



COMOX-STRATHCONA ACUTE CARE (HOSPITAL) SERVICE OPTIONS REVIEW

Reviewed by the Vancouver Island Health Authority Board
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INTRODUCTION

This document provides an overview of the discussion and analysis of the Vancouver Island Health Authority (VIHA) Board of Directors on the preferred option to achieve sustainable, regional, acute care service delivery for north Vancouver Island. Specifically, it provides:

- Background on the planning, analysis and engagement process to date;
- An overview of the reassessment of the September 2006 option along with three new options; and
- A description of the new preferred option.

BACKGROUND

- There are two full service community hospitals in the north area of VIHA: St Joseph's General Hospital (SJGH) and Campbell River and District General Hospital (CRDGH). Both are aging and require significant capital investments to upgrade to current standards.
- In 2008, there were approximately 122,000 residents living in the north area of VIHA, which includes the Comox Valley, Campbell River, Vancouver Island West and Mount Waddington.¹ The majority of the population lives in the Comox Valley (53%) and Campbell River (35%), with the remaining 12% in dispersed rural and remote communities. The population is projected to grow by 12% by 2020 to a total of approximately 137,000. The majority (83%) of the net growth will occur in the Comox Valley.
- The population is not only growing, it is also aging. The population 75 and over is projected to increase by over 46% (2,400) in the Comox Valley and by 65% (1,800) in Campbell River and northern communities during the same time period.²
- Forecasted need for hospital services shows a need for approximately 70 additional hospital beds by 2020 to meet future needs of North Island residents.³
- Current services at SJGH and CRDGH cannot meet this future need without significant investment to address failing infrastructure and required additional capacity. Over the past few years, there have been increasing challenges to delivering continuous specialty services; particularly at CRDGH due to the inability to recruit necessary staff and physicians, a challenge not unique to VIHA or the North Island, it is a problem across Canada.
- To address the need for enhanced hospital services in the North Island, the VIHA Board made the decision in September 2006 to support a new 230-240 bed regional hospital at the Dove Creek interchange of the Inland Island Highway. Under this proposed option, a range of services (urgent care, outpatient services and primary health care) would have remained in Campbell River and SJGH would have been converted to a primary health care centre.
- CRDGH and SJGH currently provide community hospital services including primary care, outpatient services such as endoscopies and chemotherapy, diagnostics including laboratory, x-ray and CT scanning, a trauma level four⁴ emergency department, surgery, medicine including intensive care, maternity and pediatrics. SJGH also provides psychiatry services.
- A Regional Hospital would provide these current services as well as a psychiatric emergency and psychiatric intensive care, a specialized maternity and nursery (level 2A), enhanced cancer care, cardiac medicine, renal services (kidney), an emergency department with trauma level three capacity,

¹ BC STATS, PEOPLE 33, Ministry of Labour and Citizen Services

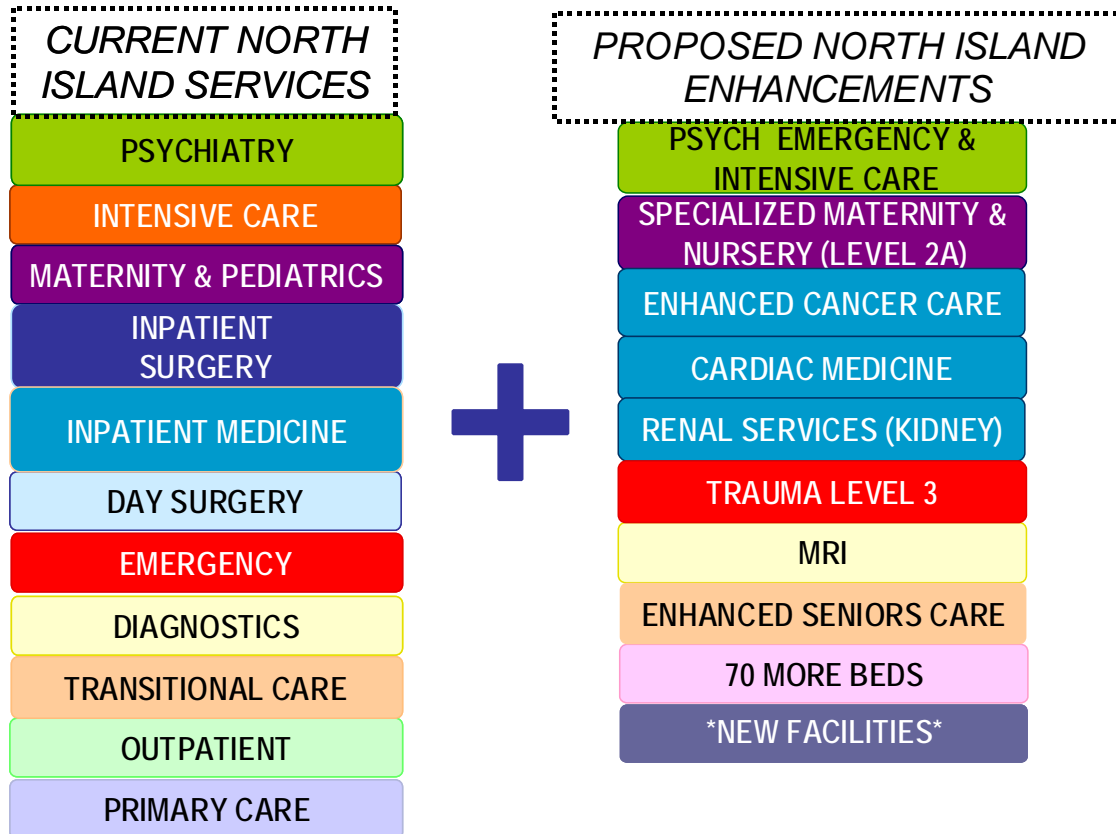
² Ibid.

³ VIHA Acute Care Forecasting Model based on changes in population and utilization, and includes adjustments for best practices and changes in service delivery

⁴ Trauma Association of Canada's Trauma System Accreditation Guidelines (June 2007)

enhanced seniors care, and magnetic resonance imaging - MRI (refer to figure 1). Appendix A provides more detail on service categories.

Figure 1: Current Hospital Services and Proposed Enhancements



- Currently North Island residents travel to hospitals in the south (Nanaimo, Victoria General and Royal Jubilee Hospitals) for approximately 21% of their specialized hospital care. It is anticipated that over half of these specialized cases could be treated in the North Island at a new regional hospital.
- The 2006 Board decision generated significant concerns from the community, physicians, staff and other stakeholders. These concerns focused on the location of the regional hospital, travel time to get there, and the services that would remain in each community.
- In February 2008, the Comox-Strathcona Regional Hospital District (RHD) rescinded their initial support for the regional hospital model. The support of the Comox-Strathcona Regional Hospital District, a significant funding partner providing up to 40% of the capital investment, is essential for any development to proceed with regards to hospital enhancements in the North Island.
- Based on the concerns from the communities, local government, physicians and staff, the VIHA Board directed that further analysis and engagement occur with staff and physicians over the summer and fall of 2008. New options emerged based on the feedback received. The analyses of these options are assessed along with the original September 2006 decision and are described in this document.

