Best Practices Review

Grenfell Regional Health Services Board

February 10, 2005

HayGroup

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1.0 Background & Objectives

1.1 Project Background

Grenfell Regional Health Services Board

The Grenfell Regional Health Services Board provides a comprehensive range of institutional and community based services under one administrative structure in Northern Newfoundland and the Labrador South Coast. The Grenfell Region includes the area north of Bartlett's Harbour, to Englee and the coastal Labrador communities south of Black Tickle. It has a population of 16,000 persons. The population of the regional has decreased by 16% from 19,000 persons in 1991.

The Grenfell Regional Health Services Board operates one hospital, Charles S. Curtis Memorial Hospital in St. Anthony, one nursing home, John M. Gray Centre in St. Anthony and three health centers: Labrador South Community Health Centre in Forteau, Straits of Belle Isle Community Health Centre in Flowers Cove, and White Bay Central Community Health Centre in Roddickton. It also operates four community clinics, and community health offices in five locations. There are 54 acute care beds, 63 long term care beds and 16 holding/observation beds in the region.

The Grenfell Board's operating costs for shareable expenses in 2003/04 are forecast to be $44.4 million. Shareable operations have generated operating deficits in four of the past five years (through 2003/04), with a cumulative operating deficit of $2,064,000 over that period. The Board's financial situation is further impacted by operating deficits in its Air Ambulance operations. The Board is carrying a bank overdraft of $1,485,283 at March 31, 2004.

1.2 Project Objective

The Minister of Health and Community Services is concerned about the continuing deterioration of the fiscal health of the Grenfell Regional Health Services Board (GRHSB). To address this situation the Minister has commissioned the Hay Health Care Consulting Group to conduct a 'Best Practice Review' of GRHSB. Simultaneously, Hay has conducted a similar best practices review of the Western Health Care Corporation.

1.3 Project Scope of Work and Approach

The Best Practices Review has been designed to provide recommendations to assist GRHSB in bringing about a healthy

financial position while providing quality services and programs that fall within its mandate. The Best Practices Review has included:

1. Review the governance and management structures and processes and identify opportunities, if any, for improvements to better meet the organization's mandate.

2. Identification of the major cost drivers that have contributed to and that continue to contribute to the operating deficits of the Board.

3. Identification of efficiency measures already adopted by the Board to address its cost pressures.

4. A population based review of the utilization of acute care services to determine the appropriateness of the current use of key areas such as ED visits, inpatient admissions, surgeries, diagnostic imaging, and laboratory services. This will include a consideration of the appropriateness of the current rates of referral of cases to secondary and tertiary care centers.

5. A population based utilization review of long-term care services to determine the appropriateness of their current use.

6. Assessment of the current revenue generation by the region to identify opportunities to increase revenues from sources other than the Department.

7. Assessment of the current productivity of acute care, rehabilitation, long term care, community and air transportation services to identify opportunities for improvement in efficiency through comparison to best practice models and available benchmarks for similar services within and outside the Province. This has included consideration of:

    - Clinical Efficiency: Use of Same Day Surgery and Average Lengths of Stay.

    - Operating Efficiency: The productivity of functional centers that provide and/or support the delivery of regional services.

8. Assessment of the IT infrastructure requirements, tools and human resources necessary for effective operations and identify strategic IT investments, if any, that would enable further cost savings.

9. Assessment of the current organization and delivery of services and compare these with best practices from across Canada to identify opportunities to reduce costs and/or improve the quality of services through alternate approaches to meeting the health needs of the populations served by the GRHSB.

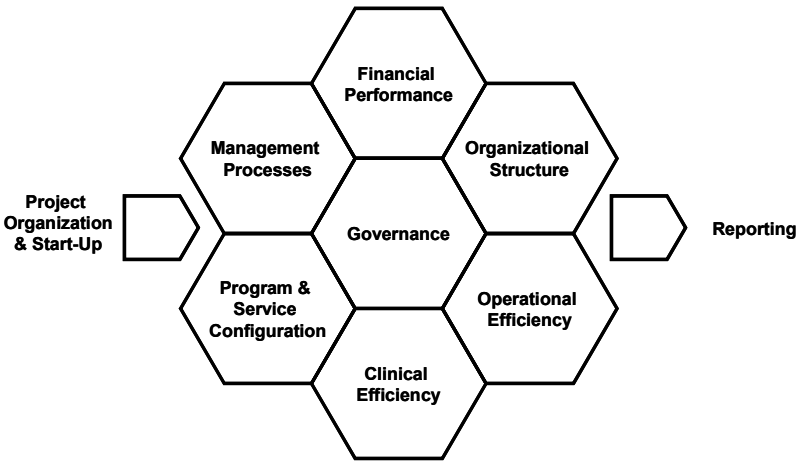
10. Determination of the priority health services that can be delivered within the funding available to these organizations and determine if there are services which are of lesser priority that might be reduced or discontinued so that resources can be reallocated to address higher priority needs.

11. Recommendation of appropriate staffing levels in relation to the current and proposed configuration of services

12. Develop a financial recovery plan to achieve a balanced budget in 2004/05 and to retire the accumulated deficit over a maximum ten-year period.

7 Phase Workplan for theBest Practices Review of GRHSB.

Hay Health Care Consulting Group conducted this review. We employed a 7-phase work plan for conducting the review of GRHSB. This approach is presented schematically in the exhibit following:



Phase 1: Project organization, confirmation of objectives, scope and approach, resolution of methodological issues and assembly and refinement of GRHSB data and measurements of costs, operating efficiency, clinical efficiency and population utilization of services.

Phase 2: Review and evaluation of governance and management planning and decision-making processes.

Phase 3: Review of financial performance of the Board since amalgamation and evaluation of the Board's financial management processes.

Phase 4: Review of programs and services to assess current need, appropriateness, efficacy and efficiency of the organization and delivery of services in the region.

Phase 5: Review and evaluation of the clinical efficiency of hospital clinical processes and of the effectiveness of GRHSB utilization management process.

Phase 6: Review and evaluation of the efficiency of department and functional centre operations to identify opportunities to reduce costs in the short and longer-term.

Phase 7: Reporting on the findings of the review and the development of a plan to improve governance, management, clinical efficiency and operational efficiency and a plan to restore the Board to a positive financial position.

1.4 The Steering Committee

The project was conducted by Hay Health Care Consulting Group under the direction the Department of Health and Community Services. The study received advice from a Steering Committee made up of representatives of Grenfell Regional Health Services Board, Western Health Care Corporation, the Department of Health and Community Services and Treasury Board. The Steering Committee was responsible for directing the execution of the study and reviewing and commenting on interim and final reports. As the funder of the review, the Department reserved for itself responsibility for defining and managing the scope of work to be conducted. The members of the Steering Committee were:

Chair Deborah E. Fry, Deputy Minister, Department of Health & Community Services

Robert Mesher, Board Chair, GRHSB

GRHSB Representatives	John Budgell, Executive Director, GRHSB
WHCC Representatives	Bernd Staeben, Board Chair, WHCC
	Allan Kendall, CEO, WHCC
Department of Health and Community Services	Moira Hennessey, Assistant Deputy Minister, Board Services & Project Director, Department of Health & Community Services
	Donna Brewer, Assistant Deputy Minister, Financial Services, Department of Health & Community Services
	Dr. Ed Hunt, Medical Consultant, Department of Health & Community Services
	John Rumboldt, Director (A), Board Services & Project Manager, Department of Health & Community Services
	Jim Strong, Director, Financial Services, Department of Health & Community Services
	Beverly Griffiths, Regional Consultant, Department of Health & Community Services
Treasury Board	Brenda Caul, Assistant Secretary, Financial Services, Treasury Board

2.0 Financial Position

This section looks at the overall financial performance of the organization over the past five years. This perspective helps us to view the governance and management, program and service, site and departmental findings within the context of the organization's overall financial situation. It also may help to identify other trends or changes that have affected the corporation's financial performance.

GRHSB had an accumulated operating deficit of $2,702,130 at March 31, 2003[1]. Coupled with an operating deficit of $780,000 in 2003/04, the accumulated operating deficit that must be addressed is about $3.4 million.

Key observations from GRHSB's financial statements include:

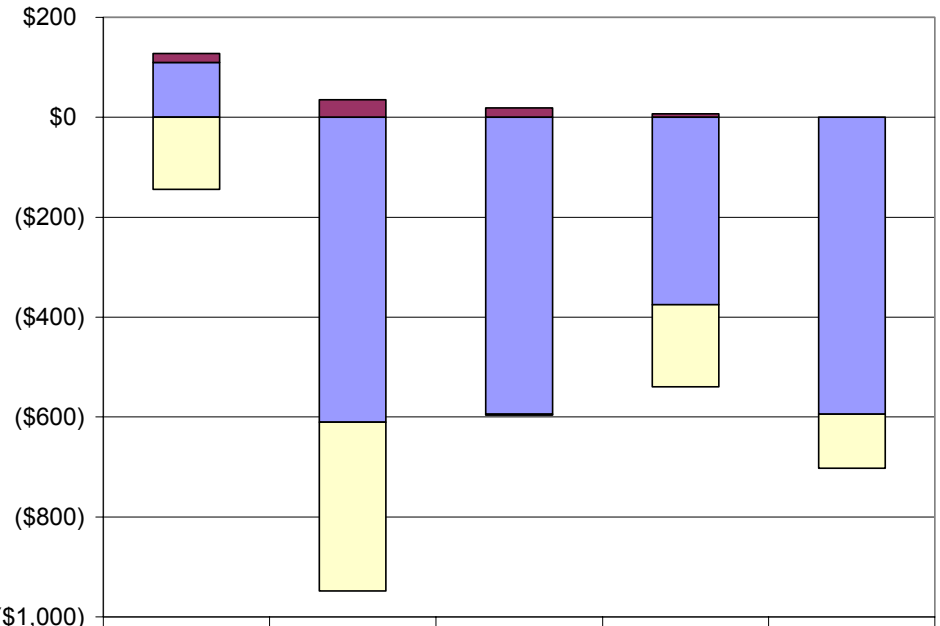
- Shareable operations have generated an operating deficit in four of the past five years (through 2003/04), with a cumulative operating deficit of $2,064,000 over that period.
- The Corporation is carrying an Overdraft ($1,485,283 at March 31, 2004).
- Non-shareable items, although largely accounting accruals, account for an additional $700,000 annual shortfall for the Board.
- The Operating Fund owes the Board Fund some $3.0 million (est.) at March 31, 2004.
- Ambulance Services contribute significantly to the Board's overall deficit situation.

2.1 Operating Deficit

Shareable operations have generated an operating deficit in four of the past five years (through 2003/04). As can be seen in Exhibit 2.1, the operating deficit was reduced to less than 1.0% in 2002/03, but is projected to increase to previous levels (1.3%) in 2003/04. Operating deficits in the Air Ambulance operations further exacerbate the financial situation of GRHSB.

[1] Department of Health & Community Services

Exhibit 2.1
GRHSB Operating Experience[2]



	2000	2001	2002	2003	2004 est.
Air Ambulance Services	(144)	(338)	(2)	(165)	(108)
Long Term Debt Principal	19	35	19	6	
Surplus (deficit) for Gov't	109	(610)	(595)	(375)	(594)

2.2 Revenues

Estimated revenues for 2003/04 were $43.9 million. Revenues have increased 31% since 1999/00. Exhibit 2.2 shows the revenues by major revenue category over the period. Provincial plan revenue contributes close to 78% (77.9% in 2003/04). Most significant increases through 2003/04 were for Drug Recoveries (55.9%) and Medical (51.2%). Inpatient and Dental revenues have been essentially flat over the period.

Miscellaneous revenues have increased by 35.6% over the period through 2002/03. This is a greater increase than the overall increase in revenues in that period.

[2] After completing this analysis, the actual operating deficit for 2003/04 was reported to be $780,000.

Exhibit 2.2
GRHSB Operating Revenues

$ in thousands	2000	2001	2002	2003	Change	%
Provincial Plan						
Operating	25,753	27,349	30,063	32,258	6,505	25.3%
National Child Benefit	26	130	401	492	466	1771.9%
Early Child Development	-	-	32	168	168	
MCP physician	5,103	5,684	5,575	6,042	939	18.4%
Inpatient	510	761	435	508	(2)	-0.4%
Outpatient	138	129	155	158	20	14.3%
LTC Resident	559	566	592	688	129	23.0%
Dental revenue	563	582	555	556	(6)	-1.1%
Drug Recoveries	487	564	725	759	272	55.9%
Medical	67	86	89	102	34	51.2%
Ambulance	71	88	89	98	27	37.4%
Miscellaneous	305	696	497	414	109	35.6%
	33,584	36,635	39,206	42,244	8,660	25.8%

2.3 Shareable Operating Expenses

Shareable operating expenses have increased by 32.8% since 1999/00 as shown in Exhibit 2.3. Benefits costs rose at a slower pace than salaries over the period. Direct Client Costs showed the most significant increase, rising from 5.2% of total expenditures in 2000/01 to 6.2% in 2003/04.

Shareable operating expenses by organizational area are shown in Exhibit 2.4. Administration (14.2%) and Education (0.4%) have increased significantly less than the overall increase of 32.8%. Community & Social Services increased 66.0% as there were significant increases in all of the Community & Social Services areas.

Exhibit 2.3
GRHSB Shareable Operating Expenses by Category[3]

$ in thousands	2000	2001	2002	2003	2004 est.	% Change
Salaries	20,898	23,710	25,719	27,735	28,870	38.1%
Benefits	3,394	3,632	3,830	4,310	4,441	30.8%
Supplies	7,342	5,075	4,718	4,708	4,866	14.1%
Other Shareable Expenses		2,664	3,154	3,234	3,512	
Direct Client Costs	1,749	2,065	2,361	2,624	2,755	57.5%
Long Term Debt	90	98	20	6		-100.0%
Total Expenditures	33,474	37,245	39,801	42,619	44,444	32.8%

[3] Supplies and Other Shareable Expenses were combined for calculation of the % Change.

Exhibit 2.4
GRHSB Shareable Operating Expenses by Organizational Area

$ in thousands	2000	2001	2002	2003	2004 est.	% Change
Total Administration	3,660	3,672	3,764	4,298	4,181	14.2%
Total Support Services	6,181	7,069	7,474	7,532	7,950	28.6%
Total Nursing Inpatient Services	6,173	7,056	7,538	8,308	8,478	37.3%
Medical Services	6,019	6,381	6,635	6,879	7,443	23.7%
Ambulatory Care Services	3,837	4,342	4,656	5,085	5255	37.0%
Total Diagnostic & Therapeutic	3,225	3,560	3,909	3,961	4,098	27.1%
Total Community & Social Services	4,060	4,905	5,635	6,402	6,738	66.0%
Education	302	226	171	148	303	0.4%
Total Expenditures	33,456	37,210	39,782	42,612	44,446	32.8%

2.4 Capital Spending

GRHSB has spent $1.1 to $2.0 million per year on capital purchases over the past five years as shown in Exhibit 2.5. The majority of funds for these purchases have been provided through provincial equipment and facility capital grants. However, GRHSB each year has applied significant additional funds from other contributions.

Exhibit 2.5
GRHSB Capital Spending

$ in thousands	2000	2001	2002	2003	2004
Capital Purchases	$ 1,167	$ 1,738	$ 1,912	$ 1,972	$ 923
Sources of Funds					
Prov. capital equip grant in current year	$ 927	$ 467	$ 413	$ 65	$ 350
Prov. Facility capital grant in current year	$ 674	$ 1,077	$ 917	$ 61	$ 279
Add: deferred capital grant from prior year	$ 1,207	$ 2,144	$ 2,608	$ 2,973	$ 1,565
Less: deferred capital grant from current year	$ (2,144)	$ (2,608)	$ (2,973)	$ (1,565)	$ (1,599)
	$ 664	$ 1,081	$ 965	$ 1,534	$ 595
Other Contributions	$ 449	$ 658	$ 947	$ 437	$ 328
Long term debt	$ 53				
	$ 502	$ 658	$ 947	$ 437	$ 328
Total Funding	$ 1,167	$ 1,738	$ 1,912	$ 1,972	$ 923
Surplus (Deficit) on capital purchases	$ -	$ -	$ -	$ -	$ -

2.5 Bank Overdraft

GRHSB is carrying a growing bank overdraft. The operating line of credit was established in 2001/02. The bank overdraft at March 31, 2004 was $1,485,283 million. An operating surplus is required to enable GRHSB to begin to reduce this financial burden, as well as the accumulated operating deficit.

The Board of Trustees Fund contains special purpose assets and those that may be expended at the discretion of the Board. Revenue consists mainly of investment income and revenue not directly related to hospital operations. Expenditures of this fund consist of hospital operating expenditures not shared by government and those approved by the Board. Over the years the Board Fund has been able to advance some $3.0 million to the Operating Fund.

2.6 Air Ambulance Services

The Air Ambulance Services have generated an operating deficit in each of the past five years (Exhibit 2.1). The Air Ambulance Services are discussed in Chapter 5 of this report.

