chairs (without arms), whiteboard, PolyCom teleconference phone and regular phone	Hospital standard, UBC FoM AV requirements (separate guidelines), conduit to the table centre, sufficient plugs for each attendee	Hospital standard + UBC FoM AV requirements (separate guidelines)	STC 55 Acoustical treatment as per UBC FoM specifications	24/7
Office	Furniture/millwork desk, meeting desk 30" diameter, chair (with arms), 4 participant chairs (without arms), computer, phone, bookcase, lockable filing cabinet, lockable 4 drawer cabinet, whiteboard, door mounted coat hook	Hospital standard + for guests	Hospital standard	Hospital standard	0700-1900 6 days per week
Waiting Room	Millwork and/or furniture, coffee table, chairs (with arms)	As per number of waiting chairs		Hospital standard	0700-1900 6 days per week
Reception (if no work area include equipment from work area room)	Furniture/millwork desk, chair (with arms), lockable 4 drawer cabinet, computer, phone	Hospital standard	Hospital standard	Hospital standard	0700-1900 6 days per week
Storage, Files	Upper & lower cabinet and/or shelving	2 x on each wall - 8 in total	2 x on two walls - 4 in total	Hospital standard	0700-1900 6 days per week
Work Area, Copier/Fax/Supplies	Printer/fax/scanner, millwork and/or furniture, shelving, storage	Hospital standard	Hospital standard	Hospital standard	24/7
Staff Kitchenette (if there is none in the proximity)	Dinning tables, chairs, upper and lower cabinet millwork kitchenware, sink, soap dispenser, paper towel dispenser, dishwasher, fridge, water cooler, microwave, coffee machine, kettle	Hospital standard	Hospital standard	Hospital standard	0700-1900 6 days per week
Video Conference Room - up to 16 seats	AV equipment - separate guidelines Secured access with card reader Stackable, side tilted tables, stackable chairs (without arms) with back flex, whiteboard, PolyCom teleconference phone and regular phone, digital wall clock, room signage with letter size page insert	UBC FoM AV requirements (separate guidelines) + Hospital standard + additional plugs as per number of attendees. Conduit to the table centre	Hospital standard + UBC FoM AV requirements (separate guidelines)	STC 55 Acoustical treatment as per UBC FoM specifications	24/7
Video Conference Room - more than 16 seats	AV equipment - separate guidelines Secured access with card reader Audience table and lectern millwork (custom made as per AV separate data sheet), presenter chair (with arms and back flex), stackable chairs with back flex (without arms), whiteboard, PolyCom teleconference phone and regular phone, digital wall clock, room signage with letter size page insert	UBC FoM AV requirements (separate guidelines) + Hospital standard + additional plugs as per number of attendees	Hospital standard + UBC FoM AV requirements (separate guidelines)	STC 55 Acoustical treatment as per UBC FoM specifications	24/7
Central Video Conference Operator / Rack Room / Projection Room	AV equipment - separate guidelines Secured access with card reader Furniture/millwork desk, chair, door hook, phone	Hospital standard + AV requirement (separate guidelines)	Hospital standard + UBC FoM AV requirements (separate guidelines)	Hospital standard	24/7
Clinical Skills Room, Regular	AV equipment - separate guidelines Secured access with card reader, PC + small desk, phone (wall mounted), upper and lower cabinets with lockable doors, sink, soap dispenser, paper towel dispenser, Medical diagnostic equipment panel including Blood Pressure cuff, otoscope (with tip dispenser), ophthalmoscope and wall mounted thermometer, digital wall clock, exam stool on wheels, examination bed 90° Fowler backrest and footrests, 48"x36" whiteboard, 18" X 24" tack board, 6-8 stackable chairs (without arms), 52" Plasma TV display/mounted, mounted AV camera, DVD player, stand for recording and playback equipment, small desk on wheels, 4 coat hooks, poster with space for slide in, room signage with letter size page insert, door holder, door stopper, small garbage bin, disposable clinical supplies	UBC FoM AV requirements + Hospital standard + additional plugs as per equipment list + additional plugs as per number of attendees	Hospital standard + additional data as per equipment list + UBC FoM AV requirements (separate guidelines)	STC 55 Acoustical treatment as per UBC FoM specifications	24/7
Clinical Skills Room, Bariatric	AV equipment - separate guidelines Secured access with card reader, PC + small desk, phone (wall mounted), upper and lower cabinets with lockable doors, sink, soap dispenser, paper towel dispenser, Medical diagnostic equipment panel including Blood Pressure cuff, otoscope (with tip dispenser), ophthalmoscope and wall mounted thermometer, digital wall clock, exam stool on wheels, examination bed 90° Fowler backrest and footrests, 48"x36" whiteboard, 18" X 24" tack board, 6-8 stackable chairs (without arms), 52" Plasma TV display/mounted, mounted AV camera, DVD player, stand for recording and playback equipment, small desk on wheels, 4 coat hooks, poster with space for slide in, room signage with letter size page insert, door holder, door stopper, small garbage bin, disposable clinical supplies, patient lift	UBC FoM AV requirements + Hospital standard + additional plugs as per number of attendees	Hospital standard + additional data as per equipment list + UBC FoM AV requirements (separate guidelines)	STC 55 Acoustical treatment as per UBC FoM specifications	24/7
Clinical Skills Resource Room	AV equipment - separate guidelines Secured access with card reader Desktop computer, PolyCom teleconference phone, digital wall clock, PACS, View Box, X-Ray, 8-10 stackable chairs (without arms), 48"x35" whiteboard, desk, DVD player, mounted 52" Plasma TV display, 4 coat hooks, room signage with letter size page insert	UBC FoM AV requirements + Hospital standard + additional plugs as per equipment list + additional plugs as per number of attendees	Hospital standard + additional data as per equipment list + UBC FoM AV requirements (separate guidelines)	STC 55 Acoustical treatment as per UBC FoM specifications	24/7
On-Call Room	Secured access with card reader Long bed, desk, chair (with arms), mirror, goose neck task lamp (to cover desk and bed) OR 2 task lamps, phone, distress connection to security, coat hook, alarm clock backed up with batteries, dead bolt on the inside with occupy/vacant indicator on the exterior of the door, lockable cupboard or locker, access to non-public washrooms and showers	Power plug above desk + above bed + by mirror	Data above desk + and above bed	STC 55 Acoustical treatment as per UBC FoM specifications	24/7
Locker Room	Secured access with card reader Full height lockers: width 300mm / depth 400mm / height 1800mm, full height mirror, bench	Hospital standard, plug near mirror	Hospital standard	Hospital standard	24/7
Shower Room	Each shower divided to wet and dry area, bench, 2 x towel bar/hook, full height mirror	Hospital standard, plug near mirror		Hospital standard	24/7
Lounge	Secured access with card reader Study stations (equipment list as per above), lounge/dinning tables, lounge chairs, sofa, upper and lower cabinet millwork kitchenware, sink, soap dispenser, paper towel dispenser, dishwasher, fridge, water cooler, microwave, coffee machine, kettle, wall mounted television with cable connection, 52" TV, phone, wall clock	Hospital standard + number of intended users	Hospital standard	Hospital standard	24/7

Royal Inland Hospital CSB Functional Program

10. Staff & Support Space

Library Secured access with card reader
Study stations (equipment list as per above), phone, wall clock, book stacks, sink for librarian office, separate washrooms for librarian

Hospital standard + number of intended users Data for librarian, as per number of PCs

STC 55
Acoustical treatment as per 24/7
UBC FoM specifications