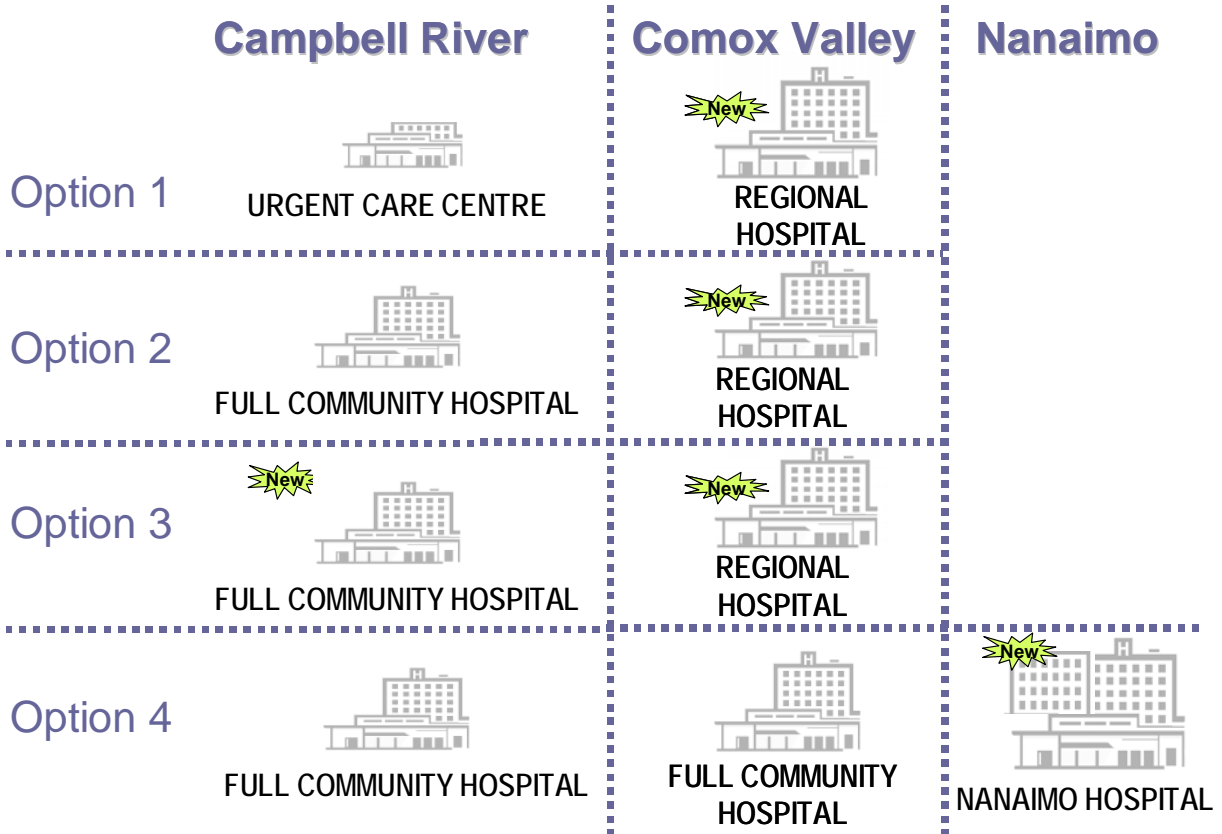
DESCRIPTION OF THE OPTIONS

To address the need for acute care services to meet growing North Island needs, the original 2006 decision and three alternate Regional Hospital options were reviewed.

- **Option 1 – Regional Hospital One Site Model**
 - Original 2006 Board decision to build a new state-of-the-art North Island Regional Hospital (230-240 beds) at Dove Creek and Inland Island Highway;
 - Convert CRDGH to an Urgent Care Centre;
 - Convert SJGH to a Primary Health Care Centre;
 - Estimated Capital cost \$370-465 million;
 - Estimated Annual Operating cost \$120-132 million.
- **Option 2: Enhanced Regional Services (one new hospital, one renovated hospital)**
 - New state-of-the-art Hospital in Comox Valley:
 - replaces existing services at SJGH (110 beds);
 - provides enhanced specialized services for all north Island residents, supported by 40-50 additional beds for a total of 150-160 beds.
 - Renovate and upgrade CRDGH to maintain existing services with an additional 10-20 beds for a total of 70-80 beds;
 - Alternate role of SJGH to be determined by their Board;
 - Estimated Capital cost \$400-500 million;
 - Estimated Annual Operating cost \$125-135 million.
- **Option 3: Enhanced Regional Services (two new hospitals)**
 - New state-of-the-art Hospital in Comox Valley:
 - replaces existing services at SJGH (110 beds);
 - provides enhanced specialized services for all north Island residents, supported by 40-50 additional beds for a total of 150-160 beds.
 - This option is the exact same as Option 2, except it proposes a new hospital with flexible design in Campbell River instead of a renovated facility;
 - New state-of-the-art Hospital in Campbell River that replaces existing services and addition of 10-20 beds for a total of 70-80 beds;
 - Estimated Capital cost \$500-600 million;
 - Estimated Annual Operating cost \$125-135 million.
- **Option 4: Enhanced Regional Services at Nanaimo Regional Hospital**
 - CRDGH and SJGH remain community hospitals delivering current services provided;
 - Upgrades and expansion of Nanaimo Regional General Hospital (NRGH), adding 60-70 beds for acute specialized services;
 - Estimated Capital cost \$280-350 million;
 - Estimated Annual Operating cost \$125-140 million.

Figure 2 illustrates the differences in service provision between each of the options. The following section describes each of the options in more detail.

Figure 2: Four options proposed for the North Island Regional Service Enhancements



OPTION 1: REGIONAL HOSPITAL (ONE SITE) MODEL (230-240 BEDS)