2.7 Impact of Changes on Worked Hours

This analysis focuses primarily on changes from 2000/01 through 2002/03. 2003/04 projections based on third quarter results are shown for information. Total worked hours are shown by year in Exhibit 2.6. Overall, worked hours changed little (-1.8%) over that period. Slight increases in Ambulatory Services (1.7%) were more than offset by decreases in other areas.

Exhibit 2.6
GRHSB Total Worked Hours

	2000/01	2001/02	2002/03	Change	2003/04
711 Admin & Support	281,869	264,054	269,209	-4.5%	277,730
712 Inpatient Nursing	274,307	277,228	274,328	0.0%	266,370
713 Ambulatory Services	116,110	115,466	118,049	1.7%	124,002
714 Diagnostic & Therapeut	61,873	60,941	60,649	-2.0%	65,370
715 Community Services	67,852	66,004	65,707	-3.2%	70,906
Grand Total	802,010	783,693	787,941	-1.8%	804,378

2.8 Impact of Changes on Wage Rates

This analysis focuses primarily on changes from 2000/01 through 2002/03. Total Worked Salaries are shown in Exhibit 2.7. Worked Salary costs increased by 22.1% over the period 2000/01 through 2002/03. About 17.5% of this increase is attributable to salary contract increases. The remainder would have been influenced by the combined impact of several factors:

- Staff moving up in the pay range with increased seniority
- Application of negotiated union salary increases

- Application of non-union salary increases
- Reduction in lower wage positions/hours (such as clerical or support) combined with increase in higher wage positions/hours (nursing or technical)
- Changes in the number of premium hours or premium rates for various categories of premium hours

As seen in the previous section, the increase was not due to increased worked hours. The increase was due strictly to wage cost increases. Exhibit 2.8 shows the average rates over the period 2000/01 through 2002/03 and 2003/04 projections based on third quarter results.

Exhibit 2.7
GRHSB Total Worked Hour Salaries

	2000/01	2001/02	2002/03	Change	2003/04
711 Admin & Support	$ 5,572,867	$ 6,102,332	$ 6,910,115	24.0%	$ 7,074,260
712 Inpatient Nursing	$ 5,308,451	$ 5,813,930	$ 6,404,558	20.6%	$ 6,756,146
713 Ambulatory Services	$ 3,292,684	$ 3,564,667	$ 4,011,818	21.8%	$ 4,504,706
714 Diagnostic & Therapeut	$ 1,635,891	$ 1,886,810	$ 1,909,700	16.7%	$ 2,092,697
715 Community Services	$ 1,642,536	$ 1,773,474	$ 2,069,643	26.0%	$ 2,187,403
Grand Total	$ 17,452,429	$ 19,141,213	$ 21,305,833	22.1%	$ 22,615,211

Exhibit 2.8
GRHSB Average Worked Hour Rates

	2000/01	2001/02	2002/03	Change	2003/04
711 Admin & Support	$ 19.77	$ 23.11	$ 25.67	29.8%	$ 25.47
712 Inpatient Nursing	$ 19.35	$ 20.97	$ 23.35	20.6%	$ 25.36
713 Ambulatory Services	$ 28.36	$ 30.87	$ 33.98	19.8%	$ 36.33
714 Diagnostic & Therapeut	$ 26.44	$ 30.96	$ 31.49	19.1%	$ 32.01
715 Community Services	$ 24.21	$ 26.87	$ 31.50	30.1%	$ 30.85
Grand Total	$ 21.76	$ 24.42	$ 27.04	24.3%	$ 28.12

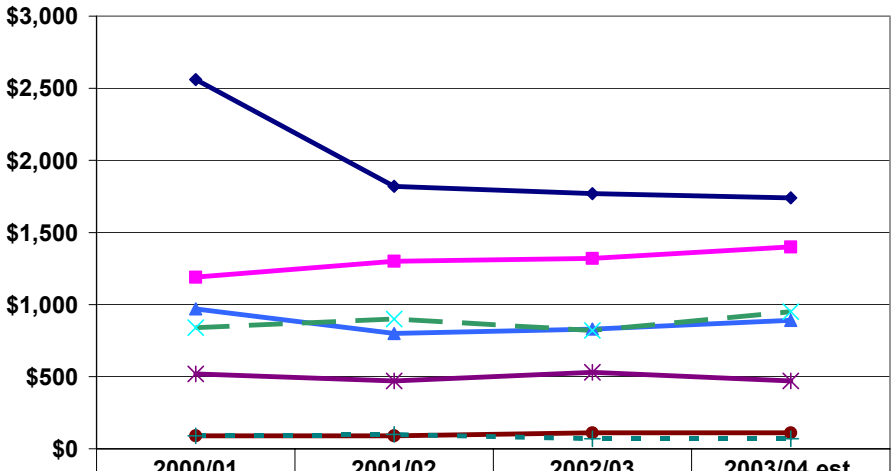
Based on the third quarter results, it appears that average wage rates were on track to increase a further 4.0% in 2003/04.

2.9 Impact of Supplies Costs

Overall supplies costs have increased by 14.1% over the past five years. Supplies costs have increased less than labour costs over the period and less than increases in revenues. Several major categories of supplies expense are highlighted in Exhibit 2.9. The only striking change over the period is the decrease in Plant supplies expense in 2001/02. In fact, GRHSB entered into an Energy Performance Contract in

February, 2000 with Johnson Controls Ltd. for the implementation of energy efficiency improvements. The annual cost of that contract is some $183,000. Assuming that the change in Plant Supplies cost is being driven by those energy efficiency improvements, GRHSB appears to have benefited significantly from that initiative.

Exhibit 2.9
GRHSB Supplies Costs ($ in thousands)



	2000/01	2001/02	2002/03	2003/04 est.
Plant Supplies	$2,560	$1,820	$1,770	$1,740
Drugs	$1,190	$1,300	$1,320	$1,400
General Supplies	$970	$800	$830	$890
Med/Surg Supplies	$840	$900	$820	$950
Diag & Ther Supplies	$520	$470	$530	$470
Food	$90	$90	$110	$110
Laundry	$90	$100	$70	$70

3.0 Governance and Management

3.1 The Province and the Board

The government has increasingly stressed the accountability of Regional Boards for the effectiveness, efficiency and the long-term viability of health and community services in the province.

Health and Community Service Regions in Newfoundland and Labrador are significantly dependent on the provincial government for their operating and capital funds. The public holds the provincial government accountable for the funding, organization, delivery and, to a large extent, the quality of health and community services. However, the region is a private entity, owned by the regional corporation, and governed by an independent Board of Governors. Because of the public's perspective and the amount of public funds being provided to health and community service regions, the government has increasingly stressed the accountability of health regions and their Boards for the use of these public funds and for the effectiveness, efficiency and the long-term viability of the health services under their jurisdiction.

The Department of Health and Community Services is responsible for determining and ensuring a planned and coordinated system of health care and community services. The responsibilities of a regional board are to manage and deliver its mandated services in the most effective and efficient manner it can, to optimize the use of the resources available to it and to strive continuously to improve the availability and quality of its services. The regional board defines its mandate within the framework established by the Department of Health and Community Services.

3.2 Health Care Governance

Governance is the exercise by the Board of Directors of authority, direction and control over the organization.

Governance is the exercise by the Board of Directors of authority, direction and control over a health care organization.[4] Fundamental responsibilities of governance are:

- defining the purposes, principles, and objectives of the organization
- ensuring and monitoring the quality of services
- ensuring fiscal integrity and long-term future

[4] From "Into the 21st Century: Ontario's Public Hospitals, Report of the Steering Committee, Public Hospitals Act Review, Ontario Ministry of Health, Toronto, Ontario, February, 1992.

- arranging for and monitoring the effectiveness of management
- approving annual operating plans and budgets

At its most elemental, governance is the culture of getting things done. This does not mean, however, that there are no limits upon governance. Directors have a number of duties or obligations[5] in developing the culture of the corporation, including the duties:

- of knowledge[6]
- of care[7]
- of skill & prudence[8]
- of diligence[9]
- to manage[10]
- fiduciary[11]
- to avoid conflict of interest[12]

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[5] There is a measure of overlap in the list that follows and in the corresponding descriptions in the footnotes. These are all taken from "Duties and Responsibilities of Directors of Non-Profit Corporations", by Hugh M. Kelly and Mark R. Frederick, Canadian Society of Association Executives, 1999.

[6] Knowledge must include at least the Statutory framework under which the corporation operates; its constating documents; its Mission, Vision and Values; its By-laws (by which purposes become actions), and the policies adopted to guide Board decisions.

[7] The duty of care requires a Director to act honestly, in good faith and in best interest of corporation.

[8] The duty of skill and prudence requires a Director to act with practicality not necessarily expertise, and cautiously, and to anticipate consequences of actions.

[9] The duty of diligence requires a Director to act in the best interest of corporation, and to preserve its integrity and reputation; in practice, this duty requires a Director to review agenda and related material, attend meetings, discuss matters knowledgeably, and to vote on all matters unless prohibited by law or conflict of interest.

[10] The duty to manage (in a limited sense) requires the Director and the Board to enact appropriate by-laws**,** to appoint and supervise staff, to elect officers, to establish and monitor policies, and to comply with legal requirements.

[11] The fiduciary duty requires a Director to act honestly and in good faith; to be loyal to the best interest of corporation; to act in the best interest of corporation; and to avoid conflict of interest by subordinating personal or other conflicting interest to the interest of the corporation.

- act in scope of authority[13]

Generally, the Board of a voluntary corporation is directly accountable to its corporation. The Board and corporation are accountable to the patients, clients and communities served by the organization, to the provincial government that funds the organization on behalf of these patients and communities as well as to the staff of the organization.

The Board and the fiscal integrity of the organization.

A fundamental responsibility of the Board is the fiscal integrity of the organization and its long-term solvency. It is accountable to:

- the corporation,
- the community and
- the province acting on behalf of that community

Boards that allow the organization's debt to exceed its ability to repay that debt are putting the organization, its ability to provide service to the community and the health and well-being of the community at risk.

for the long-term viability of the health services organization. The Board should be monitoring and ensuring effective fiscal management. The fiscal solvency of the organization is critical to its ability to respond to the care requirements of the community. Boards that allow the organization's debt to exceed its ability to repay that debt are putting the organization, its ability to provide service to the community and the health and well-being of the community at risk. This is not good or reasonable stewardship of public and charitable funds and is not in keeping with the Board's and the corporation's long-term obligations to its community. If a Board puts the long-term solvency and viability of the organization at risk, it is incumbent on the provincial government to take action in the interest of the local community and the province as a whole. If lesser actions are unsuccessful in correcting the situation, it may be necessary for the government to assume ownership and governance responsibility for the health services organization through the appointment of a Supervisor.

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[12] A Director cannot profit from position at expense of corporation, but must place corporation's interest first (and must remain neutral if a Director of two corporations); cannot get indirect benefit (to others); avoidance of conflict is achieved by disclosure of interest and declining to influence result.

[13] A Director must know the authority, of corporation, and of self as Director, failing which there can be personal liability if action is *ultra vires* of corporation or of Director; liability can be avoided by opposing and demanding record of opposition.

3.3 Governance Structures and Processes

The following paragraphs provide a brief description and evaluation of the governance structures and processes of Grenfell Regional Health Services Board. The review is based primarily upon:

- Review of minutes, including all the public and in-camera meetings of the Board of Directors over the past 12 months.
- Review of selected documents related to Board governance.
- Personal interviews with the Chair and Vice-Chairs of the Board, the Chairs of Board Committees.

3.3.1 Grenfell Regional Health Services Board

The Grenfell Regional Health Services Board was established[14], under the Hospitals Act of the Province of Newfoundland and Labrador, to:

- assist in the provision of health services for the people of Northern Newfoundland and Labrador;
- support the continuation of the health service work begun by Sir Wilfred Grenfell and the International Grenfell Association;
- unceasingly pursue excellence in health service work by a qualified and dedicated staff.

3.3.2 Composition and Size of Board

"The Board of Directors is to be composed of not less than eight and not more than eighteen members 'who shall be generally representative of the areas served"[15]. Currently there are 13 members of the Board. The GRHSB Memorandum of Association prescribes the size and composition of the Board. The current size of the Board is reasonable for its objects and responsibilities. Also, the size allows it to have members that reflect the various geographies and communities to be served by the Board.

We have found, and governance literature generally supports our conclusion, that Boards of voluntary organizations are

[14] Grenfell Regional Health Service Board Memorandum of Association Preamble and Bylaws, Revised February, 1999.

[15] Ibid

most efficient and effective when there are between 15 to 20 members. And fewer is often better.

Current Board size is not a significant impediment to effective decision-making.

And perhaps most importantly, the current size is not a significant impediment to effective decision-making by the GRHS Board. Changing the number of Board members is not critical to the future success of the organization.

The persons who serve on the Board of GRHSB are unquestionably dedicated and hard working, and they firmly believe that they fully comply with their duties.

Directors have a duty to make the interests of the corporation pre-eminent in their decision making.

Directors have a duty[16][17] to make the interests of the corporation pre-eminent in their decision making at the Board. GRHSB Directors assert that they both understand and observe their obligation to make the interests of GRHSB pre-eminent in their consideration of issues and their decision-making. However, it appears that many Directors are unable to give priority to the interests of GRHSB over the interests of their home community. There is a clear and repeated articulation of a belief by many of the appointees of that they serve on the Board to represent and advocate for the interests of their home community. Not only is this proposition not necessarily so, its articulation demonstrates a perspective that places the sequence of priorities in exactly the reverse of what the fiduciary obligation requires. To the extent that the interest of the member's home community is equated to, or even placed above the interest of GRHSB as a whole, there is an inadvertent omission to place the interest of the Board in the priority required by this duty.

A significant number of Board members come to the Board with the agenda of their home community.

It is easy to translate the positions (and behaviours) of many members in a negative way, but it is very important to note that these behaviours are likely the intended results of the Memorandum of Association that members shall be "...representative of the areas served". Many Board members perceive that they have an accountability, through appointment, to their home community and, thus, an interest in

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[16] The duty of diligence requires a Director to act in the best interest of corporation, and to preserve its integrity and reputation; in practice, this duty requires a Director to review agenda and related material, attend meetings, discuss matters knowledgeably, and to vote on all matters unless prohibited by law or conflict of interest.

[17] The fiduciary duty requires a Director to act honestly and in good faith; to be loyal to the best interest of corporation; to act in the best interest of corporation; and to avoid conflict of interest by subordinating personal or other conflicting interest to the interest of the corporation.

furthering the agenda of that community. This intended result can only be expected to continue to place the interest of the home communities at par, if not above the interests of GRHSB. This will, and has, created conflict between the interests and advocates of the different communities. Of greater importance, the Board is impeded in developing a focus solely on the interests of GRHSB. It is continually required to reference and root the interests of GRHSB with those of each individual community served as reflected by the members appointed from each community on the GRHS Board.

This is not to say that the interests and history of the communities served by the Board should not be considered and given importance in the decisions of the Board of GRHSB. It is only that continuing to make appointees who are, or who perceive themselves to be accountable to their home community, keeps the Board looking myopically at the needs of individual communities rather than the region as a whole. It is an impediment to the organization transcending local interests to create a health and social services system that can meet the needs of the entire community in the current and in the future.

The Minister of Health and Community Services and the Board should alter the appointment and orientation of new Board members so that appointees clearly understand that they are appointed to reflect the perspectives of their local community, not to represent it. The responsibilities of Board members to the region as a whole should be emphasized.

Recommendations:

It is recommended that:

(1) The Minister of Health and Community Services should ensure that appointees to the GRHSB are aware that they are appointed to reflect the interests of, not represent or advocate for their home communities.

(2) The Board of GRHSB should modify the orientation process for new Board members so that they are clearly made aware of their responsibilities to the Board.

Board Orientation

Given the considerable complexity of health care in Newfoundland and Labrador generally and of the operations of GRHSB in particular, what has been provided as orientation for new Board members is not adequate. It does not meet the training needs of new (and perhaps longer serving) members of the Board. A more comprehensive program of orientation would unquestionably assist Board members to understand the intricacies of the duties and responsibilities of the office, and such a program should be both mandatory and involve all Board members.

The Board should establish a formal orientation program for new directors.

The Board should establish a formal and reasonably detailed program (which may include written materials, a building tour, and personal presentations by other Directors and GRHSB staff) for the orientation of Board members. Participation in the Board orientation process should be mandatory and a condition of appointment to the Board. The Board should encourage Directors, both new and those with longer tenure, to attend sessions on voluntary governance. Additionally, the Board should embark upon a planned program of Board development focusing on the Board as a whole.