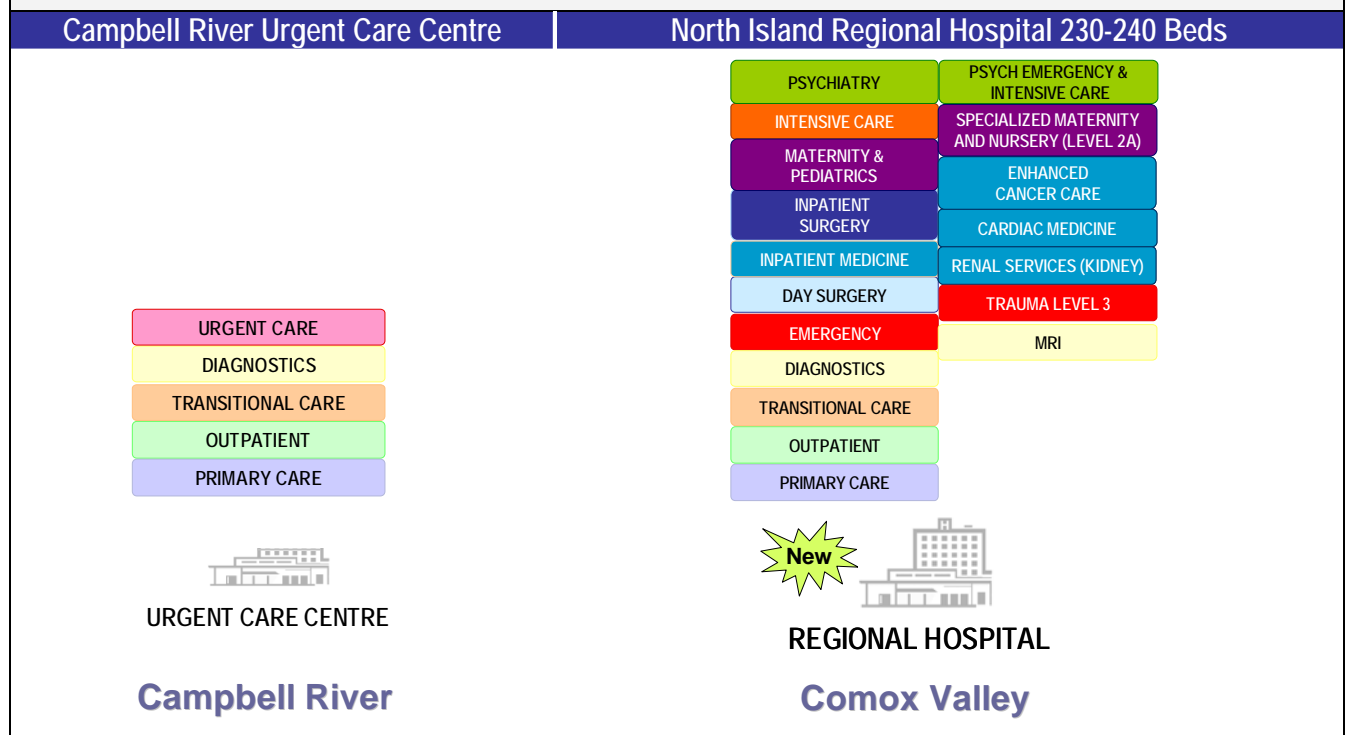
Original 2006 Board decision for a new state-of-the-art North Island Regional Hospital (230 to 240 beds) at Dove Creek and Inland Island Highway, supported by an Urgent Care Centre in Campbell River and a Primary Health Care Centre in Comox.

Capital Requirements:

- Renovate existing CRDGH to become an Urgent Care Centre.
- Renovate existing SJGH to a Primary Health Care Centre.
- Build a new state-of-the-art Regional Hospital with 230-240 beds at Dove Creek and Inland Island Highway.

Operational Changes:

- Transfer all hospital services from SJGH to the new Regional Hospital.
- Work with SJGH to convert the role to a Primary Health Care Centre.
- Transfer day surgery and inpatient hospital services from CRDGH to the new Regional Hospital and convert CRDGH to an Urgent Care Centre.
- Consolidate hospital services from CRDGH and SJGH to one site - new Regional Hospital, and enhance these services to a regional level (see Appendix A).
- Integrate hospital staff and physicians into one model.
- General practitioner based models will likely change and include hospitalists to support the new hospital.



OPTIONS 2 AND 3: ENHANCED REGIONAL SERVICES - A REGIONAL HOSPITAL (COMOX VALLEY) AND A COMMUNITY HOSPITAL (CAMPBELL RIVER)

The services provided and the distributions are identical in Option 2 and Option 3. The only difference between the two options is that Option 2 provides a new state-of-the-art Hospital with flexible design in Comox Valley and a renovated CRDGH while Option 3 provides two new hospitals.

Capital Requirements:

Option 2

Comox Valley:

- Build a new state-of-the-art Regional Hospital in the Comox Valley to replace existing hospital services at SJGH (110 beds);
- This facility would provide enhanced specialized services for all of the North Island residents supported by 40-50 additional beds for a total 150-160 beds;
- Alternate role of SJGH to be determined with their Board.

Campbell River:

- Maintain current services at CRDGH with an additional 10-20 beds for a total of 70-80 beds;
- Renovate CRDGH to meet current standards.

Option 3

Comox Valley:

- Build a new state-of-the-art Regional Hospital in the Comox Valley to replace existing hospital services at SJGH (110 beds);
- This facility would provide enhanced specialized services for all of the North Island residents supported by 40-50 additional beds for a total 150-160 beds;
- Alternate role of SJGH to be determined with their Board.





Campbell River:

- Maintain current services with an additional 10-20 beds for a total of 70-80 beds;
- Build a new state-of-the-art community hospital with flexible design.

Operational Changes:

- The new Regional Hospital in the Comox Valley would be built to accommodate a regional level of service. The Regional Hospital would have fewer beds than the Option 1 Regional Hospital, as inpatient beds will increase in the community hospital in Campbell River.
- Inpatient hospital services would move from SJGH with an alternate role to be determined with their Board.
- Full community hospital services similar to what is currently at CRDGH would continue in Campbell River (Any growth in specialty services would likely occur at the Regional Hospital).
- Integrate hospital staff and physicians into one model.
- General practitioner based models at both facilities will likely continue.

Options 2 and 3 Continued

Campbell River Hospital	Comox Valley Hospital	
<ul style="list-style-type: none"> INTENSIVE CARE MATERNITY & PEDIATRICS INPATIENT SURGERY INPATIENT MEDICINE DAY SURGERY EMERGENCY TRANSITIONAL CARE DIAGNOSTICS OUTPATIENT PRIMARY CARE 	<ul style="list-style-type: none"> PSYCHIATRY INTENSIVE CARE MATERNITY & PEDIATRICS INPATIENT SURGERY INPATIENT MEDICINE DAY SURGERY EMERGENCY DIAGNOSTICS TRANSITIONAL CARE OUTPATIENT PRIMARY CARE 	<ul style="list-style-type: none"> PSYCH EMERGENCY & INTENSIVE CARE SPECIALIZED MATERNITY AND NURSERY (LEVEL 2A) ENHANCED CANCER CARE CARDIAC MEDICINE RENAL SERVICES (KIDNEY) TRAUMA LEVEL 3 MRI ENHANCED SENIORS CARE
<p>Option 2</p> 	<p>Option 2</p> 	
<p>Option 3</p> 	<p>Option 3</p> 	
<p>Campbell River 70-80 beds</p>	<p>Comox Valley 110 beds</p>	<p>Regional Services for all North Island 40-50 beds</p>

OPTION 4: ENHANCED REGIONAL SERVICES AT NANAIMO REGIONAL GENERAL HOSPITAL (NRGH) WITH CURRENT SERVICES REMAINING AT CRDGH AND SJGH WITH REQUIRED UPGRADES

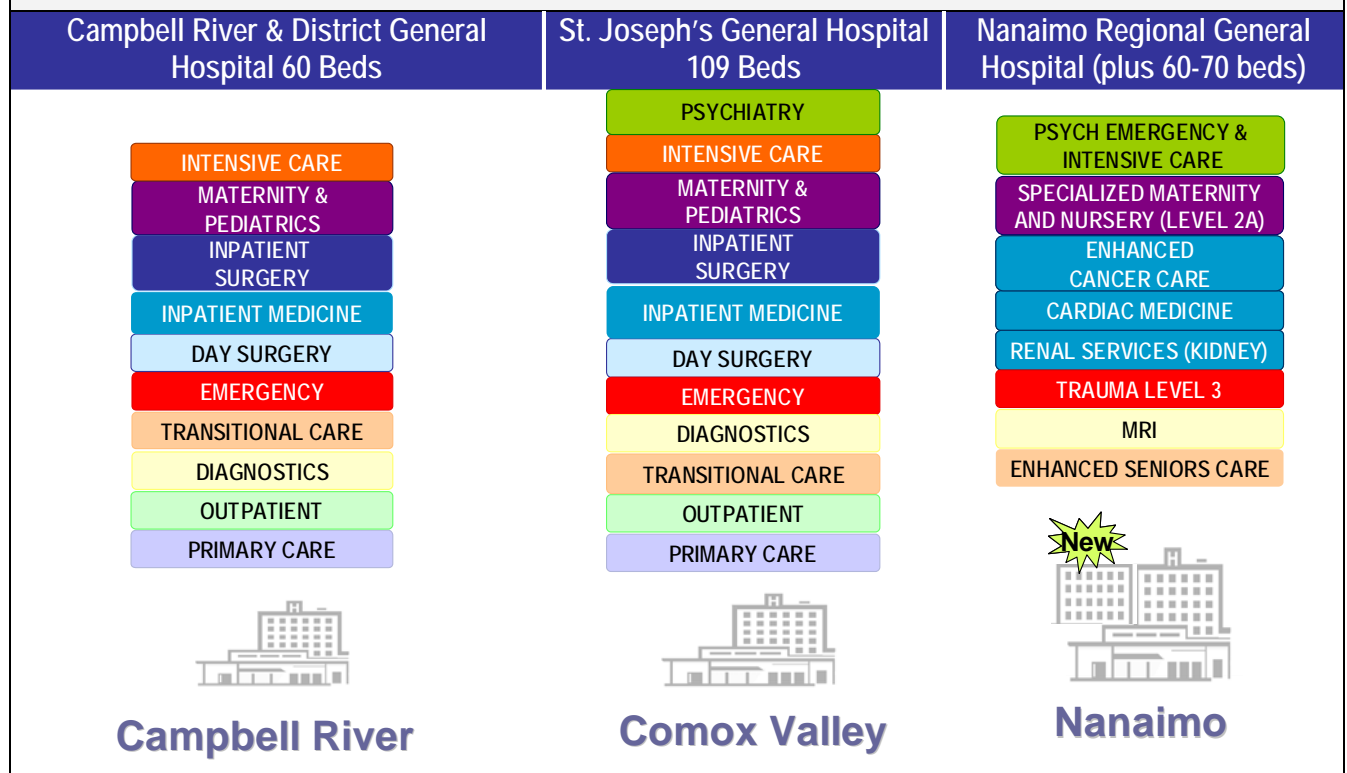
Build additional capacity at Nanaimo Regional General Hospital (NRGH) for acute specialized services (additional 60-70 beds) and retain CRDGH and SJGH as community hospitals, with necessary maintenance as required.

Capital Requirements:

- Upgrade to maintain existing CRDGH with 59 beds.
- Upgrade to maintain existing SJGH at 109 beds.
- Build an additional 60-70 beds on to the existing 269 beds at NRGH.

Operational Changes:

- Specialized services at NRGH would be expanded to accommodate specialized care needs of North Island residents. This builds on the critical mass already present at NRGH to further strengthen the delivery of specialty services.
- Full community hospital services would remain at SJGH.
- Full community hospital services would remain at CRDGH.
- Three separate staffs and physician arrangements continue.
- North Island residents would continue to travel to Nanaimo for specialized services.



ANALYSIS

To assess these options, the same decision-making criteria were used as in 2006. The following section provides a description of the criteria and a review of each new option against the following four criteria:

- Quality and Safety
- Sustainability – Both Service and Financial
- Access
- Public/Stakeholder Acceptability

Based on the feedback received from the past two years, the decision was made to put greater weighting on the public/stakeholder acceptability criterion.

QUALITY AND SAFETY

This criterion addresses whether services are safe and mitigate risks, personnel are qualified and demonstrably competent, and decisions are based on evidence. The services are coordinated and meet the needs of the intended recipients within a reasonable standard of care and level of risk. The infrastructure that is in place supports the quality and safety of care delivery.

Personnel are qualified and demonstrably competent

It is important to ensure that the proposed options allow for:

- Staff and physicians to be adequately trained and practice a sufficient volume and range of procedures to maintain their skills and competencies; and
- A supportive clinical learning environment that enables the sharing of practices and advancement of skill sets across disciplines and between general and specialty care.

Physical Infrastructure

The physical infrastructure of a facility impacts the ability to deliver quality care:

- Older facilities such as CRDGH and SJGH require seismic upgrades, significant investment to maintain infrastructure, and currently provide a poor functional workspace for staff and physicians to deliver modern day health care. For example, older patient room designs do not provide sufficient space for emerging technology and equipment, do not support the involvement of families in patient care, and include multiple occupancy patient rooms which increase the risk for the spread of infections and provide a poorer healing environment for patients than single occupancy rooms.
- Purpose-built facilities today look very different than they did even ten years ago. A newer hospital can be built to accommodate the latest technology and equipment and meet the most up-to-date standards of care. Innovative design concepts allow the provision of best practice care in an environment that safely and effectively meets patients, families and care providers needs. A new hospital would:
 - Provide opportunities to implement lean flow designs to increase staff efficiencies, reduce wait times, and maximize patient flow;
 - Be designed with future flexibility in mind and adaptable to changing needs and medical practices into the future meaning that the useful lifespan will be much longer;
 - Accommodate specialized designs to support the quality of care and healing practices of Aboriginal populations;
 - Allow for the latest infection control practices to be incorporated - greater proportion of single patient rooms, negative pressure rooms, and isolation design features that minimize the loss of whole patient units during infectious disease outbreaks such as Norovirus; and
 - Allow for a much more positive patient experience.

Coordination

- Consolidation of specialty services would improve the delivery of coordinated care for the patient as it minimizes the need to travel between sites. Reducing the number of sites at which a patient receives services supports the patient seamlessly through the system and minimizes the complexity of processes and potential for errors. Multiple sites with differing levels of services may require a patient to be transferred to two or three different sites as their care needs change.
- The management and operation of a single integrated physician and staffing model at one site would be more efficient, reduce the complexity in coordination, and support team development.
- The continuity of care currently provided by general practitioners in hospitals may be challenged when services are consolidated at one site that may be distant from where general practitioners practice. This may result in the need for a hospitalist model of care, which can be costly to the system and reduces the familiarity and continuity of care for patients.
- The delivery of quality care can be enhanced through the addition of new technologies and equipment. The most effective and efficient use of leading edge technology and equipment using skilled health professionals to support the diagnosis and treatment of patients would likely be better achieved through consolidation. The ability to adapt these technologies to provide a higher quality of care needs to be cost effective. Multiple sites could result in duplication of some equipment and technology, as well as some specialized staff, increasing costs and recruitment/retention challenges.