Board Self Assessment

Relatively recently, the Board has instituted a self-assessment process intended to evaluate its performance. The process provides for regular evaluation of the efficiency and effectiveness of Board structures, processes and decision-making. The Board should be commended for implementing this process. However, limiting the evaluation to self-assessment may be limiting its usefulness to the furtherance and improvement of the governance process of GRHSB. The Board should consider extending the process to include evaluation of their decision-making processes by representatives of key stakeholders such as Senior Management, Senior Medical Staff, Union Leadership, the Foundation Board and Community Leaders. This would both provide differing perspectives on the operation and effectiveness of the governance processes of the Board as well as reinforce the accountability of the Board not only to the Minister of Health and Community Services, but also to the communities served and to the staff of the Board.

Recommendations:

It is recommended that:

(3) The Board should develop and implement a formal, comprehensive program for the orientation of Board members.

(4) The Board should make participation in the Board orientation program mandatory for all Board members.

(5) The Board should extend the Board evaluation process to include input from stakeholders as well as Board Members.

3.3.3 Committee Structures & Processes

3.3.3.1 Committee Structure

There are currently 5 Standing Committees of the Board:

- Executive Committee
- Joint Conference Committee
- Planning and Finance Committee
- Community Liaison Committee
- CEO and Board Evaluation Committee

These committees and their functions are reasonable for the governance of a regional health and social services authority like GRHSB.

3.3.3.2 Board Processes

Ideally, most of the work of the Board can be and should be delegated to standing and as necessary ad-hoc committees of the Board.

Ideally, most of the work of the Board can be and should be delegated to standing and as necessary ad-hoc committees of the Board. Committees can review information and debate issues more comprehensively than could be achieved by the full Board. Committees would then:

- Report their recommendations for Board action.
- Support their recommendations with documentation of issues related to the recommendations and related discussions that took place at the committee level.
- The committees should also provide the detail of the any alternatives considered, for the information of the full Board.

- The committees should also provide the minutes of their meetings for the information of the full Board.

Except in unusual circumstances, these processes and practices will minimize the need for the full Board to reconsider and re-debate issues that have been dealt with at the committee level. Board members can ask the subcommittee to clarify facts, issues and recommendations; however, the Board should not repeat the debate that has already taken place at the subcommittee level and that has been documented in the committee's report and meeting minutes. The Board should have enough information to vote on the recommendation of the Committee, accepting or rejecting the recommendation as appropriate. This approach to deliberation and decision-making makes Board meetings more efficient. It allows the full Board to focus its deliberations on the most critical issues.

It does not appear that much of the work of the board is being delegated to its committees. The Board seems to be addressing almost all issues as a committee of the whole. As a result Board meetings are quite lengthy. Board meetings regularly last in excess of 5 hours. Although Board members seem willing to devote the time to the affairs of the Board, and there is much to be said for entire Board to be involved in the all of the affairs of the organization, this is an excessive length of time for a Board to devote to its governance function. In addition for the need for the Board to address, debate and resolve a wide range of governance issues, it also seems to be devoting considerable time to listening to details related to items that could and should be the responsibility of management and not governance. It is useful for the Board to be aware of developments in the Region; but the depth of discussion seems excessive. Much of this information could be provided in written form without the need for discussion at Board meetings.

3.3.3.3 Public Meetings

Board meetings are not open to the public. There are some valid reasons for excluding non-members from Board meetings, for example, because in the discussion of the matter, there could be disclosure of personal information; or that the matter involved pending litigation. On the other hand, an often posed reason that is not defensible, is that the Directors could feel constrained in expressing their views if the public were present. There are statutory examples of how to resolve the issue of whether and when the exclusion of the public is

defensible.[18] A reasonable policy would provide that, subject to limited exceptions, meetings of the Board and its Committees would be open to the public, and no person could be excluded from a meeting that is open to the public except for improper conduct. The public may be excluded, however, when the subject matter under consideration involves the one of the following:

- the security of the property of GRHSB;
- the disclosure of intimate, personal or financial information in respect of a member of the Board or Committee, or an employee or prospective employee, or a patient or member of a patient's family;
- the acquisition or disposal of real property;
- decisions in respect of negotiations with employees;
- litigation affecting GRHSB.

We encourage the Board to adopt a policy for public meetings of the Board, narrowly defining what matters may be discussed in camera, and this policy should provide that the majority of the business of the Board should be conducted in public.

Recommendations:

It is recommended that:

(6) The Board should establish a policy that opens meetings of the Board of GRHSB and of its committees to the public.

(7) The Board should establish a clear policy that articulates a narrowly defined set of subject matters that will be discussed in camera by the Board and its committees.

[18] The example that follows comes from the *Education Act*, R.S.O. 1990, ch.E.2, as amended, §207.

3.3.3.4 Information to Support Decision-Making

The organization should improve further the utility of the information that is used to measure and monitor organizational performance to support both governance and management.

Board members feel that they receive adequate information to support the functioning of the Board. And we find that the Board is kept well informed of the operations and issues related to the services of the Board. Although most Directors feel that the Board is effectively kept apprised of the financial performance of the organization, Board and management continue to work on getting better, more meaningful and more timely financial and performance information to support the operations of the Board. We feel that management should focus its efforts on improving the information that it provides to the Board on improvements in information related to the efficiency, effectiveness and quality of care and service in the region.

Also, we are concerned that the Board, on occasion, has been reviewing issues and requesting information related to issues that are clearly the responsibility of management, not of governance. Governors should be provided with information that allows them to monitor the effectiveness of management; not that allows them to direct or do the job of management.

Recommendation:

It is recommended that:

(8) The Board Chair should direct management to enhance the information supplied to the Board related to the Board's critical governance responsibilities.

3.3.4 Defining & Maintaining Purposes & Principles of A Health Services Organization

Planning is a critical component of health services governance and management.

The health care industry has clearly recognized the importance for health service organizations to develop coherent sets of objectives and plans. Planning is recognized as a critical component of health services governance and management. Health service organizations should develop plans in response to the needs of the community and in collaboration with the community and other health care and social service agencies. Effective health services planning should include the following elements:

- Identifying the communities to be served by the health service organization
- Establishing the objectives for the health service organization (Mission, Vision and Core Values)

- Selecting the health needs of the composite community that might be appropriately served by the health service organization (Role Statement)
- Defining and describing the programs and services required to be offered by the health service organization to respond to the health needs of the population and achieve the health service organization's objectives (Long-Range Plan)
- Detailing plans for implementing the program and service goals of the long-range plan and thus achieving the Vision and fulfilling the Mission of the health service organization (Strategic Plan)
- Translating the objectives, plans and strategies into specific activities to be initiated in the next fiscal year (Operational Plan)

A Mission/Vision Statement, Role Statement, Long Range Plan and Strategic Plan are critical to the successful governance and management of a health service organization.

We believe that a Mission/Vision Statement, Role Statement, Long Range Plan and Strategic Plan are critical to the successful governance and management of a health service organization. Decision-making in the absence of clearly articulated Long- Range and Strategic Plans is often uncoordinated and inconsistent. The complexity of a health service organization and its levels of governance and management require that decisions must be made with reference to a set of long-term objectives (Mission/Vision/Role) and plans for achieving these objectives (Long-Range and Strategic Plans) that are generally accepted by the critical stakeholders in a health services organization. These documents provide a framework for annual operational planning and budgeting. If prepared through the collaboration of the Board, the medical staff, management and health service organization staff and in consultation with the community and other health care agencies, they can become the basis for clear communication of the health service organization's priorities and for collaborative and supportive actions to achieve the health service organization's objectives.

In keeping with the need to distinguish between governance and management, organizational objectives and long-range goals for programs and services should be considered primarily a responsibility of governance; strategies and operational plans for achieving these objectives and goals should be considered primarily a responsibility of management. Although primarily a responsibility of governance, it is unrealistic to expect that Boards can or

should develop long range objectives or plans independently. Although led by the Board, management staff of the health service organization will support the development of these statements and plans.

In late 2002, GRHSB initiated a Strategic Planning process following the processes established by Treasury Board to ensure that GRHSB complied the requirements of the accountability framework for public bodies established by the Government in 2000. The process built upon the previous strategic plan adopted by the GRHS Board in February 2001. Elements of the plan include:

Objects of the GRHSB The objects of the GRHSB, as established by the Memorandum of Association include:

- To assist in the provision of health services for the people of Northern Newfoundland and Labrador
- To support the continuation of the health service work begun by Sir Wilfred Grenfell and the International Grenfell Society
- To unceasingly pursue excellence in health service work by a qualified and dedicated staff.

Mission The Board adopted the following statement as its Mission:

"Grenfell Regional Health Services has implemented a wellness model to improve the health status of the people in the region".

Vision It then went on to articulate a vision for the organization: Its vision is:

"Our vision is of healthy people living in healthy communities within the Grenfell Region."

Values And the Board has also developed a list of the organization's values. The Board has articulated the following:

"The core values explain the organizational character promoted by the GRHS Board. They identify a range of actions and behaviours that are critical to the achievement of the organization's mission and vision:

- Accessibility
- Collaboration
- Evaluation
- Growth

- Multi-disciplinary approach
- Quality
- Respect
- Responsibility
- Sensitivity

Communities to be Served

The Board has determined, in keeping with its regional mandate, that it will provide services to the residents of the Grenfell Region.

Role Statement

And the GRHSB has clearly articulated the role it will play in responding to the needs of these communities in:

- Acute Care Services
- Diagnostic and Clinical Support Services
- Continuing Care
- Community Health
- Transportation Services
- Education

And the Strategic Plan incorporates a set of Strategic Issues that will be addressed by management to allow the organization to fulfill its mission and realize its vision.

3.3.5 Ensuring & Monitoring Financial Health

For the Board of a regional authority to exercise its responsibility in ensuring effective management of the financial health of the organization, there must be strong processes for operational planning and budgeting and for reporting on progress in achieving these plans and budgets.

The primary link between budgeting and strategic planning processes is the annual operational plan.

"The primary link between a public body's budgeting and strategic planning processes is the annual operational plan, which translates long-term goals and objectives into a clear operating framework for a one year period. Operating plans generate the context for the detailed financial information required in the annual budget."[19]

[19] Government of Newfoundland and Labrador Treasury Board, "Achieving Excellence 2000-A Guidebook for the Improved Accountability of Public Bodies"

Although the Board has developed strategic and long-range plans to guide its future growth and development, operating planning and budgeting continues to be incremental based on prior years activity and performance, driven by providers' descriptions of needs, rather than (as it should be) flowing from the Board's long term objectives.

A Board should start the operational planning process by setting the annual objectives for the organization and defining the parameters for operational planning and budgeting.

A Board should start the annual operational planning process by drawing from its strategic and long-range plans to set the annual objectives for the organization and to define the parameters for operational planning and budgeting. Without clearly articulated objectives, it is not possible for the Board to evaluate the performance of the organization. The GRHS Board is not setting annual objectives for the organization.

The Board must take the initiative in setting operational goals, performance targets and initial targets for the size of the organization's operating surplus or loss for the coming year. Budget targets should take into account the Board's responsibility to ensure the current and future financial health of the organization. The Board should then critically review and approve the operating plan and budget developed by management to achieve its objectives and to accommodate its budget parameters. If the Board's resources are insufficient to implement the organization's plans, then the Board must take responsibility for directing management to defer initiatives, suggest alternative strategies for achieving the Board's vision or, if necessary, to rethink the vision for the organization. Although management is reporting to the Board on its progress in developing the operating plan and budget for the organization, the Board does not seem to be formally establishing parameters for the organizations operational planning and budgeting processes.

Recommendations:

It is recommended that:

(9) The Board should draw upon its Strategic and Operational plans to formally articulate annual objectives for the organization.

(10) The Board should formally articulate parameters for the annual operating plan and budget.

The Board's strategy in dealing with organization's operating losses has put the financial health of the organization in jeopardy.

Although the Board is not setting annual objectives for the organization, it is actively involved in reviewing and then approving the operating plan and budget for the organization. But, the Board's strategy in dealing with organization's operating losses (budgeting for operating losses and accepting costs and losses that exceed its budgets) has put the financial health of the Board in jeopardy.

The Board of Directors has devoted significant attention to the Boards financial position and deficit. The common theme of the Board's deliberations seems to be that the Board wishes to be fiscally responsible, has instructed management to assess and report upon alternatives by which GRHSB could eliminate the gap between expense and revenues, and considered such reports. But the Board has not taken effective action to reduce costs, increase revenue and/or reduce services to better match the operating funds available to it. As recently as February 2004, the Board has approved "the cost saving measures, as presented, for submission to the Department of Health and Community Services with the following provisions:

- Government consider that the home support budget for GRHSB is the lowest per capita in the province
- Government wait for the report of the Best Practices Review before making a decision regarding these measures and
- Government consider that the implementation of these measures will have a significant impact on the services provided to the people of this area.

And then, the Board submitted its plan and continued operations without making the necessary changes to achieve a surplus.

In recent years the Board has approved operating budgets that would result in significant deficits. The operating losses materialized as forecast. As a result, the Board's working capital position has deteriorated significantly.

The Board continues to incur operating losses and watch its working capital position deteriorate. The Board continues to wait for the province to increase funding to solve its problems or to grant permission for the Board to take action. It is unwilling to take action on its own to preserve the fiscal

integrity of the organization[20]. It is hoped that the findings of this Best Practices Review will provide the Board with insight into the appropriate actions that it might pursue to achieve an operating surplus and over time retire its debt.

The Board must be even more aggressive in pursuit of opportunities to reduce costs through improved clinical and operational efficiency and/or reduced content of care before it considers reducing service volume or seeks additional funding from the Ministry.

It should be noted that effective accountability requires a commitment by both parties to fulfill their respective roles and to respect and support the other party in the process. The Department must clearly identify its expectations (both service delivery and financial) to the Board, and then allow the Board to make the changes necessary to meet these expectations. In turn, the Board should insist that management aggressively pursue opportunities to minimize costs. The Board should direct management to more aggressively pursue opportunities to increase non-ministry revenues or reduce costs through improved clinical and operational efficiency and/or reduced content of care before considering reductions in the volume of services or seeking additional funding from the Department. And if there are no further opportunities to increases revenues or reduce costs, rather than incur losses, the Board must be prepared to implement service restructuring that will reduce costs and finally, if left with no other recourse, the Board should reduce service volumes. It cannot continue to spend more funds than are provided by the Department of Health and Community Services. And in the end, it should not look to the Department to provide license for it to take action to reduce costs. The Board is accountable for the operation of health and community services in the Grenfell region, and it must assume the responsibility to take the necessary actions to ensure the continuing fiscal integrity of the organization.

If the board is to be effective in managing its fiscal affairs, the Minister must grant it the autonomy to take responsible action.

To be fair, the Department of Health and Community Services has been reluctant to allow the Board to take several initiatives that would have served to both improve effectiveness and reduce the cost of operations. When asked, the Department has told the Board not to act. If the board is to be effective in managing its fiscal affairs, not only must it assume responsibility for action, the Minister must grant it the autonomy to take responsible action.

[20] It should be noted that if an action requires capital spending, then the Department needs to approve the capital expenditure. In recent years, the Board has been unable to obtain the necessary approvals and capital funds to implement some of its cost reduction/service enhancements strategies.

Recommendations:

It is recommended that:

(11) The Board should take responsibility for the financial health of the Region by insisting that management aggressively pursue opportunities to minimize costs and maximize non-government revenues.

(12) The Board should take more responsibility for the financial health of the Region by implementing reasonable service restructuring to achieve necessary cost savings.

3.3.5.1 Monitoring Financial Health

The Board is receiving reports that provide the annual budget, current month actual, budget and variance and YTD actual, budget and variance. A written narrative that summarizes the organization's current position and explains the causes of variances in revenues and expenses supports these reports.

Importantly, the Board also receives a forecast of the organization's year-end position based on activity to date and known exogenous events. This report presents forecasts of revenue by source and expenses by type compared to the annual budget. The statistical reports are augmented by a prose report describing the forecast and highlighting significant variances. However the focus is on explaining the variances, not on initiatives that might correct for forecasts of significant year-end variances from plan.

There are weaknesses in the analyses of variances in current and projected performance.

There are several opportunities to improve the Region's approach to analyzing variances from plans and budgets. We feel that financial and performance reporting to the Board should help it to understand:

- Causes of variances from plan,
- Impact of the variances on the running rate of costs for the organization,
- Potential impact on year-end results,

and should identify variances that might be corrected through management initiatives. Thus variances from budgeted levels of expenditure should be identified and measured as variances that are caused by:

- Variances from planned volumes/workload

- Variances from planned unit costs (of labour or materials)
- Variances from planned levels of productivity

Making these analyses available to the Board would allow Board members to better exercise their responsibility for monitoring and maintaining the financial health of the organization.