In summary, from a quality and safety perspective:

- there are service delivery advantages to a new purpose-built facility;
- renovations to the CRDGH will improve the current state, but possibly limit flexibility; and
- continuity of care may be challenged by a two or three site option, although this could be mitigated by a single medical and general staff model.

SUSTAINABILITY

This criterion is described in terms of service and financial sustainability.

Service Sustainability

Services and programs are flexible enough to meet the current needs as well as respond to future changing health needs and circumstances, and qualified staff can be recruited and retained to deliver services with the proposed service model.

The most significant issue for consideration with respect to sustainability is whether or not the necessary staff and physicians will be available to provide services for North Island residents under each of the proposed options. Having sufficient staff and physicians remains the most significant risk to the health authority and numerous recruitment and retention strategies are underway to begin to address these challenges as part of VIHA's People Plan. Given this reality, an issue throughout VIHA as well as across the country, it is important to plan services in a manner that will be sustainable into the future.

Physician Services

A sustainable physician practice requires a sufficient case volume to provide enough work to earn a living. This case volume comes from having a "critical mass" of population. Current physician arrangements to deliver core specialties separately at the two sites do not have the "critical mass" to be considered sustainable into the future given the size of the population is smaller as they are separated between the two sites and the current and future availability of physicians, which are in short supply across the country. To provide a continuous, 24 hour a day, seven day a week service, while keeping a reasonable on-call schedule for physicians, three to five physicians per specialty are generally required.

SJGH is close to having a sustainable number of physicians for the delivery of core specialty services. CRDGH has had significant challenges maintaining continuous specialty services. For example, in the last year, CRDGH has experienced difficulties filling positions and finding back up (locum) coverage for specialty services such as anesthesia, internal medicine and radiology. The situation is compounded by the fact that the two existing hospitals are competing for the same resources.

The ability of a group to function with the minimum number of three physicians will depend on call frequency and individual physician preferences. More and more, physicians want a greater work-life balance. Many physicians are currently working longer hours than they would choose if they had the opportunity to share the responsibility of continuous care and on-call arrangements with other physicians. Currently, there are shared call arrangements between the two sites for orthopedics and general surgery.

It is anticipated that maintaining specialty services at CRDGH or a new community hospital in Campbell River will remain a challenge. Although this will be somewhat mitigated by the move to one North Island medical staff, which would share coverage and call between both sites.

Staff Availability

Challenges attracting and retaining staff in the North Island will remain a reality as part of the current international shortage of health professionals. Concerns have been expressed from staff about the physical condition of the current facilities, and there is recognition changes are needed to maintain and attract staff.

As with physicians, the vision is for a consolidated staff functioning across one or two sites. Despite this, staffing will remain a challenge, particularly in a multiple site model. Factors, which contribute to successful recruitment and retention of staff, include:

- Providing state-of-the-art, purpose built facilities with the latest technology and equipment;

- Consolidating services to support a greater critical mass to maintain specialty skills, such as nursing skills for intensive care and obstetrics.

Physical Infrastructure

Service sustainability is impacted by physical infrastructure. New, purpose built infrastructure will have a longer life than renovated facilities. Construction of new hospitals could occur without interrupting ongoing service delivery. Recruitment and retention of physicians and staff will be improved by providing a purpose built, best practice designed facility;

Purpose built facilities meet Leadership in Energy and Environmental Design (LEED) gold standards and support the delivery of 'greener' health care to last future generations.

Extensive renovations are required at both sites, and this would be extremely costly and challenging. Both hospitals are around 50 years old with some additions over the years. Each facility requires major capital investment to upgrade the infrastructure including the need for seismic mitigation. They currently provide a poor functional workspace for staff and physicians to deliver modern day health care.

Although renovation hospitals is cheaper than building brand new, this is a significant investment and will only result in having renovated facilities that do not have the benefit of all new design features, have a shorter life span, and will require more ongoing maintenance than new facilities.

Construction of new hospitals could occur without interrupting ongoing service delivery and would likely take three years. Upgrading the existing hospitals while still operating would be extremely disruptive to patient care. There would likely be a cost to the community to travel to access services elsewhere in the interim. A major renovation would have to be undertaken in stages and would likely take six to eight years.

Major components of the upgrades required at CRDGH include:

- New inpatient accommodation;
- Operating rooms;
- Seismic upgrade;
- Ambulatory and diagnostic space.

The ability to invest in new technologies and equipment at multiple sites will be challenging as will having sufficient qualified staff to sustain the services.

Financial Sustainability

Service delivery models are cost effective so we can provide access to a broad range of quality services in a continuous manner to as many people as possible.

Cost Effectiveness

The high-level estimated costs in capital and operating associated with each of the four options are as follows (refer to Table 1 for more detail):

- Option 1 – Regional Hospital One site model at Dove Creek, Urgent Care Centre in Campbell River and Primary Care Centre in Comox Valley: capital \$370M-\$465; annual operating \$120M-\$132M;
- Option 2 – Enhanced Regional Services with a new Regional Hospital in Comox Valley and renovated CRDGH: capital \$400M- \$500M; annual operating \$125M-\$135M;
- Option 3 – Enhanced Regional Services with a new Regional Hospital in Comox Valley and new community hospital in Campbell River: capital \$500 -\$600M; annual operating \$125M-\$135M;
- Option 4 – Enhanced Regional Services in Nanaimo with status quo at SJGH and CRDGH and new 60-70 bed capacity at NRGH: capital \$280M-\$350M; annual operating \$125M-\$140M;

- The estimated cost of these options should be considered an “order of magnitude” only. The full cost of any new option will require a rigorous analysis, based on the most appropriate service delivery model for each site.
- Operating estimates are derived from the original cost estimates in 2006, adjusted for inflation. They assume that any operating expense associated with capital amortization or P-3 capital substitution is additionally funded. Capital estimates for Option 1 were derived by updating estimates from 2006. Capital Costs for Options 2 through 4 were estimated by referencing recent construction costs of peer facilities in British Columbia.
- The main difference in the four options relate primarily to capital expenditure. The operating costs are similar for all four options. The current operating budget for hospital services at the existing hospitals is \$88 million in 2008 dollars. The estimated annual increase in operating costs for enhanced North Island acute care services in any of these options is in the range of \$32 to \$50 million annually, excluding any new capital costs.

Table 1: Estimated Capital and Operational Costs* Associated with each of the Four Options

OPTIONS	DESCRIPTION	2008 COSTS \$ MILLIONS (Rounded)	
		CAPITAL COST Range	OPERATING COST Range
OPTION 1	<ul style="list-style-type: none"> • New 230-240 Bed Regional Hospital –Dove Creek • Urgent Care Centre– upgrade CRDGH • Primary Care Centre - upgrade SJGH 	\$370 - \$465	\$120 - \$132
	NEW FUNDING REQUIRED	\$370 - \$465	\$32 - \$45
OPTION 2	<ul style="list-style-type: none"> • New Regional Hospital –Comox Valley • Community Hospital – upgrade and expand CRDGH • SJGH – to be determined 	\$400 - \$500	\$125 - \$135
	NEW FUNDING REQUIRED	\$400 - \$500	\$36 - \$48
OPTION 3	<ul style="list-style-type: none"> • New Regional Hospital – Comox Valley • New and Expanded Community Hospital – Campbell River • SJGH – to be determined 	\$500 - \$600	\$125 - \$135
	NEW FUNDING REQUIRED	\$500 - \$600	\$36 - \$48
OPTION 4	<ul style="list-style-type: none"> • Add 60-70 new beds to NRGH • Upgrade and continue CRDGH & SJGH 	\$280 - \$350	\$125 - \$140
	NEW FUNDING REQUIRED	\$280 - \$350	\$38 - \$50

* Costs are “order of magnitude only”. Revisions to costs are anticipated pending a detailed analysis and business case.

In summary, from a sustainability perspective:

- consolidation of services means the population served would be combined which provides the greater critical mass to support specialist services and makes recruitment and retention easier;
- new purpose built state-of-the-art hospitals reduce need for further investments in the future and does not result in service disruptions during renovation of an existing hospital;
- investments in equipment / technology are challenging at multiple sites due to high costs and having enough qualified staff. Having these at one new site will impact sustainability of services at the other renovated site as staff and physicians may choose to work with the new facility, technology and equipment although this issue is mitigated by option 3 where there would be two new facilities and equipment; and
- the material cost differences in these options relate primarily to capital expenditure. The operating costs are similar for all four options. Upgrading the NRGH has the lowest capital cost and building two new facilities in each community has the highest cost. Overall, newer facilities will cost more but will have a longer operational life.

ACCESS

This criterion considers whether reasonable and fair geographic access to services is achieved, and need governs where services are located and how services and benefits are distributed.

Services need to be geographically distributed and delivered in a fair and equitable manner to ensure access to services and to address the health of populations with the most need. VIHA provides health services across a vast geographic area with significantly different populations and varying health care needs. With limited fiscal and human resources, competing priorities, and the evolution of service delivery models that tend to concentrate hospital-based services in specific locations, it is not feasible or reasonable to offer the full continuum of health services in all communities. However, it is important to determine what care is appropriate to a community and what service configurations maximize local accessibility while maintaining the integrity of the services.

- Demographic factors to be considered in determining access and meeting local population health needs include:
 - current population size and projected growth;
 - population density;
 - population age; and
 - populations with high needs.
- To determine whether services could be provided locally or regionally, key factors to consider which contribute to overall community health and well being include:
 - the impact on care delivery and family support when transferring a patient to a hospital outside of their community;
 - the level of access and supports provided to rural and remote hospitals and health centres; and
 - the desire for services to be available as close to communities as possible.

Current and Projected Population Distribution

- In 2008, there were approximately 122,000 residents living in the north area of VIHA, which includes Local Health Areas [LHAs] of Courtenay (Comox Valley), Campbell River, Vancouver Island West and North (Mount Waddington). The majority of the population lives in the urban communities:
 - 53% live in the Comox Valley;
 - 35% live in Campbell River; and
 - 12% live in rural and remote communities.
- The north area population is projected to grow by 12% by 2020 to a total of approximately 137,000.
 - The majority (83%) of the net growth will occur in the Comox Valley (see Table 2 below).
 - The most significant growth is in the population aged 65 to 74, which is expected to increase by 68% during that time frame.

Table 2: North Area Population Growth 2008-2020

Place of Residence	2008 Population	2020 Population	Difference from 2008		% of Total North Area Net Growth (14,934)
LHA 71 Courtenay (Comox Valley)	65,053	77,459	12,406	19%	83%
LHA 72 Campbell River (including Sayward)	42,336	46,268	3,932	9%	
LHA 84 Vancouver Island West (Gold River/Tahsis area)	2,410	2,151	(259)	-11%	
LHA 85 Vancouver Island North (Mt. Waddington Area)	12,284	11,139	(1,145)	-9%	
North Area	122,083	137,017	14,934	12%	

Source: PEOPLE 33, BC STATS

Hospital Utilization

- Campbell River and Vancouver Island West and North residents receive 47% of their specialized hospital services at CRDGH, 13% of these cases are seen at SJGH, and 40% at other facilities including 12% at Royal Jubilee Hospital (RJH), 5% at Victoria General Hospital (VGH), and 4% at Nanaimo Regional General Hospital (NRGH) (see Table 3).
- Similarly, Comox Valley residents receive 64% of their specialized hospital services at SJGH, 5% of these cases are seen at CRDGH, and 31% to all other hospitals including 13% at RJH, 4% at VGH, and 3% at NRGH (see Table 3).

Table 3: Where Comox Valley, Campbell River, and Vancouver Island North and West Residents Receive Specialized Hospital Services, 2006/07

Hospital	Where Specialized Services were Received	
	Comox Valley Residents	Campbell River, VI West and North Residents
SJGH	64%	13%
CRDGH	5%	47%
RJH	13%	12%
VGH	4%	5%
NRGH	3%	4%
Other	10%	19%

- Currently North Island residents travel to hospitals in the south (NRGH, VGH and RJH) for approximately 21% of their specialized hospital care. It is anticipated that over half of these specialized cases could be treated in the North Island at a new regional hospital.

Geographic Access and Drive Times

- The optimal location of services should provide:
 - minimum travel for the majority of the population using services;
 - reasonable and fair geographic access to services for all North Island residents;
 - timely access to services in relation to need; and
 - the greatest benefit to residents in how services are distributed.

- Inconvenience associated with travel times will continue for all stakeholders regardless of the option selected.
- The greatest opportunity to optimize geographic access to a new Regional Hospital is along the Inland Island Highway. Feasible locations include:
 - Dove Creek;
 - Piercy Road; and
 - Cumberland Interchange.
- Although interest has been expressed by local government and residents in a facility at the Jubilee Parkway, this location is not considered optimal as the most significant growth in population is forecast to occur in the Comox Valley.
- The original 2006 decision recommended Dove Creek as the optimal location for a one site North Island model as it provided a minimum distance for the majority of the population and was closer to where the highest anticipated future growth in population will occur.

Other Important Considerations for Determining Optimal Access

- Other considerations when determining optimal access to regional services include:
 - The need for proximity to trauma services is likely higher in Campbell River and north where there is an increased likelihood for multi-system trauma and injuries associated with dangerous road conditions and industry compared to the Comox Valley. The ability to respond to trauma cases can be enhanced through increased use of advanced-care paramedics who are able to provide care at first point of contact prior to admission to hospital;
 - Flight and wind patterns affect the time and distance associated with fixed wing and helicopter transportation to particular areas;
 - Increasing distance and travel time for ambulances coming from rural and remote areas will impact the remaining ambulance service delivery in these areas;
 - Planning must ensure that public transportation systems and accommodation supports are an integral part of the enhancement of services for rural and remote populations, Aboriginal peoples, and people living on low incomes; and
 - Improvements to services must also address the cultural needs of the Aboriginal population as identified by them including patient room design and specific gathering rooms to accommodate many visiting family and friends as important considerations.