Thus we feel that the effectiveness of financial reporting to the Board could be enhanced with the following changes:

- The narrative component of the report should be expanded and enhanced to provide a discussion of opportunities for corrective action to achieve the operating plan or budget targets and an explanation of actions undertaken or planned to correct for negative variances. We further suggest that the Board should direct management to propose and undertake these mid-year corrective actions to achieve budgeted levels of performance.
- The reports should present selected volume statistics for the corporation as a whole (separations, patient days, etc.) and selected operating units and services (OR Cases, Emergency Visits, CAT Exams, etc.), and variances from the plan.
- The reports should also include a set of corporate performance indicators that present a comparison of the corporation to benchmark levels of performance of other like organizations (or elements of like organizations). Also, performance on these indicators should be contrasted with budgeted levels of performance. The reports should provide explanations of variance and planned corrective actions. Indicators for the hospital, for example, could include nursing and total paid hours per patient day; total paid hours per adult weighted case; adult and newborn average length of stay; administrative expenses as a % of total operating expenses, etc. Similar indicators should be developed for other elements of the Board's responsibilities.
- And, it should not be acceptable for the organization to achieve only average levels of performance relative to its peers. GRHSB should be striving to be a high performing organization.

It should be noted, however, that the organization is improving its structural foundation to support variance analysis. Variance analysis is now embedded in its

management processes. It now needs to take advantage of this information to better control costs in relation to plans.

Recommendations:

It is recommended that:

(13) The AED, Finance and Administration should further expand and enhance financial and statistical reporting to the Board to include more comprehensive analyses of variances from plan that provide not only the cause of the variance but also potential corrective actions.

(14) The AED, Finance and Administration should expand financial reporting to the Board to include reporting of the clinical and operational performance underlying the region's financial performance.

(15) The AED, Finance and Administration should further expand and enhance statistical performance reporting to the Board to provide comparisons with similar organizations in Canada.

3.3.6 Ensuring & Monitoring Quality of Services

A fundamental responsibility of governance is ensuring and monitoring the quality of services.

A fundamental responsibility of governance is ensuring and monitoring the quality of services and continuing improvement of quality in all aspects of hospital operations. GRHSB seems to have assigned this responsibility to its Quality Council.

The minutes of the Board do not show evidence of any recommendation to establish or modify policies related to patient care from the Quality Council to the Board. While specific risk situations are discussed, and general operational concerns that might impact risk or quality are raised, they are not explicitly linked to existing or needed Board policies or initiatives. During 2003/04, no action was taken by the Board in response to the reports of the Quality Council (or the CQI Leadership Team).

Quality of care indicator measurement results and trend data is not routinely being provided to the Board.

Quality of care measurements and trend data are not routinely being provided to the Board. We believe that the Board, through the Quality Council, should also routinely receive performance measurement results for a small number of the more critical corporate performance indicators. These indicator results should be provided for information only,

unless the results fall outside a predetermined performance range. Where the performance is outside the range, the Quality Council should be required to report on the steps being taken by Region to address the factors that have contributed to the deviation in performance, and to identify whether changes in policies are recommended.

The indicators could include indicators such as:

- Hospital and program occupancy rates
- Hospital length of stay performance relative to CIHI expected length of stay
- Unplanned hospital readmission rates
- Risk adjusted in-hospital mortality
- Complications following surgery
- Indicators of the quality of nursing care.
- Patient satisfaction

Indicators should be developed and provided for each program and for each service modality offered by the Region. Given its mission and vision to improve the health of the community, consideration should also be given to reporting, at least on an annual basis on changes in the health status indicators (infant mortality, mortality, morbidity) of the population and comparisons with like communities across Canada[21].

The Board should monitor its performance over time so that it can be confident that quality of care is being maintained or enhanced.

It is important to monitor the selected indicators over time so that the Board can be confident that quality of care is being maintained or enhanced.

The organization might also consider developing or obtaining quality measurement tools for other key areas of performance such as dietary, housekeeping, imaging, laboratories and providing summaries of these measurements to the Quality Council.

[21] The Board indicates that its Quality Council has recently undertaken the development of a corporate indicator report. And it is planning an evaluation of its primary health care project, in consultation with the province's Office of Primary Health Care, that likely will incorporate measures of efficiency, effectiveness and quality.

The Board should compare its performance with external benchmarks to determine whether its performance is as good as or better than peer organizations.

The Board should compare its performance with external benchmarks to determine whether its performance is as good as or better than peer organizations. This will make the information provided to the Board much more useful in understanding the need for and/or opportunities to improve the quality of care and service being provide by the organization.

Recommendation:

It is recommended that:

(16) The Board should direct that management propose, develop and implement a Board quality monitoring system incorporating a set of critical indicators of quality of care for the Region.

3.3.7 Monitoring Effectiveness of Management

Reporting structures and mechanisms established by GRHSB have not allowed the Board to effectively monitor the effectiveness of management.

The Board of a health service organization bears overall responsibility for the effectiveness of the organization in fulfilling its mission. It is, however, dependent on management to provide it with sufficient information to fulfill this responsibility. We feel that reporting structures and mechanisms established by GRHSB have not allowed the Board to effectively monitor the effectiveness of management.

The Board receives regular reports from the Chair and from the Executive Director. Each report provides an update of current issues facing the corporation. The Board also receives a report from each of the standing committees. These committees are actively engaged in monitoring operational and management issues facing the organization.

As we have discussed, the Board is not setting annual objectives against which the effectiveness of management can be evaluated. Although its strategic directions do communicate to management the Board's desires regarding the organization's focus, and the corporate goals provide a focus for management activity, management has not established a framework for formally and systematically reporting on its actions in relation to these directions or goals. The Board is not receiving systematic reporting of the organization's overall performance related to its:

- Responsiveness to community needs
- Quality of care
- Efficiency of care
- Improvements in health of the community

- Quality of Work life

that would allow it to track the hospital's/management's performance or success in achieving the related corporate goals.

It should be noted that performance indicators should be related to the corporate goals. The number of indicators should be appropriated for Board level reporting. The Board should be monitoring a core set of indicators over time; they should not change from year to year. Management should identify critical or sentinel indicators and/or summary metrics related to each goal that can be used by the Board to measure the changing performance of the Region over time. It is important for the Board to be assured that the Region is maintaining or improving its levels of performance. And it is important for the Board to be assured that management is taking corrective action if performance begins to deteriorate. Detail related to the summary metrics could be provided to explain the reason and locus of any deterioration in performance.

These measures would be further enhanced by the addition of external benchmarking comparisons to the measurements of organizational performance.

Recommendation:

It is recommended that:

(17) The Board should instruct Management to develop a set of sentinel or summary indicators related to the hospitals mission, vision, values and strategic goals.

3.3.8 Annual Objectives and Performance Review of Executive Director

The annual process of setting and communicating the objectives for the Executive Director is critical in setting the direction for the entire organization.

Formally, the Board interacts with and provides direction to the organization through its Executive Director. The annual process of setting and communicating the objectives for the Executive Director is critical in setting the direction for the entire organization. The review of the Executive Director's performance in relation both to these objectives and to the responsibilities of the position is a critical tool for reinforcing the importance of both the objectives and also the values and desired culture of the organization. The performance of the Executive Director is critical to success of the organization.

In setting annual personal objectives for theExecutive Director, the Board should provide both critical responsibilities and also measurable objectives related to those responsibilities and to the Board's annual objectives for the organization.

The annual objectives for the Executive Director should include, as their fundamental component, the annual objectives for the corporation. As has been discussed, the Board of GRHSB does not set annual objectives for the organization. However, as part of the performance review process of the Executive Director, the Board did establish personal, annual objectives that related to the current needs of the organization. However the objectives 2003/04 were more a description of the duties and responsibilities of the Executive Director than a set of measurable objectives. Although it is important to clearly articulate the elements of the Executive Director's responsibilities that the Board feels are most critical, the Board and the Executive Director need to have a set of measures by which the Board and the Executive Director can determine whether he has fulfilled his responsibilities and met the Board's expectations. In setting annual personal objectives for the new Executive Director, the Board should provide both critical responsibilities and also measurable objectives related to those responsibilities and, most importantly, related to the Board's annual objectives for the organization as a whole.

The Board has assumed responsibility for evaluation of the Executive Director and delegated the review function to its CEO and Board Evaluation Committee. The Executive Committee created an evaluation and compensation subcommittee consisting of the Chair and Vice Chairs of the Board to develop and implement a review process.

Performance Evaluation of the Executive Director.

In evaluating the critical responsibilities of its Executive Director, the Board might consider a "360 degree" feedback process to inform their evaluation of the Executive Director. It can provide input into an evaluation of the competencies demonstrated by the Executive Director and his performance relative to his annual goals and objectives. The questionnaire should include ample space for comments by raters, both on specific goals and competencies, as well as general comments. The questionnaire might be circulated to the following:

- Executive Director for self-evaluation
- Board of Directors
- Medical leadership
- Executive Team
- Selected managers and front-line staff
- Selected external stakeholders

A summary report should be prepared and reviewed with the Board Chair and then with the Executive Director. The report should consider the Executive Director's standing relative to the necessary competencies for the position and achievement of his annual goals and objectives. The Board Chair should meet with the Executive Director to discuss the results of the evaluation.

Recommendation:

It is recommended that:

(18) The Board should set annual performance expectations and objectives for the Executive Director that incorporate the objectives for the organization.

3.4 Management Structures & Processes

Management is responsible for the effective and efficient operation of the organizationl in accordance with the direction set by the Board.

It is generally accepted in the health care industry that management is "responsible for the effective and efficient operation of the organization in accordance with the direction set by the Board".[22] Management of a health region is expected to fulfill its responsibility by:

- Providing leadership to the health services community
- Developing and implementing strategies for achieving the region's objectives
- Creating organizational structures and processes
- Directing and overseeing the delivery of health services
- Improving efficiency of health services
- Improving effectiveness and quality of health services and care
- Recruiting and developing staff
- Reporting to Board on the effectiveness of the services operated by the region

The organizational health and effectiveness of a health service organization is dependent on the successful execution of these responsibilities. Generally, the management of Grenfell Regional Health Services Board has been and continues to be

[22] From "Into the 21st Century: Ontario's Public Hospitals, Report of the Steering Committee, Public Hospitals Act Review, Ontario Ministry of Health, Toronto, Ontario, February, 1992.

effective in most of its areas of responsibility. Its major failing has been its inability to implement strategies to improve efficiency, reduce costs and improve the quality of care.

3.4.1 Senior Management Organization

Senior management at GRHSB is challenged by the need to operate a wide variety of services on sites throughout the region while integrating programs and services across modalities of care and sites.

Senior management at GRHSB is challenged by the need to operate a wide variety of services on sites throughout the region while integrating programs and services across modalities of care and sites. The Region has recently reorganized to improve the effectiveness of management and, in the process has reduced the size of the senior management team. GRHSB has chosen a modified matrix approach to the management of sites and services. This is a reasonable and potentially effective approach to addressing a significant management challenge. And it seems to be effective for the purposes and services of GRHSB. The only improvement that we would suggest relates to the Direction of Nursing Services in the Region. Because of the diversity of modalities of nursing care, the number of nurses functioning independently, and an interest to reduce the number of management layers in a relatively small organization, we feel that the AED, Nursing Services position should be eliminated and replaced with two new AED positions:

- AED, Acute Care Nursing (incorporating the current role of Acute Care Director)
- AED, District Health and Continuing Care Nursing (incorporating the current role of the Continuing Care Coordinator and assuming responsibility for the District Health Coordinators in Districts 1,2,3 & 4.

The AED, Nursing Services position should be eliminated and replace with two new nursing AED positions.

The AED, Acute Care Nursing should also be given portfolio responsibility for professional practice for nursing within the region. In a model where there are two nursing leaders at the senior team it is important to ensure a role that has specific responsibility for the professional practice of nursing at the senior management team. The shared governance activity is encouraged and the planned introduction of a multi-disciplinary professional practice committee is supported. The activities of this committee could also be represented at the senior management team by the AED, Acute Care Nursing.

This would further reduce the number of management positions by one, while at the same time recognizing and elevating the importance of nursing within the Region.

Recommendation:

It is recommended that:

(19) The Executive Director should restructure management to eliminate the AED, Nursing Service position and create positions of AED, Acute Care Nursing and AED, District and Continuing Care Nursing.

It is unusual for AEDs of a region to be appointed by the Board.

The Region's Bylaws provide that "The Board shall appoint a suitable and competent person to be the Assistant Executive Director, Finance and Administration of GRHSB. The Assistant Executive Director, Finance and Administration, shall be responsible to the Executive Director for all aspects of financial management of the affairs of GRHSB..."[23]. It is unusual for management staff of a health care organization to be appointed by the Board. This involvement in the appointment and direction of the management staff of the organization's contravenes generally accepted principles of separation of governance and management. The Board should appoint the Executive Director and the Executive Director is accountable to the Board. To fulfill his duties, the Executive Director must be able to select his management team and they must collectively and individually be accountable to him. They should not be appointed by or directly accountable to the Board; they are accountable to the Board through the Executive Director. And it should be noted that it is inappropriate for the Board to prescribe duties directly to an Associate Executive Director. If duties are to be performed, the Board should communicate these to the Executive Director and it is his/her responsibility to determine who would best be able to fulfill the duties.

Recommendation:

It is recommended that:

(20) The Board should revise the bylaws to provide for the appointment of Assistant Executive Directors independently by the Executive Director.

[23] Grenfell Regional Health Services Board, Memorandum of Association, Preamble and Bylaws, as Revised February 1999.

3.4.2 Operational Planning & Budgeting

Operational planning and budgeting are the annual management processes through which an organization implements its long-range plans and fulfills its mission.

Operational planning and budgeting are the annual management processes through which a health service organization implements its long-range plans and fulfills its mission. Typically these processes will include setting:

- Annual objectives for the organization
- Plans for the development, enhancement, maintenance, contraction or elimination of programs and/or services
- Performance expectations related to the
  - volume,
  - productivity,
  - cost, and
  - quality

  of services provided by each program and by each therapeutic, diagnostic, support and administrative service.
- Targeted expenditure levels for each element of the program
- Estimates of revenues

A health service organization needs the operating plan and related budget to describe and quantify its annual objectives and its planned program, service and fiscal initiatives. The plan and budget should be reviewed and approved by the Board, and thus is one of the most effective vehicles for ensuring accountability of management and staff to the Board, and the communities served by the organization.

GRHSB has developed a budgeting process that substantially meets these criteria for effective planning and budgeting.

The minimal process and content for operational planning and budgeting for health and community service regions in Newfoundland and Labrador has been codified through regulations articulated by the Department of Health and Community Services. GRHSB has developed operational planning and budgeting processes that incorporate the regulated processes.

However the operational planning and budgeting process at GRHSB focuses first on prior year's staffing and costs and responds incremental needs to add staff and seeks incremental opportunities to reduce staffing and costs. Ideally, the process

would focus first on plans for operations, and then translate these plans into the budget for the year. The focus should be operations, not costs.

Annual Objectives

Annual objectives should start the annual operational planning and budgeting process and should provide the framework for setting planning parameters and performance targets. GRHSB does not set formal annual objectives for the organization.

To the extent that the Board considers annual objectives, they relate more to performance characteristics rather than providing specific performance and achievement targets.

For maximum effect the region's operating plan, the budget and the evaluation of the Executive Director should be based on the same sets of organizational objectives, targets and performance measures. The Board would benefit from a formal process for setting annual objectives and from having these three processes brought into alignment.

Recommendation:

It is recommended that:

(21) The Chair of the Board should establish a process for setting annual objectives for the organization.

Performance Expectations

In general, GRHSB management should be commended for developing an inclusive, criteria-based process for developing its operating plans and budgets. However, there may be opportunity to improve the process by providing managers with more explicit organizational expectations of their operating plans and budgets. And, it needs to be noted that the region's operational planning and budgeting process has been unable to identify and implement operational changes or cost saving initiatives that would resolve the regions growing fiscal problems.

As stated previously performance expectations related to the volume, productivity, cost and quality of services should be provided to each site and therapeutic, diagnostic, support and administrative service department. These should be established as the starting point for the operational planning and budgeting exercise. We feel that an effective operational planning and budgeting process should be based on:

- Estimates of patient volume
- Targets for Clinical Efficiency
  - % Ambulatory

  - ALOS
- Targets for Content of Care
  - Departmental Workload per Separation/Ambulatory Procedure/Clinic Visit or other appropriate activity measure
- Targets for Operating Efficiency
  - Departmental Productivity
  - Unit Cost Estimates for Labour
    - targeted worked hours %
    - targeted benefit hours %
- Targets for Material and Supplies Productivity

The operational planning and budgeting process established by GRHSB does not explicitly relate costs to patient volume or workload. Nor does it explicitly consider potential changes to the content of care. It does not incorporate productivity targets, and external benchmarks for performance. And there is little if any explicit discussion regarding expectations regarding quality of care.

Communication of plans and budgets tend to focus on costs almost to the exclusion of discussion of patient volumes workload, productivity and quality. Discourse regarding operating plans and budgets along with planning tools should be expanded to include specification of expectations regarding patient volume, content of care, workload, productivity and quality.

Recommendation:

It is recommended that:

(22) The Executive Director and AED Finance should modify the operational planning and budgeting process to more formally and explicitly include consideration of patient volume, content of care, departmental workload and productivity targets.