In summary, from an access perspective:

- the location of enhanced specialized services in the Comox Valley increases access to all North Island residents and is aligned with the projected population distribution; and
- maintaining full community hospital services will keep local access for Campbell River residents.

PUBLIC/STAKEHOLDER ACCEPTABILITY

This criterion considers that the public and key stakeholders are informed about the issues and have been given the opportunity to provide input and feedback to the proposed actions, which has been given due consideration by VIHA. Ideally they are in agreement with the proposed action.

Public Consultation – Pre-Board Decision in September 2006

The public consultation process in June and July of 2006 provided insight into the level of public acceptability to the options. The diversity of the comments heard is a reflection of the diverse communities in the area. Clear themes emerged with the greatest variation occurring between rural and remote areas and the more urban areas.

The responses provided cannot be considered reflective of the population as a whole. As with any consultation process, it only reflects the people who chose to participate. Generally, those who attended the town hall/ open houses in 2006 were in older age cohorts and are therefore more likely to be current users of the hospital system.

- In summary, generally:
 - Mount Waddington residents (who have the greatest travel burden), physicians and staff supported a new Regional Hospital as far north as possible;
 - Vancouver Island West and Sayward residents (who also have a significant travel burden), and physicians and staff from these areas supported a new Regional Hospital as far north as possible;
 - Campbell River area residents had varied positions. There was support for the Regional Hospital concept, however; concerns were expressed regarding the location. The most support was given for maintaining current services in both communities along with necessary upgrades;
 - Comox Valley residents had varied positions. There was support for the Regional Hospital concept, however; concerns were expressed regarding the location. The most support was given for maintaining current services in both communities along with necessary upgrades;
 - Unions supported the status quo with upgrades to maintain community hospitals in both communities and also expressed concern about and opposition to any potential public-private partnership (P3) that could be part of any new hospital construction;
 - Physicians in the Comox Valley and in Campbell River supported the concept of a Regional Hospital as long as it was located as close to their respective community as possible. Physicians in both communities also wanted to ensure sufficient services were left behind in each community.

Consultation – Post-Board 2006 Decision

Since the Board's initial decision in September 2006, the opinions and perspectives of some of the stakeholders has shifted. The largest shifts in stakeholder support has occurred with the physicians in both Campbell River and Comox Valley and with the Comox-Strathcona Regional Hospital District (CSRHD):

- Physicians in the Comox Valley are generally supportive of a Regional Hospital as long as it is located in the Comox Valley.
- Physicians in Campbell River have indicated that they would only be supportive of a Regional Hospital if it were located in a more northern location (the Hamm Road and Jubilee Parkway interchange were most often cited).
- In an effort to resolve these seemingly conflicting views, the CSRHD appointed a Task Force in August 2007 to develop a workable solution amongst both physician groups. This Task Force was not able to achieve a consensus. The resulting position was that the existing hospitals should be maintained and upgraded.

- In February 2008, the CSRHD rescinded their initial support for the regional hospital model. Over the summer and early fall 2008, VIHA re-engaged key stakeholders on this issue.

Key Considerations

- The lack of physician support and the subsequent rescinding of CSRHD support indicate that stakeholder support for the original Board decision is lower now than in 2006;
- No North Island acute care option can move forward without public support (including physician, staff and the CSRHD);
- Funding support from key funders, the CSRHD and Provincial Government, is required;
- As a result of the events that unfolded after the 2006 decision, the Public/Stakeholder Acceptability criterion has been re-weighted, as the new options presented in this document have a greater potential to achieve sufficient public/ stakeholder acceptability.

In summary, from a public/stakeholder perspective:

- there has been very limited support for the one site regional model, from the staff, physicians, the general public and the RHD, with concerns raised about the services remaining in both communities and the travel time for services;
- it is anticipated that there will be very little support for enhancing services at the NRGH to serve North Island needs; and
- it is anticipated that maintaining current services in both communities with enhanced regional services in the Comox Valley should address many of the concerns raised.

PREFERRED OPTION

After significant deliberation at their November 2008 meeting, the VIHA Board is putting forward a new preferred option for the delivery of hospital services in the North Island. This option is different than the previous option in that it includes two new facilities that will replace existing hospital services in both communities, as well as provide access to a regional level of services. It includes:

- a new Regional Hospital in the Comox Valley;
 - replaces existing services at SJGH (110 beds);
 - provides enhanced specialized services for all North Island residents, supported by 40-50 additional beds for a total of 150-160 beds.
- a new 70-80 bed Community Hospital in Campbell River (providing the same services currently available at Campbell River and District General Hospital with an increase in beds); and
- St. Joseph's General Hospital converting to non-acute care functions (to be determined).

The Board considered the following **key outcomes** in its deliberations to select this new preferred option:

- **Enhanced North Island acute care capacity** to meet the growing and changing needs:
 - An additional 70 hospital beds over current bed capacity;
 - New regional level services including: enhanced palliative and cancer services; enhanced renal services; geriatric assessment; specialized maternity and nursery services; Level 3 trauma services; MRI; and enhanced specialty and sub-specialty services.
- **Improved access to services** as a result of new facilities being built in each community. It brings regional hospital capability to the North Island with a Regional Hospital in the Comox Valley and a fully functioning community hospital in Campbell River.
- **Enhanced quality of care** with two new purpose built facilities that provide:
 - better space for patients to recover and reduced risk of infections;
 - specialized designs to support elder friendly care and the healing practices of Aboriginal populations;
 - Leadership in Energy and Environmental Design (LEED) gold standards that support the delivery of 'greener' health care to future generations;
 - attractive and innovative functional workplaces for staff and physicians with the latest technology and equipment;
 - maximum flexibility in facility design to ensure long-term adaptability to changing North Island community needs.
- **Maximized staff and physician recruitment and retention potential** with new state-of-the-art facilities in both locations compared to renovated facilities.

The Board recognizes that the following **key success factors** must be fulfilled to proceed with this option:

- **Integrated VIHA staff and physicians** are essential to the effective functioning of this model working as an integrated regional system. All staff and physicians would be integrated into single clinical and medical staff teams operating under common standards of practice within unified clinical programs. For instance, staff and physicians would have the option to work at one or both sites.
- **Funding commitments attained** from local government for their capital contribution (up to 40%) and from the Province for the capital and operating resources.
- **Acceptance by the public and key stakeholders** including physicians and staff from both communities and the general public.