3.4.3 Controlling Expenditures

To be effective in the execution of its responsibilities, management needs to be able to influence and ultimately manage all aspects of the clinical and non-clinical activities of a region.

The primary focus of management of a region is providing for and ensuring the effective and efficient provision of patient care and community services. Controlling expenditures suggests that management needs to set in place processes for managing efficiency. These processes should include:

- Cost Management-Controlling the cost of each unit of labour and material used by each department of the in providing its services or producing its products.
- Productivity Management-Measuring, monitoring and controlling the number of units of labour and materials employed in producing departmental services.
- Utilization Management-Measuring, monitoring and controlling the resources used in each episode of patient care (including length of stay in hospital).
- Utilization Management-Ensuring the appropriateness of each episode of patient care.
- Production Management-Measuring, monitoring and controlling the number of episodes of patient care.

The managers of a health region uses these processes to manage the overall content and cost of operations. To be effective in the execution of its responsibilities, management needs to be able to influence and ultimately manage all aspects of the clinical and non-clinical activities of a health region.

Through its management structure and management processes, the management of GRHSB has and is establishing structures and processes that will allow it to manage costs. However, best practice would provide for more focused and more aggressive control of costs.

A Quarterly Review Process reinforces accountability and provids a forum for identifying, discussing and planning for resolution of operational issues.

Of particular note is a quarterly review process being established by many health service organizations and health regions that focuses on financial performance, utilization, quality, and goals and objectives. These reviews reinforce accountability and provide a forum for identifying and discussing operational issues, and facilitating communication around key results areas.

Using an ‘accountability framework’ provides an organization-wide approach to assigning accountability and monitoring performance. The framework is the basis for conducting quarterly reviews incorporating:

- goals,
- objectives,
- action plans,
- indicators,
- monitoring and evaluation of performance, and
- communication

Each AED would be responsible for a formal quarterly review of each component of the portfolio. These Quarterly accountability reviews measure and monitor:

- Progress toward operating plan objectives
- Quality & Patient volume indicators
- Progress toward corporate goals
- Financial performance
- Variances from Plans
  - volume variances,
  - productivity variances or
  - cost variances
  - quality variances

External benchmarks/targets have been used to support these reviews including CIHI/Hay Benchmarking Study, CCHSA Accreditation Reports, OHA Report Card, Johnson & Johnson Operating Room Benchmarks, CIHI Databases, etc.

These reviews can form the basis for Quarterly Reports to the Board on selected indicators related to the organization's Corporate Goals.

The most important aspect of variance analysis is not the determination of the cause of the variance, but rather the determination of whether it is a controllable variance and the actions necessary to address the issue.

Variance analysis is critical to the success of the Quarterly Review Process. In refining its approach to variance analysis, it will be important for the region to remember that the most important aspect of variance analysis is not the determination of the cause of the variance, but rather the determination whether it is a controllable variance. If the variance is controllable then corrective action should be initiated, if it is an uncontrollable variance, then re-planning and re-budgeting should be considered to reflect the uncontrollable/unplanned event. Corrective actions should be taken in response to significant departmental variances. When these actions will impact on departments outside the portfolio, the proposed plan

of action should be reviewed with Senior Management prior to implementation. Corrective actions with significant implications for the region and/or re-budgeting with significant implications for year-end results should be reviewed with the Board.

Recommendation:

It is recommended that:

(23) The Executive Director and AED, Finance and Administration should introduce a Quarterly Review Process to provide for better performance management and expenditure control.

3.4.4 Management Reporting

Management information should focus on the "critical success factors" of an organization.

There must be a balance in management reporting. Too little information and too much information should both be avoided. Management information should focus on the "critical success factors" of an organization. For any organization, the critical success factors are the limited number of areas in which satisfactory results must be achieved in order to ensure the successful performance of the organization. These are the few key areas where "things must go right" for the organization to flourish. If results in these few significant areas are good, the organization will be successful. If results in these few areas are not adequate, the organization's overall performance for this period will be less than desired. The critical factors are areas of activity that should receive constant, careful attention from management. The current status of performance in each area should be continuously measured and made available to the appropriate managers.

The critical volume, productivity, cost, revenue and overall performance targets specified in an operational plan/budget should provide the foundation for effective management reporting.

The critical volume, productivity, cost, revenue and overall performance targets specified in an operational plan/budget should provide the foundation for effective management reporting. Management reports should provide managers with an indication of departmental performance in relation to operating targets and budgets for:

1. Utilization (e.g. Laboratory Tests per Separation)
2. Volume (Laboratory Tests)
3. Workload (Laboratory Workload Units)
4. Productivity (workload units per variable worked hour – per Unit Producing Personnel (UPP) worked hour)

5. Variable or Unit Producing Personnel worked hours
    - with separate reporting of overtime and call-back hours
6. Overhead worked hours (Management and Operational Support hours)
7. Benefit hours
    - with separate reporting of sick time
8. Total paid hours
9. Total Labour Costs
10. Labour cost per paid hour
11. Total Supplies Costs
12. Total Operating Costs
13. Revenues
14. Quality of service

Then, throughout the year, an effective management reporting system will concentrate on:

- Comparing actual results to targets
- Providing this information in a timely and accurate manner to support operating decisions

so that managers are able to understand and explain significant variances and develop plans for corrective actions to achieve the budgeted levels of performance. (Alternatively, if the causes of variance are outside the control of the organization, consideration might be given to formally changing the performance targets.)

Reporting for Departmental Managers

The organization currently provides functional centre managers with Current Period and Year-to-Date Reporting of Budget, Actual and Variance for:

- Hours
- Worked Hours
- Non-Worked Hours
- Total Paid Hours
- Salary Costs

- Benefit Costs
- Other Expenses
- Recoveries
- Net Expenses

Managers are also provided with a listing of current period transactions.

The level of detail provided by these reports is most useful for

- Monitoring financial performance in relation to plan, and
- Documenting individual expenditure items within categories of spending.

Other than financial performance, the reports do not provide an easily usable summary information on variances from other critical operating targets.

Other than financial performance, the reports do not provide an easily usable summary information on variances from other critical operating targets. They do not identify the critical variances requiring investigation and corrective action. Departments do not appear to receive regular reporting or analysis of budgeted and actual workload or productivity. There is no indication of the sources of workload by program.

The level of detail currently being provided will help department managers to understand and explain the expenditure items that may have led to variances from targets. But they are difficult to use in identifying the causes of these variances. As a result, reporting to front-line managers is not as effective as it might be in supporting the management of departmental activity or controlling costs.

Once it has addressed any issues of accuracy and timeliness, management should work to provide each department with higher-level summaries of departmental performance in relation to the critical operating and budget targets listed above. These can then be the basis for more effective variance analysis within the organization and discussion of causes of variances from plan related to one or more of patient volume, patient mix, departmental workload, productivity, and unit costs.

Recommendations:

It is recommended that:

(24) The AED Finance & Administration should extend management reporting to include measures that will better support identification and explanation of variance from plans.

(25) The AED Finance & Administration should ensure that all analysis of variance includes consideration of corrective action and/or the implications of the variance for year-end departmental, program and regional results.

3.4.5 Absenteeism Control

It is recognized that the GRHSB is but one participant in the provincial bargaining process and is therefore unable, on its own, to negotiate changes to the provincial agreements. There are, however, three areas where the Board should advocate for change that could result in significant cost savings for the organization and other health regions in the province.

Sick time provisions

The collective agreement provisions that provide for the accumulation of a "bank" of sick days are contributing to a culture of entitlement to days off as opposed to the intended purpose of providing income protection for employees experiencing legitimate illness. And yet, the agreement does not provide any income protection for employees who experience a non-work related long-term illness or disability.

The recently introduced 'Early and Safe Return to Work Program' is a welcome addition to absenteeism management in the province. Early return to work is in the best interests of both the employer and the employee. It should have a beneficial impact on both the quality and cost of Board services. And it should have a beneficial impact on the health and well-being of injured workers. To the extent possible, the region should continue any sense that participation in the program is voluntary.

Personal Paid Leave

The collective agreement also provides for personal paid leave in addition to paid leave for vacation, holidays and illness. We understand that employees are taking on average 2 of the 3 days of paid personal leave available to them subject to the qualifying criteria. Paid personal leave does not exist in most other jurisdictions. The high rate of utilization of this entitlement is further exacerbating the organization's high replacement costs.

The current provisions of the collective agreement both inhibit the ability of employer to legitimately manage employee absence and do not meet the income protection needs of employees. The AED, Human Resources should participate in advancing, through the provincial bargaining process, changes to the collective agreement provisions governing over time for

nurses and sick leave and personal paid leave provisions for all union employees.

Recommendation:

It is recommended that:

(26) The AED, Human Resources should advocate for and seek changes to the collective agreement provisions governing sick leave and personal paid leave provisions for union employees.

Attendance Management

Although relatively successful compared to others in the province, GRHSB acknowledges that there is still significant opportunity and need to reduce the amount employee absence due to illness and/or accident. Sick time is the element of benefit costs most immediately affected by management. At the same time there are potentially significant differences in the rules that determine qualification for, and payment of paid sick time benefits. To help to put regional differences in perspective along with the performance of the review organization, we compared the 2002/03 sick time usage of GRHSB both to the performance of the Newfoundland and Labrador peers, and to the performance of peers from elsewhere in the country.

Exhibit 3.1 shows GRHSB Sick time usage[24] compared to Newfoundland & Labrador peers. The comparison shows sick time hours as a percentage of worked hours for the four major reporting groups for hospital services. All areas except Ambulatory Care were better than the 25th percentile of the Newfoundland & Labrador peers.

Exhibit 3.1
GRHSB Sick Time Hours as a Percentage of Worked Hours (2002/03)

Area	GRHS	Newfoundland & Labrador Peers				Potential @ 25th %ile
		Low	25th	MEDIAN	MEAN	Hours
Administration & Support	**4.4%**	2.6%	6.6%	7.9%	7.7%	
Inpatient Nursing	**4.9%**	4.9%	6.7%	7.4%	7.5%	
Ambulatory Care	**6.6%**	0.0%	5.8%	6.4%	5.8%	998
Diagnostic & Therapeutic	**2.2%**	0.4%	3.0%	5.1%	4.4%	
			Potential @ 25th %ile			998

[24] This analysis is based on the total sick time hours and the total worked hours reported for all staff in each site in the region.

Exhibit 3.2 shows GRHSB Sick time usage compared to peers located elsewhere in Canada. The comparison shows sick time hours as a percentage of worked hours for the four major reporting groups for hospital services. Sick time usage rates appear to be significantly lower in the other provinces. Three areas were worse than the 25th percentile of these peers, for a total potential saving of 8,433 hours if the 25th percentile could be achieved.

Exhibit 3.2
GRHSB Sick Time Hours as a Percentage of Worked Hours (2002/03)

Area	GRHS	NON N & L PEERS				Potential @ 25th %ile
		Low	25th	MEDIAN	MEAN	Hours
Administration & Support	**4.4%**	3.8%	4.6%	5.3%	5.5%	
Inpatient Nursing	**4.9%**	1.9%	3.6%	5.2%	5.2%	3,492
Ambulatory Care	**6.6%**	1.0%	2.7%	3.9%	4.2%	4,638
Diagnostic & Therapeutic	**2.2%**	0.4%	1.7%	2.8%	2.8%	302
			Potential @ 25th %ile			8,433

With more effective interventions, the corporation should be able to further reduce employee absences and generate cost savings. GRHSB should develop and implement an Early Intervention Management Program[25] to reduce employee absenteeism. The critical features that such a program should include are:

- High level support from the Executive Director and all members of the senior management team.
- Collaboration among Human Resources, Occupational Health and Unions.
- Clearly written guidelines communicated to all employees, supported by education for all employees and managers.
- Consistent application of the program for all employees, full and part time.
- Consistent application of the program for all absences due to illness, accident or personal issues. These include short and long term, compensable and non-compensable absences.

[25] Early Intervention Program Case Studies and Examples can be found in "Windows of Opportunity: A Reference Manual for Early Intervention Management, OHA, March, 1977 and in HR Professional, the Magazine for Canadian Human Resources Professionals, December 2001/January 2002.

- Regular monitoring and evaluation of the outcomes of the program.

A consistent approach should be taken for all absences, both work and non-work related absences, and should include the following core elements:

- Clear guidelines that define sick for both short and long term absences
- Tracking and analysis of employee absences at the employee, program/department and hospital wide levels
- Regular contact with and monitoring of the health status of the absent employee
- A team approach to early intervention and return to work involving the employee, union. manager, occupational health and human resources
- Return to work programs that address the needs of individual employees, their work areas giving consideration to safety issues and the impact on patient care and co-workers

The overarching philosophy of the program should be that maintaining the workers well-being on the job and restoring the worker to health and the concomitant return to work are in the interest of both the worker and the employer.

Recommendation:

It is recommended that:

(27) The AED, Human Resources should develop and implement an Early Intervention Management program to reduce employee absence due to illness and/or accident.

3.5 Medical Staff Involvement in Governance and Management

3.5.1 Organizational Climate

The medical staff is committed to delivering high quality medical care to people with unique health needs in isolated communities in a very remote part of the province.

There is special culture among the medical staff in Grenfell Region that is an undoubted legacy of the early days of the Grenfell mission. The medical staff as a whole is committed to delivering medical care in a very isolated part of the province in which the local population has unique health needs. The medical staff has become largely self-sufficient, providing many services within the local community, a wider

range of services in fact than one would typically associate with a small community and a relatively small catchment population.

In simple terms, there are two groups of physicians in the community. The two groups differ in terms of length of stay and therefore their level of long term commitment to the Region. The first group consists of physicians (including dentists) who have been in the community five to ten years or more. The second group includes physicians who are transient in nature, usually remaining in the community for two to three years. There were no obvious visible undercurrents of medical staff politics. Rather the medical staff seemed to be focused on practical issues such as on-call, availability of physician human resources and accessing needed medical resources in a series of isolated communities.

The physicians in the region need to be and are prepared to be supportive of one another in order to deliver a relatively seamless continuum of health services.

There is generally a good understanding within the medical community that the physicians need to be and are prepared to be supportive of one another in order to deliver a relatively seamless continuum of health services. However, there are occasional difficulties accessing medical services inside the region and some difficulties accessing services within the region. The former may be based in part on the fact that the transient nature of a significant proportion of the medical staff and remote practice settings make it difficult to establish professional relationships based on face-to-face contact. The latter appears to be based in part on the fact that there are no formal referral relationships between GRHSB, WHCC and St. Johns.

3.5.2 Physician Leadership and Organizational Structure

In general, the medical staff organizational structure is adequate to meet the needs of the relatively small medical staff in the Region. The more important challenge is to ensure that the medical staff leaders lend support to challenges associated with recruitment and retention and with quality and utilization management.

The medical staff structure consists of a Chief of Staff and a single Medical Staff Committee (MSC).

The Committee structure consists of the Medical Advisory Committee, Credentials, Pharmacy and Therapeutics, Patient Audit and Ethics etc. The committees, including the MAC report to the Medical Staff Committee, the MSC reports to the Joint Conference Committee which reports to the GRHS Board. Chiefs of Service report to the AED, Medical

Services, who reports to the Executive Director. There is a parallel structure wherein the Chief of Staff works with the AED Medical Services, Chiefs of Service and committees and reports directly to the GRHS Board.

The Chief of Staff is appointed by the Board following the recommendation of the Medical Advisory Committee. The Chief of Staff and the Medical Advisory Committee appear to be accountable directly to the Board for the quality of medical care provided all sites, including the Community Health Centres.

Various clinical departments such as the Departments of Family Practice, Surgery and Medicine have chiefs of service, although given the small size of the medical staff, this kind of organizational structure may be superfluous.

The physicians in the smaller communities do not appear to be specifically represented and do not feel that they are represented within the Medical Staff organizational structure. Physicians in the smaller communities felt that it was impractical for them to attend meetings of any kind in St. Anthony, although it appears that there were regular meetings of the medical staff at one point in time. It is reported that these medical staff meetings are no longer taking place however. Perhaps video conferencing can be employed to facilitate participation of medical staff from the smaller communities.

The physicians in the three Community Health Centres are represented through their Chief of Service; but there is no one on the Medical Advisory Committee who can reflect the issues and interests of these smaller communities. There seemed to be a general sense of disconnectedness between the medical staff in St. Anthony and those in the Community Health Centres. Given the need for collegiality and collaboration among physicians in general, it is possible that this lack of connectedness contributes to the relatively high turnover of physicians, particularly among those in the Community Health Centres.

Recommendation:

It is recommended that:

(28) The AED Medical Services should make arrangements to facilitate attendance of Medical Staff Committee meetings by each member of the medical staff.

3.5.3 Committee Structure

Overall, the Medical Staff Committee and its subcommittees function reasonably well. However, the activities of the MAC seem to focus largely on issues pertaining to medical care in St. Anthony and in particular at the Charles S. Curtis Memorial Hospital; the Community Health Centres and the nursing stations appear to be beyond the functional purview of the MAC being left to function relatively autonomously with respect to issues of quality of care.