The key weaknesses of this service model option include:

- It is more costly than a single Regional Hospital and/or renovating the existing facilities however the strengths gained in quality of care, access and longevity of the facilities is a worthwhile investment. Once actual cost estimates have been developed through a business plan process, VIHA will work with all of our partners including the Provincial Government and the Comox-Strathcona Regional Hospital District (RHD) to assess the cost implications and develop the best funding model.
- It will be more challenging to sustain specialty services at two hospitals rather than one hospital. The model is based on forecasted population data and it may change over time, particularly in the Campbell River area as population projections cannot always anticipate the impact of significant economic changes (such as a mill opening or closing). However, the opportunity to build new facilities allows for maximum flexibility in facility design to ensure long-term adaptability.

NEXT STEPS

The preferred option is only a proposal for hospital service delivery in the North Island at this time. The next steps are to consult with key local stakeholders, including: the Comox Strathcona Regional Hospital District (CSRHD), staff, physicians and the general public. If there is local support, evidenced by the CSRHD support of the concept, we will proceed to the detailed costing and business case development.

APPENDIX A – SERVICE CATEGORIES & SERVICES AT COMMUNITY & REGIONAL HOSPITALS

The following tables provide a brief description of each of the service categories that are outlined in the options and the guideline of services for community and regional hospitals in VIHA.

Primary Health Care	
<p>An integrated Primary Health Care Team includes healthcare professionals working in partnership with family physicians, such as nurses, nurse practitioners, dietitians and pharmacists, and focuses on maintaining health, managing chronic diseases, and recovering from illness or injury.</p>	
Transitional Care	
<p>Rehabilitation and convalescent care is provided after people are discharged from acute care hospitals. Transitional care is designed to help people to return to their homes or community.</p>	
Emergency Services	
Urgent Care Department	Emergency Department
<ul style="list-style-type: none"> • Responds to an illness or injury that will not cause further disability or death if not treated immediately but requires professional attention to prevent it from developing into a greater threat. • Available 24/7, depending on demand. • Key distinguishing factor between urgent care and emergency departments is generally that there is no inpatient beds to admit. 	<ul style="list-style-type: none"> • Provides trauma care to people with serious illness or injury and has the capacity to admit patients. • VIHA's community hospitals generally provide a Trauma Level 4 service, while a regional hospital provides a Trauma Level 3 service as defined by the Trauma Association of Canada:⁵
Outpatient Services	
Outpatient Clinics	
<ul style="list-style-type: none"> • Chronic disease management clinics - e.g., Diabetes Education • Multi-specialty clinics e.g., stroke and kidney care clinics • Geriatric assessment 	
Outpatient Procedures	
<ul style="list-style-type: none"> • Medical day care - e.g., endoscopy and chemotherapy • Surgical day care - e.g., hernias and cataracts 	
Acute Inpatient Services	
<p>Inpatient hospital cases are grouped into primary, secondary and tertiary levels of care based on how complex (acuity) the case is and the degree of resources required (resource intensity):</p> <ul style="list-style-type: none"> • Typical primary cases are mostly medical - e.g., simple pneumonia and pleurisy. • Typical secondary cases are medical and surgical - e.g., hip and knee replacements. • Higher acuity and complex secondary cases require more specialized services. • Tertiary cases are highly complex and have high acuity that requires a fully specialized tertiary level of services. 	

⁵ Trauma Association of Canada's Trauma System Accreditation Guidelines (June 2007)

GUIDELINE OF SERVICES AT A COMMUNITY AND REGIONAL HOSPITALS IN VIHA

	Community Hospital	Regional Hospital
Critical Volumes	<p>Greater than:</p> <ul style="list-style-type: none"> ➤ 4,000 surgeries annually ➤ 4,000 inpatient weighted cases annually ➤ 80% Local Primary Inpatient Care needs met ➤ 70% Local Secondary Care needs met 	<p>Greater than:</p> <ul style="list-style-type: none"> ➤ 10,000 surgeries annually ➤ 15,000 inpatient weighted cases annually ➤ 90% Local Primary Inpatient Care needs met ➤ 85% Local Secondary Inpatient Care needs met
Specialties	<p>Core Specialties include: General Surgery, Internal Medicine, Anesthesia, Obstetrics/ Gynecology, Pediatrics, Psychiatry and Orthopedics.</p> <p>OTHER SUBSPECIALTIES (OPTIONAL): Urology, Otolaryngology, Plastics, Ophthalmology</p>	<p>Core Specialties include: General Surgery, Internal Medicine, Anesthesia, Obstetrics/ Gynecology, Pediatrics, Psychiatry and Orthopedics.</p> <p>OTHER SUBSPECIALTIES: Urology, Otolaryngology, Plastics, Ophthalmology</p>
Specialists	<ul style="list-style-type: none"> ➤ 3-5 Specialists in Core Specialties with 24-7 coverage 	<ul style="list-style-type: none"> ➤ 5-7 Specialists in Core Specialties with 24-7 coverage ➤ 3-5 Specialists in other subspecialties
Medical	<ul style="list-style-type: none"> ➤ Palliative Care and Outpatient Chemotherapy ➤ Geriatric Assessment 	<ul style="list-style-type: none"> ➤ Enhanced Palliative and Cancer Care ➤ Renal services: <ul style="list-style-type: none"> ○ kidney care clinic ○ dialysis unit ➤ Cardiac Medical Unit – non invasive cardiology ➤ Geriatric Assessment ➤ Acute Rehabilitation
Intensive and Critical Care	3-5 ICU beds	At least 10 ICU beds and Level 2 adult critical care
Mental Health and Addictions	<ul style="list-style-type: none"> ➤ Inpatient and outpatient services ➤ Non-acute crisis/observation unit 	<ul style="list-style-type: none"> ➤ Designated Psychiatric Emergency Unit ➤ Psychiatric Intensive Care
Maternity	<p>Level 1B Perinatal Service – for normal singleton births; ≥ 34 weeks gestation and infants ≥1800 grams and on-site cesarean section capability available.</p>	<p>Level 2A Perinatal Service for normal singleton and some twin births; ≥ 32 weeks gestation and infants ≥1500 grams; may have low risk medical /obstetrical/ neonatal complications; 24/7 on-call specialty consultation and intensive care beds available.</p>
Emergency⁶	<p>A Level 4 Trauma Centre with a 24-hour emergency department staffed by family and fully certified emergency trained physicians.</p> <p>It provides definitive care to all secondary level trauma cases presenting providing the necessary surgical specialties and clinical services are present. The vast majority of this caseload will be single system musculoskeletal injury requiring orthopaedic support. with major trauma cases being stabilized & transferred.</p>	<p>A Level 3 Trauma Centre with 24-hour trauma team response including fully certified emergency trained physicians.</p> <p>It may be required to provide initial care to major trauma patients, provide definitive care to all secondary level trauma cases, and transfer more complex or multi-system trauma cases.</p>
Diagnostics	<p>Basic Diagnostic Services; ultrasound, x-ray, pathology, CT scanner, full laboratory</p>	<p>Full Diagnostic Services; ultrasound, x-ray, pathology, CT scanner, Magnetic Resonance Imaging (MRI) service, full laboratory</p>

⁶ Trauma Association of Canada (June 2007) "Trauma system Accreditation Guidelines", Third Edition. Accessed at <http://www.traumacanada.org/>