The Board might consider restructuring its MAC to become a Professional Advisory Committee (PAC) to better integrate the impact, interests and issues of nursing related to the health care services provided by the Board.

Given that much of the health care in the Region is actually provided by community based nurses, including midwives, it is reasonable to expect representation of these health care providers on the MAC and to be part of the quality management process in the Region. Given the extent to which nursing services are responsible to provide direct patient care in the region is not clear that nursing is adequately represented on either the MAC or within the Region's quality management process. The Board might consider restructuring its MAC to become a Professional Advisory Committee to better integrate the impact, interests and issues of nursing related to health care provided by the Board and the health of the communities served by the Board.

Recommendations:

It is recommended that:

(29) The Medical Advisory Committee should develop and deploy a process for reviewing and addressing quality of care issues in all sites, including the Community Health Centres.

(30) The Board should ensure that community-based nursing, including midwives have representation on the MAC.

3.5.4 Quality Management

Medical staff need stronger processes for ensuring the quality of medical care

Quality management is a challenge in GRHSB. While incidents appear to be addressed, on a 'one-off' basis, there does not appear to be a systematic approach to quality management. There is an impression that the focus in GRHSB is primarily on ensuring that there are sufficient medical staff to provide clinical services and on-call coverage, which is a structural pre-requisite for quality. However there needs to be proactive attention to the quality of care being provided by the medical staff. While the quality of care provided by the

medical staff may be perfectly adequate, it appears that the approach to quality management is reactive rather than proactive.

The Medical Advisory Committee should develop and deploy a process for reviewing and addressing quality of care issues in all sites, including the Community Health Centres.

It was not clear that there is a formal approach to quality management in the facilities in the smaller centers. This might be expected since the only site in which there is significant inpatient activity is in St. Anthony. However, the Medical Advisory Committee should develop and deploy a process for reviewing and addressing quality of care issues in all sites, including the Community Health Centres. This includes the regular review of quality indicators that apply to an ambulatory environment and, as appropriate, actions to improve quality in the Boards ambulatory facilities.

There do not appear to be any local standards for continuing medical education (CME) with respect to clinical development that may be useful to physicians working in small communities. The physicians appear to be conscientious about CME. Although it appears that most of the medical staff use some of their generous leave time to attend CME events, the amount and type of CME taken appears to be left up to the discretion of the individual. CME is a mandatory requirement of credentialing and reappointment to the medical staff.

3.5.5 Utilization Management

The Chief of Staff is supposed to play a role in managing the utilization of clinical resources. However, it appears that there is no real concerted effort to achieve effective and efficient clinical resources utilization in the Region for a number of reasons that include, but may not be limited to the following:

- In many cases, patients are airlifted (Medevac) or sent by ambulance from the Community Health Centres and Community Clinics to St. Anthony without reference to formal criteria to determine which patients need to be sent for medical reasons.
- In some cases, patients are sent to hospital from outlying centres because the patient and/or the family put pressure on local provider staff to send the patient to St. Anthony.
- In some cases, providers in the field do not have the confidence to provide care locally to patients with certain types of presenting symptoms (e.g., chest pain).
- Diagnostic technologies are not available in the outlying centres (e.g., cardiac markers, ultrasound).

- The outlying centres do not have the capacity to provide care to patients who require in-hospital treatment.
- There are different standards for length of stay of hospitalized patients. Patients who live in St. Anthony may be discharged from hospital earlier than patients from outlying centres due to concerns about the care management requirements of patients who develop complications.

The Chiefs of Service are accountable to the MAC. They have responsibilities that include but are not limited to the efficient use of resources. The AED, Medical Service, Chief of Staff and the Medical Advisory Committee share responsibility for utilization management. However, perhaps for the reasons mentioned above, it does not appear that utilization management is a high priority of the MAC or of the organization.

Overall, it does not appear that the medical staff leaders are playing a major role in quality and utilization management in the Region. It does not appear that there is any sort of accountability framework for quality and utilization management. Nor does it appear that there is much in the way of systematic reporting to the medical staff about quality and utilization, nor is there an attempt to identify and discuss pressing issues. There is no obvious evaluation of utilization performance. For inpatients, physicians are left pretty much to their own devices with respect to how long a patient stays in hospital, what kind of procedures are done in the operating rooms etc. It appears that the main reason for this lack of attention to utilization management is the GRHSB culture of service and the delivery of medical care to a population in need regardless of potential opportunities to improve the efficiency and effectiveness of medical care.

There should be greater emphasis on utilization management within the hospital setting in GRHSB.

There should be greater emphasis on utilization management within the hospital setting in GRHSB. There should be regular reporting of utilization management performance by physician to all physicians who utilize inpatient resources. Physicians who practice in hospital appear to require and should be provided more information about their performance. To achieve this end, the Region's AED Medical Services needs to assume an active role in utilization management to identify opportunities to improve efficiency throughout the health system in both the inpatient and outpatient settings. Due to the geography, and the shortage of primary care in the outlaying areas, it may be that no universal standard can be

applied, but all potential opportunities to reduce admission and manage the length of stay of hospitalized patients must be identified and responded to. Also, success in this initiative will require that the Chief of Staff partner with senior management and specifically with the AED, Medical Service to ensure that all potential opportunities to improve quality and utilization of medical services are identified. And, medical staff leaders should be encouraged and funded to attend educational programs to enhance their leadership skills and functioning. (e.g., Physician Management Institute courses).

Recommendations:

It is recommended that:

(31) The AED, Medical Services should ensure that medical staff leaders attend educational programs to enhance their leadership skills.

(32) The AED, Medical Services should ensure that utilization data are collected, disseminated to and used by the medical staff for performance monitoring and improvement.

3.5.6 Medical Staff Recruitment and Retention

One of GRHSB's greatest challenges is recruiting and retaining medical staff.

One of GRHSB greatest challenges is to recruit and retain medical staff in all disciplines including medical specialties and family practice. If it has difficulty in attracting Canadian trained physicians with valid national licensure, the Region makes extensive use of foreign-trained physicians. Foreign trained graduates may obtain limited licensure that enables them to work in Newfoundland and Labrador. They cannot work elsewhere in Canada until they have written and passed relevant qualifying examinations that allows them to work elsewhere in Canada.

Physicians and dentists find the work in GRHSB rewarding and challenging. They like the lifestyle associated with living in the Region (e.g., safe environment for raising a family, easy access to the hospital and home, the friendliness and respectfulness of patients). However, with the exception of those providers who have lived in the region for many years and who have chosen to make it home, many of the physicians find themselves geographically, professionally and in some instances socially isolated. The degree of isolation was regarded as profound in many instances and it is clear that this

contributes to the lack of long term commitment and medical staff turnover in both primary care and the specialties.

Thus there are two groups among the medical staff, namely those who are in the Region for the long term, in effect permanently and those who are transient, have not made a long term commitment and are unlikely to do so. The sense is that because of the implications of geographic isolation, it is becoming increasingly difficult to recruit committed providers who are willing to locate in the Region for the long term. It is anticipated that this problem will worsen as some of the older, long-term members of the medical staff reach retirement age; recruitment and retention of medical staff is likely to become an even more difficult challenge over time.

The AED, Medical Services should develop an achievable physician human resources plan that is more focused on primary care, general surgery and general internal medicine.

It is not clear that GRHSB has a long-term strategy to address future recruitment issues. The approach to recruitment in the short term is based on the historical staffing complement that consists of a full range of medical specialties that includes family practice, internal medicine, dentistry, general surgery, orthopaedic surgery, anaesthesia, obstetrics and gynecology, ophthalmology, paediatrics, pathology and radiology. This is a very rich staffing model for a small population and one which is can be expected to be difficult to fill in the future. Physicians in certain of the specialties will become increasingly difficult to recruit because of expectations about critical mass (physicians within the specialty and patient volumes). Furthermore the growing interest that physicians have in balancing lifestyle and career, will add to the difficulty in recruiting. Thus GRHSB will have to consider changing its staffing mix. It should do this proactively through planning rather than in reaction to exogenous circumstances. Under aegis of the Board and Senior management, the Medical Director should develop a physician human resources plan that is both realistic and achievable. This plan must be less focused on surgical subspecialties and more focused on primary care (e.g., family physicians with interests in rural medicine), general surgery and general internal medicine. In developing this plan the AED, Medical Services should liaise closely with the office of the Dean of the Faculty of Medicine at Memorial University to utilize its resources and knowledge to develop a physician human resources plan based on the needs of the populations served, the Mission and Vision of the organization and current and future availability of medical staff in Newfoundland and Labrador and the ability to attract them to the Grenfell Region.

Recommendation:

It is recommended that:

(33) The AED, Medical services should develop a physician human resources plan.

3.5.7 Orientation and Education

New family physicians feel that they are left unprepared for working in the field, particularly in the smaller, outlying communities.

When new family physicians are recruited to the Region, they have a two-week orientation in St. Anthony before they start in the field. A number of the physicians commented that they felt unprepared for working in the field, particularly in the smaller, outlying communities. The orientation seemed to be more focused on learning about how the local health system works than imparting clinical knowledge that is relevant to remote medical practice. Many described what they referred to as scary moments, caring for patients with serious medical complications and without access to facilities offering higher levels of care because of bad weather etc. Of course situations like this will always exist in rural medicine. The challenge is to prepare medical staff as much as possible for addressing these patient care crises when they arise. The current orientation process needs to be evaluated to determine if it is sufficient to meet the particular needs of new, less experienced medical staff. The orientation process may need to be lengthened. As a matter of ensuring quality of care and increasing the confidence of primary care physicians in the field, any gaps in the special needs of rural physicians for clinical knowledge in the management of urgent and emergent medical need to be identified and addressed during their orientation[26].

As part of CME related to credentialing and reappointment, it should be mandatory for all physicians in GRHSB working in direct patient care to achieve certification in Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support (ATLS). Those members of medical staff working with infants and children in potential emergency situations should also take Paediatric Advanced Life Support (PALS). Certification in these programs will improve the confidence level of front line medical staff and improve patient outcomes as well.

[26] GRHSB reports that it has recognized physician orientation as an issue and is attempting to address it through its Primary Health Care (PHC) Project. It will be employing an existing competency based model.

Recommendations:

It is recommended that:

(34) The AED, Medical Services should modify the physician orientation program to ensure that it meets the particular needs of new, less experienced medical staff being recruited to the region.

(35) The AED, Medical Services and the MAC should ensure that all medical staff working in direct patient care in the region achieve certification in Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support (ATLS).

3.5.8 Medical Staff and Management

There is an overall sense of satisfaction among the medical staff with what appear to be healthy and collaborative relationships with senior management of the GRHSB and the management of individual facilities within the Region, including the Hospital and the Community Health Centres.

There was an overall sense of satisfaction among the medical staff with relationships with senior management of the GRHSB and the management of individual facilities within the Region, including the Hospital and the Community Health Centres in three separate locations within the region. These relationships seemed to be healthy and collaborative. Nor were there any particular complaints voiced by senior or mid-level management centrally or in the Community Health Centres.

Management was perceived by the medical staff to be supportive of the interests and concerns of the physicians. There was a sense that certain requests for new equipment for example were a function of budgetary restrain that was beyond management's control. The medical staff noted that certain sensitive issues such as differentials in on call payments had less to do with senior management at the GRHSB than with policies determined at the provincial level in St. John's.

It also appeared that the rank and file among the medical staff were not much involved with or particularly involved in day to day management issues pertaining to the Board. From their perspective, operations were generally smooth and efficient and did not seem to impact day to day medical care.

4.0 Populations, Programs and Services

This section of the report focuses on an analysis of the utilization of GRHSB hospital services by the residents of the region and a descriptive analysis of the hospital programs offered by the region.

The Grenfell Regional Health Services Board provides a comprehensive range of institutional and community based services under one administrative structure in Northern Newfoundland and the Labrador South Coast. The Grenfell Region includes the area north of Bartlett's Harbour, to Englee and the coastal Labrador communities south of Black Tickle. It has a population of 16,000 persons. The population of the regional has decreased by 16% from 19,000 persons in 1991.

The Grenfell Regional Health Services Board operates one hospital, one nursing home, three health centres, four community clinics, and community health offices in five locations. There are 54 acute care beds, 63 long-term care beds and 16 holding/observation beds in the region.

This section of the report focuses on an analysis of the utilization of GRHSB hospital services by the residents of the region and a descriptive analysis of the hospital programs offered by the region.

Data Sources

To support the analysis of utilization of hospital services, we obtained Canadian Institute for Health Information (CIHI) discharge abstract database (DAD) data from the Newfoundland and Labrador Centre for Health Information (NLCHI). This data included all inpatient and same day surgery (SDS) separations from Newfoundland and Labrador acute care hospitals during fiscal year 2001/02 (which was the most current year for which complete provincial data was available to the project).

The NLCHI edited the data (including geographic assignment, based on patient residence) and then forwarded the edited dataset to CIHI for application of updated Case Mix Group (CMG) and Resource Intensity Weight (RIW) assignments. The data was grouped using the CMG 2003, using revised ICD-10 translations and the revised grade list diagnoses. The CMG 2003 and RIW 2003 assignments were used so that the data would be compatible with data available to the consultants from the annual CIHI/HayGroup Benchmarking Analysis of Canadian Hospitals. The updated assignments also minimized the potential impact of previously identified ICD-10 to ICD-9 code translation errors and reduced the impact of the "upcoding" of grade list diagnoses in the comparative data from Ontario.

Program Assignment

All of the acute care data was assigned to a "program cluster category" (PCC) to support program-based analysis. The PCCs are similar to the major clinical category groupings of CMGs used by CIHI, but are subdivided by medicine and surgery. PCCs were used instead of doctor service categories to overcome the limitations of variation in doctor service assignment across organizations and jurisdictions.

4.1 Populations' Utilization of Programs & Services

The analyses of utilization of programs and services are based on the assignment of patients to geographic areas according to their place of residence, not the location of the hospital that provided their care. Utilization data organized in this manner can be used to assess the rates of use of hospital services by the populations of different geographic communities, and to identify patterns of reliance on individual hospitals.

4.1.1 Program/Service Population Utilization Rates

Standardized utilization rates are compared across regions to help identify populations for which there may be opportunities to modify their patterns of reliance on hospitals or for which increased investments in non-hospital health services may be required.

The basic measure of utilization of acute care services used for this project is the number of hospital separations (both inpatient and day surgery) per 10,000 population used by the residents of a geographic area. The rates are "age/gender standardized", meaning that they are adjusted to reflect the age and gender composition of the population. This allows comparisons of rates across regions that may have very different demographic structures. This is necessary because the elderly rely much more on acute care hospital services and a region with a higher percent of elderly residents will have much higher crude rates of use of hospital services. Standardization removes the impact of the differences in distribution of residents by age, and allows more direct comparison of the propensity of populations to use acute care hospitals for their health care.

Standardized utilization rates are compared across regions to help identify populations for which there may be opportunities to modify their patterns of reliance on hospitals or for which increased investments in non-hospital health services may be required.

The initial assumption when comparing utilization rates is that after standardization, all other factors being equal, all communities should have similar utilization rates, which reflect the natural burden of illness and injury, and the services that hospitals provide to treat these illnesses and injuries.

When a community is identified with high utilization, it may reflect:

- Unnecessary over-servicing of population (i.e. capacity for acute care greater than need for acute care).
- Necessary response to poor health status of population (i.e. a burden of illness greater than would be expected, given the population demographics, due to factors such as environmental challenges, lifestyles, or poor socio-economic status).
- Lack of availability of alternative non-hospital health care providers (i.e. the hospital plays a broader role in the provision of primary or long-term care because of inadequate capacity of these services in the community).
- Geographic impacts, where the threshold for admission to (and discharge from) a hospital in a region with a widely distributed population may be very different from the threshold in a densely populated urban area.

Low utilization may reflect:

- Under-servicing of a population (i.e. insufficient capacity to respond to population need).
- Appropriate response to population with good health status (and less need for care).
- Reduced reliance on hospital care because of enhanced availability of primary and community care.

4.1.2 Demographic Profile of Populations in the Regions

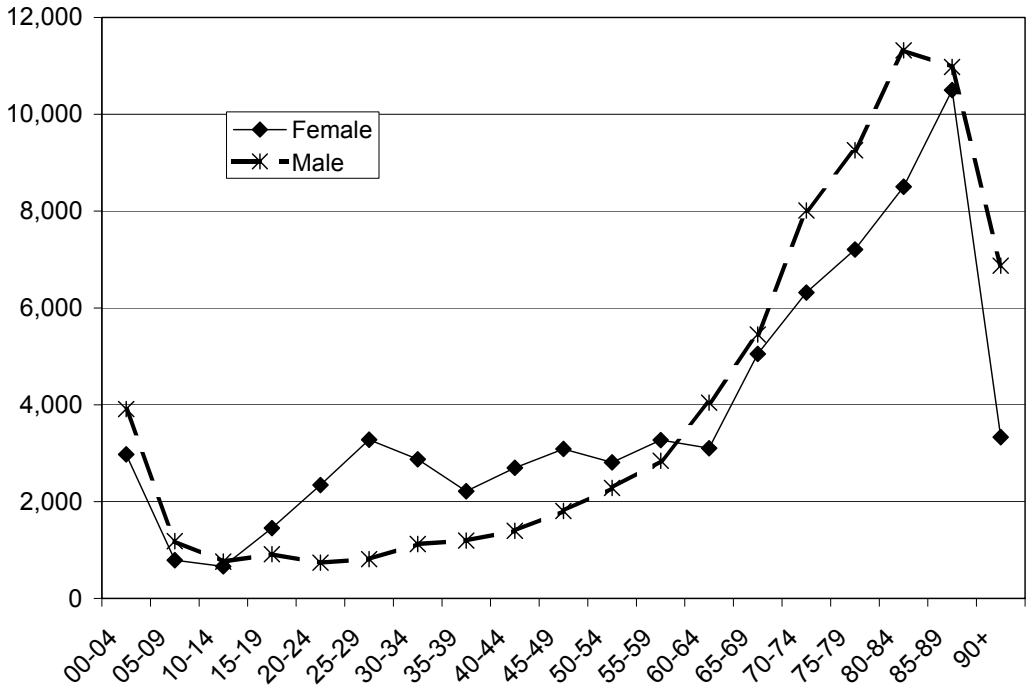
Exhibit 4.1 shows the distribution of the 2001 populations of each Newfoundland and Labrador health region by gender and age.

Exhibit 4.1
Distribution of Newfoundland and Labrador Population
by Age/Gender Group (2001) by Health Board

Age/ Gender Group		H&CS - St. Johns	H&CS - Eastern	H&CS - Central	H&CS - Western	Hlth Labrador Corp	Grenfell RHSB	Nfld & Lab
Female	0 to 19	22,316	13,219	11,786	9,742	3,819	2,056	62,938
	20 to 44	38,206	19,249	17,645	14,577	4,924	3,140	97,741
	45 to 59	19,307	12,860	11,427	9,625	2,456	1,774	57,449
	60 to 74	9,489	6,930	6,602	5,375	596	894	29,886
	75 Plus	5,871	4,256	3,480	2,609	168	409	16,793
	Total	95,189	56,514	50,940	41,928	11,963	8,273	264,807
Male	0 to 19	23,206	14,082	12,445	10,310	3,843	2,223	66,109
	20 to 44	36,045	19,229	17,595	13,698	4,851	3,225	94,643
	45 to 59	18,454	13,013	11,322	9,491	2,741	1,705	56,726
	60 to 74	8,353	6,761	6,625	5,224	722	1,026	28,711
	75 Plus	3,097	2,914	2,662	1,859	120	338	10,990
	Total	89,155	55,999	50,649	40,582	12,277	8,517	257,179
Total	0 to 19	45,522	27,301	24,231	20,052	7,662	4,279	129,047
	20 to 44	74,251	38,478	35,240	28,275	9,775	6,365	192,384
	45 to 59	37,761	25,873	22,749	19,116	5,197	3,479	114,175
	60 to 74	17,842	13,691	13,227	10,599	1,318	1,920	58,597
	75 Plus	8,968	7,170	6,142	4,468	288	747	27,783
	Total	184,344	112,513	101,589	82,510	24,240	16,790	521,986
% Distribution	0 to 19	24.7%	24.3%	23.9%	24.3%	31.6%	25.5%	24.7%
	20 to 44	40.3%	34.2%	34.7%	34.3%	40.3%	37.9%	36.9%
	45 to 59	20.5%	23.0%	22.4%	23.2%	21.4%	20.7%	21.9%
	60 to 74	9.7%	12.2%	13.0%	12.8%	5.4%	11.4%	11.2%
	75 Plus	4.9%	6.4%	6.0%	5.4%	1.2%	4.4%	5.3%

Exhibit 4.2 shows the relationship between age and gender and use of acute care hospital services for Grenfell region residents in 2001/02. Below the age of 60 years old, there are more hospital separations per population for females than males, because of hospital-based obstetrical and gynaecological services. Over the age of 60 years old, males (on average) use more hospital acute care. The steep slope of both the female and male curves between 55 and 85 years old reflects the dramatic increase in use of acute care associated with increased age.

Exhibit 4.2
2001/02 Utilization of Acute Care (IP & SDS) by Age and Gender, per 10,000 Population – Grenfell Region Residents



4.1.3 Comparative Health Status

Grenfell residents have relatively good health status.

The December 2000 Statistics Canada health indicators for the Newfoundland and Labrador health regions show that Grenfell region residents had:

- The second lowest rate of low income in the province (17.1% versus the provincial average of 21.4%)
- The lowest rate of low birth weight and the lowest infant mortality rate
- The highest life expectancy at birth
- The second lowest age/gender standardized mortality rate.

These statistics suggest that Grenfell residents have relatively good health status, compared to the residents of other health regions.

However, the small size of the population in Grenfell makes it difficult to confidently interpret the results for many health status indicators, or to determine whether the population health status is significantly different from that of other regions.

Grenfell residents had the highest rate in NL of potential years of life lost (PYLL) for males for circulatory disease.

The NLCHI reported in their January 2004 Mortality Statistics report that Grenfell residents had the highest rate of potential years of life lost (PYLL) for males for circulatory disease in 2000.[27] PYLL rates for males in Grenfell for the other two top causes of death (cancer and respiratory diseases) were the lowest in the province.

For females, PYLL due to circulator disease was lowest in the province for Grenfell in 2000 and 1998, but highest in the province in 1999. PYLL for females for cancer and respiratory diseases were lowest in the province for Grenfell residents.

Grenfell has the highest percent of the population aged 20 to 64 in the province who were overweight or obese.

The March 2003 NLCHI report "Eating Well, Living Well", reported that the 2000/01 Statistics Canada Canadian Community Health Survey found that Grenfell had the highest percent of the population aged 20 to 64 in the province who were overweight or obese.

4.1.4 Small Area Variation Analyses

Small area variation analyses are comparisons of rates of utilization of health care services by populations. Health services researchers (notably Dr. Jack Wennberg, with his comparisons of use of health care services in Boston and New Haven) have used these analyses to help understand the factors that influence use of health care services and to help inform development of health care policy.

Exhibit 4.3 shows the age/gender-standardized rate of use of acute care services (measured as inpatient and SDS separations per 10,000 population) for the residents of each of the Newfoundland and Labrador health regions in 2001/02. Utilization rates are shown for all hospital programs combined and for individual programs. Use of hospital services is attributed to the region where the patient lives, not the region where they were hospitalized. Thus, if a resident of the Grenfell region were hospitalized in St. John's, their utilization would contribute to the Grenfell region utilization rate. Within each program area, the utilization for the region with the highest utilization is shown in bold.

[27] The small population in Grenfell leads to wide variation in measures from year to year. While the PYLL rate for males for circulatory disease was highest in Grenfell in 2000, the prior year it was the second lowest.

Residents of Grenfell health region have the highest rate of use of acute care hospital services in Newfoundland and Labrador.

The lowest rate of use of acute care hospital services in Newfoundland and Labrador is 1,713 separations per 10,000 population by the residents of the Eastern health region. The highest rate of use of acute care hospital services in Newfoundland and Labrador is 2,673 separations per 10,000 population by the residents of the Grenfell health region.

Exhibit 4.3
2001/02 Age/Gender Standardized Rate of Use of Acute Care (IP & SDS Separations per 10,000 Population) by Program by Residents of Health Regions

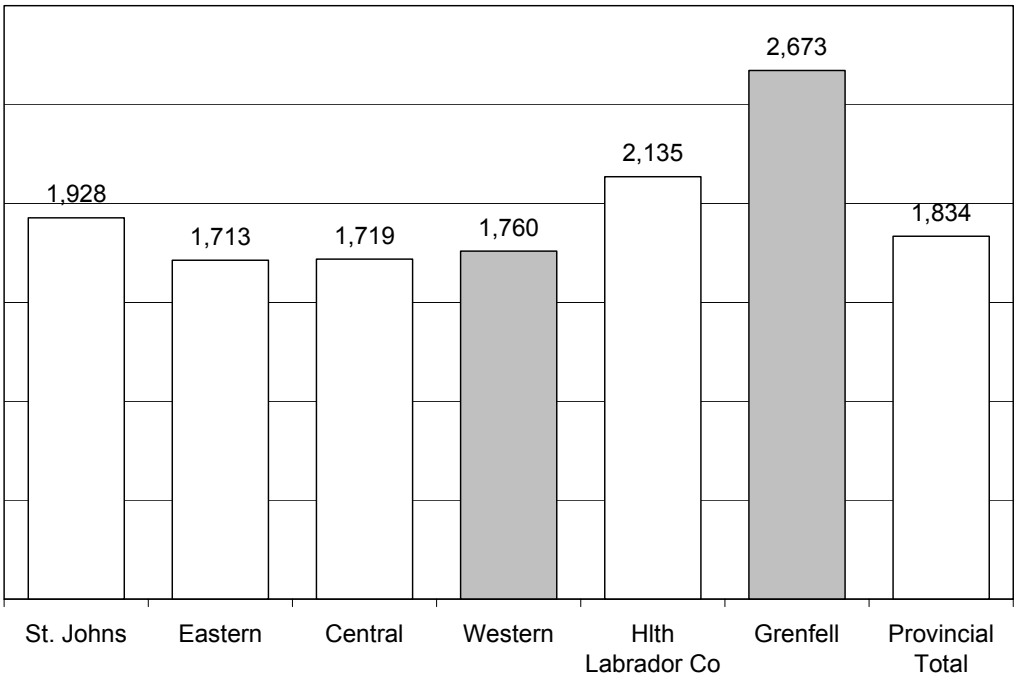
Program Cluster	St. Johns	Eastern	Central	Western	Hlth Labrador Co	Grenfell	Provincial Total	Grenfell % over Avg
Orthopaedics	80.2	66.0	105.2	87.9	81.5	**139.3**	85.2	64%
Neurology	28.1	31.9	41.1	44.8	51.8	**75.6**	37.0	105%
Neurosurgery	17.6	17.9	**20.8**	10.1	12.5	16.5	16.9	-2%
Rheumatology	4.3	4.1	6.9	5.7	**9.7**	8.7	5.4	60%
Dermatology	10.5	6.3	8.5	11.7	6.9	**13.7**	9.3	47%
Trauma	42.5	37.6	44.6	54.9	77.0	**79.5**	46.8	70%
Urology	173.2	144.8	150.7	87.6	114.5	**178.9**	145.4	23%
Nephrology	10.8	9.8	10.7	**15.1**	10.7	11.2	11.4	-2%
Gynaecology	71.4	95.0	114.7	**159.4**	100.5	150.9	101.5	49%
Obstetrics	119.8	105.6	117.6	140.5	157.8	117.4	120.4	-2%
Neonatology	95.2	80.3	83.8	**95.6**	90.6	87.2	89.6	-3%
Otolaryngology	87.3	78.7	59.6	59.2	**92.7**	74.7	75.7	-1%
Dental/Oral Surgery	54.8	**66.0**	36.9	38.3	45.7	56.6	50.6	12%
Cardiology	82.7	115.0	150.5	135.9	162.5	**265.8**	121.8	118%
Cardio/ Thoracic	**41.8**	30.5	27.0	24.9	25.0	31.0	32.2	-4%
Pulmonary	65.9	74.4	84.2	82.7	**140.2**	131.8	78.5	68%
Oncology	**62.1**	50.9	42.8	44.5	52.8	44.2	51.6	-14%
Haematology	17.5	14.4	13.5	12.3	20.6	**21.5**	15.4	39%
Endocrinology	25.0	21.8	21.7	28.4	39.0	**48.0**	25.2	90%
Psychiatry	82.1	43.2	62.6	**87.2**	76.3	62.0	69.5	-11%
Ophthalmology	**72.3**	47.7	58.5	61.6	71.6	52.9	60.7	-13%
Gastro/Hepatobiliary	309.2	248.3	148.1	162.8	301.8	**525.7**	243.6	116%
General Surgery	224.9	199.3	200.0	189.8	210.3	**250.0**	207.1	21%
General Medicine	74.0	71.6	76.4	80.2	116.6	**148.0**	78.7	88%
Vascular Surgery	16.3	17.4	**19.2**	15.5	16.9	15.9	17.1	-7%
Plastic Surgery	**13.6**	8.2	5.3	6.6	7.9	4.4	9.1	-51%
Rehabilitation	0.1	1.4	0.7	**3.5**	0.0	1.3	1.1	19%
Not Generally Hosp.	44.4	25.0	6.7	12.7	41.4	**57.9**	27.3	112%
Ungroupable	0.6	0.1	0.2	0.1	0.3	**1.9**	0.4	389%
Total	1,927.9	1,713.2	1,718.6	1,759.7	2,135.2	**2,672.5**	1,834.5	46%

Utilization of acute hospitals by residents of the Grenfell health region is 46% above the provincial average.

Utilization of acute hospitals by the Grenfell population is the highest in province, 46% above the provincial average (and 25% above the next highest region). Utilization of acute hospitals by the Western region population is 4% below provincial average, third lowest of the six regions.

The overall utilization rates are shown in graph format in Exhibit 4.4.

Exhibit 4.4
2001/02 Age/Gender Standardized Rate of Use of Acute Care
(IP & SDS Separations per 10,000 Population) by Residents of Health Regions



We obtained 2001/02 acute care utilization rate data from Ontario to compare with the Newfoundland and Labrador utilization rates. Regions served primarily by academic health science centres usually have the lowest utilization rates[28]. This is attributed to the greater availability of primary and community care, and hospital-based ambulatory care, usually found in the urban centres in which academic health science centres are located, and the greater adherence to principles of evidence-based medical utilization in an academic environment. Thus, the Toronto utilization rates were selected as a reference point in these analyses to demonstrate the minimum potential level of utilization.

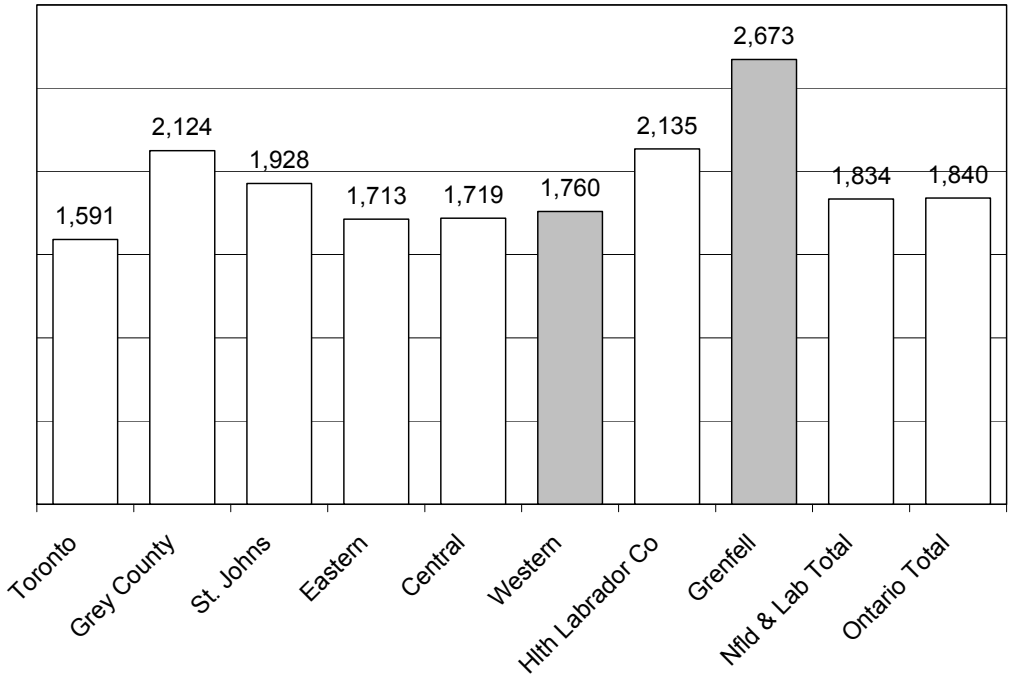
A second Ontario region, the county of Grey, was selected based on its' population (89,000 people) and its' geography (a medium sized community hospital serving a largely rural, somewhat dispersed population). While the population is

[28] The St. John's region is one of the few exceptions in Canada to this pattern. The populations in three other health regions in Newfoundland and Labrador (including the Western health region population) have lower acute care utilization rates than St. John's. This anomaly was previously identified in a review of hospital services provided by the Health Care Corporation of St. John's.

similar in size to the population of the Western region, it is much larger than the population of the Grenfell region, and the Grey county population is less geographically dispersed than either the Western or Grenfell region populations. It serves as a second reference point in these analyses to demonstrate the higher levels of utilization often found in more rural, more remote communities.

Exhibit 4.5 shows that the overall utilization rate of acute care in Ontario is slightly higher than the overall rate for Newfoundland and Labrador.

Exhibit 4.5
2001/02 Hospital Utilization per 10,000 Population
for Nfld & Lab and Selected Ontario Regions



As expected, the utilization rate for Toronto is lower than that in any of the Newfoundland and Labrador health regions, but the Grey county utilization rate is higher than the utilization rate in all of the Newfoundland and Labrador health regions except Health Labrador Corporation and the Grenfell region.

Exhibit 4.3 (shown previously) showed that the utilization of hospital services by the Grenfell region population was more than 20% above the provincial average for the following programs:

- Orthopaedics (64% above provincial average, highest in province)

- Neurology (105% above, highest in province)
- Rheumatology (60% above)
- Dermatology (47% above, highest in province)
- Trauma (70% above, highest in province)
- Urology (23% above, highest in province)
- Gynaecology (49% above)
- Cardiology (118% above, highest in province)
- Pulmonary (68% above)
- Haematology (39% above, highest in province)
- Endocrinology (90% above, highest in province)
- Gastro-Hepatobiliary (116% above, highest in province)
- General Surgery (21% above, highest in province)
- General Medicine (88% above, highest in province)
- Not Generally Hospitalized (112% above, highest in province)

Utilization of hospital services by Grenfell region residents was more than 20% below the provincial average only for plastic surgery (51% below).

Exhibit 4.6 shows the wide variation in rates of acute care hospital separations for gastro-hepatobiliary care. Utilization by Grenfell region residents is more than three times the utilization by Western region residents.

Exhibit 4.6
2001/02 Hospital Utilization per 10,000 Population – Gastro-Hepatobiliary

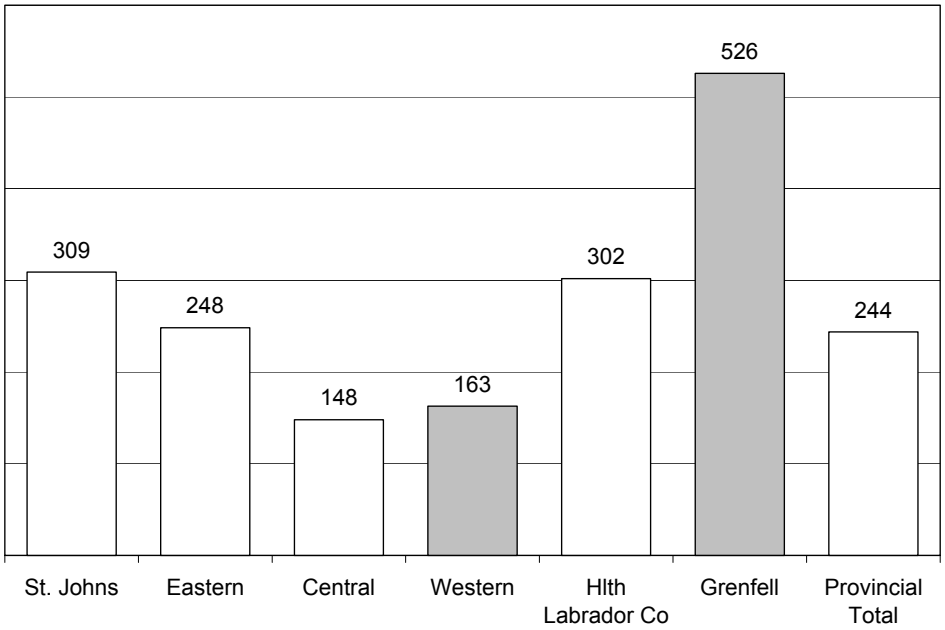
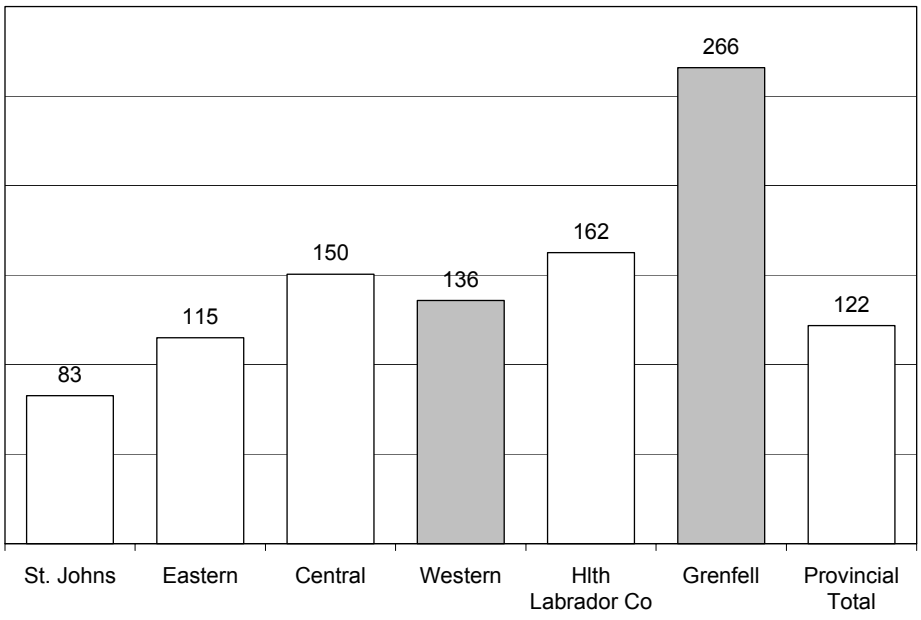


Exhibit 4.7 shows the variation in rates of acute care hospital separations for cardiology. Utilization by Grenfell region residents is 50% higher than utilization by Health Labrador Corporation residents.

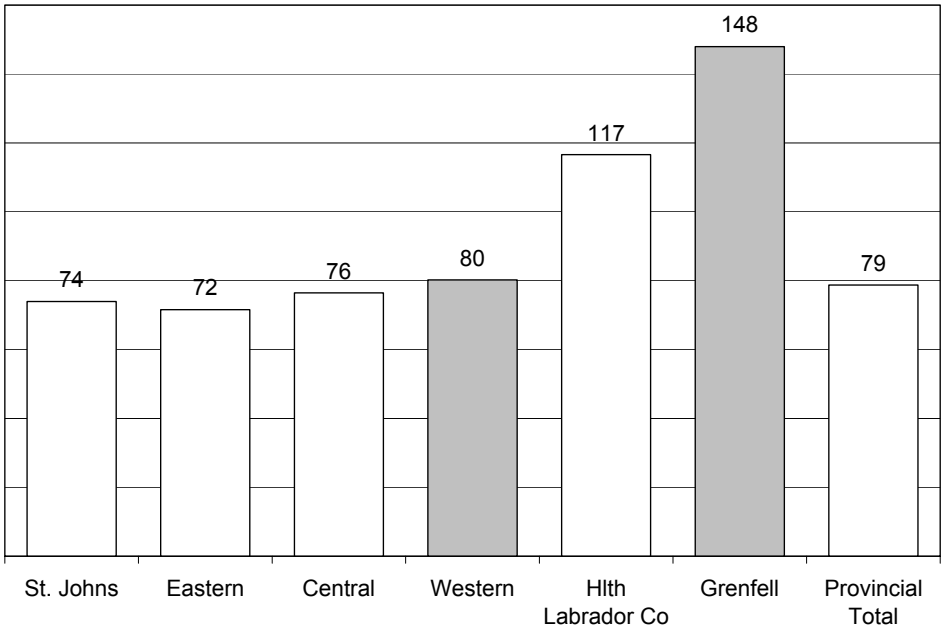
Exhibit 4.7
2001/02 Hospital Utilization per 10,000 Population – Cardiology



Utilization of hospitals for general medicine by Grenfell residents is 88% higher than the provincial average.

Exhibit 4.8 shows the rates of acute care hospital separations for general medicine. Utilization by the residents of the four largest health regions is almost identical, but utilization in Grenfell region is 85% higher.

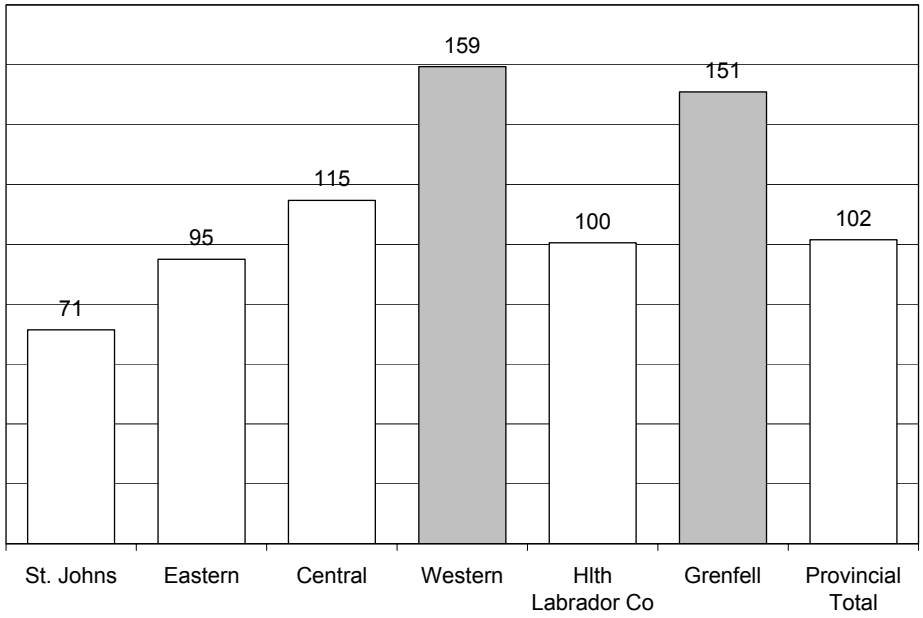
Exhibit 4.8
2001/02 Hospital Utilization per 10,000 Population – General Medicine



Utilization hospitals for gynaecology by residents of Grenfell region residents is 50% above the provincial average.

Exhibit 4.9 shows the rates of acute care hospital separations for gynaecology. Utilization by both Grenfell region and Western region residents is 50% above the provincial average and more than double the rate for St. John's residents. The recent CIHI report, "2004 Health Indicators" showed that the rate of surgery for hysterectomy for Western region residents was one of the highest in Canada.

Exhibit 4.9
2001/02 Hospital Utilization per 10,000 Population – Gynaecology



4.1.5 Analysis of Avoidable Hospitalization Conditions

Health services researchers have identified a set of hospitalization conditions that can be considered to be potentially avoidable, because early and consistent access to good primary care can prevent the condition or can manage the condition and reduce the severity of impact such that hospitalization is unlikely (or infrequent). The conditions considered to be potentially avoidable hospitalization conditions are:

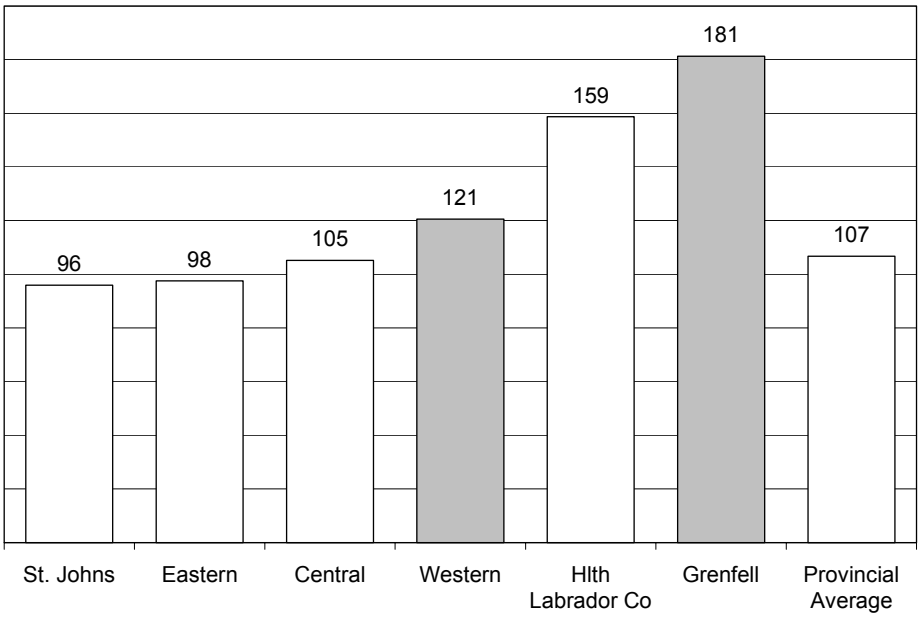
- Pneumonia
- Congestive Heart Failure
- Asthma
- Cellulitis
- Ulcer
- Pyleonephritis
- Diabetes
- Ruptured Appendix
- Hypertension
- Hypokalemia
- Immunizable Conditions

- Gangrene

High rates of admissions for these conditions may signify the need to enhance the primary care system.

Exhibit 4.10 shows the 2001/02 rates of inpatient admission (per 10,000 population) for avoidable hospitalization conditions for the Newfoundland and Labrador health regions.

Exhibit 4.10
Avoidable Hospitalization Condition Inpatient Admissions per 10,000 Age/Gender Standardized Population 2001/02



Grenfell residents have the highest rate of admission for potentially avoidable hospitalization conditions in NL.

The highest rate of admission for potentially avoidable hospitalization conditions is for Grenfell region residents. The Western region rate is 20% higher than the rates for St. John's and Eastern region residents.

To assess the relative capacity of the primary care system in each region, we obtained physician payment data (both salary and fee-for-service) for primary care physicians located in each health region. The payment data was to be a surrogate for measures of distribution of primary care physician FTEs, since the FTE data was not available. Salary data was available for 2001/02. Fee-for-service data was not available for 2001/02 but the Department of Health provided fee-for-service payment data by health region for 2003/04.

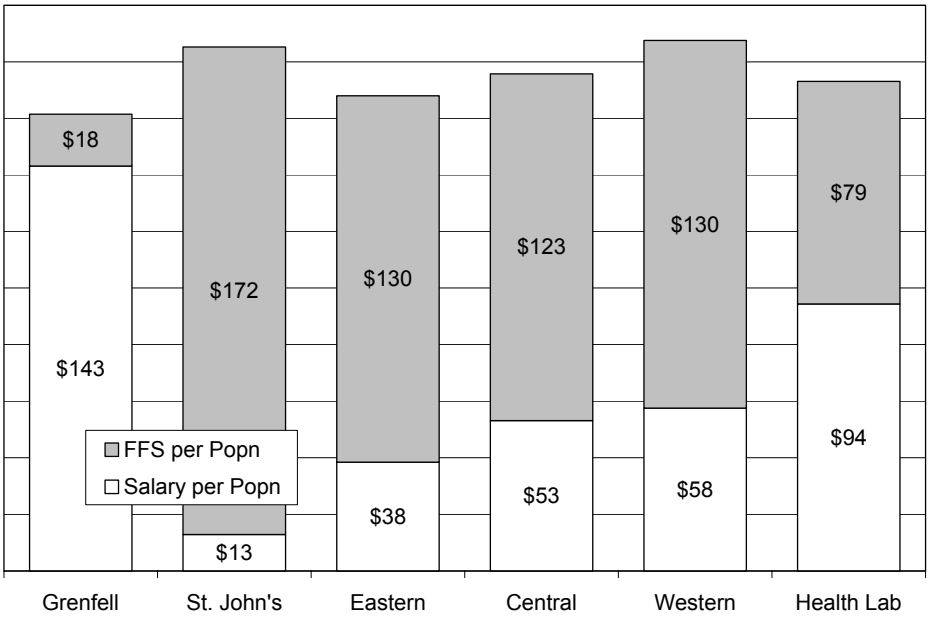
The lower use of primary care in Grenfell and geographic barriers to access to primary care likely contribute to the high rates of admission for potentially avoidable hospitalization conditions.

Exhibit 4.11 shows the range of primary care physician payments per population by health region. While the range of per capita primary care physician payments is narrow, the highest per capita payment is in the Western region, and the lowest in Grenfell region.[29]

The lower per capita payments for primary care in Grenfell (and the geographic barriers to access to primary care for some of the more remote residents) likely contribute to the high rates of admission for potentially avoidable hospitalization conditions.

The planned provincial primary care renewal initiatives (as will be implemented in Grenfell as part of the federally funded pilot projects) should further support reduced reliance on inpatient hospital care for potentially avoidable hospitalization conditions. However, the improvement in primary care and the corresponding reduction in use of hospital for these conditions is unlikely to occur within the next three years.

Exhibit 4.11
Primary Care Physician Payments per Population
(Salary [2001/02] and Fee For Service [2003/04])



[29] Because the FFS data is more current than the salary data, it is inflated relative to the salary data. Use of un-inflated 2001/02 FFS data (not available) would further reduce the variation in payments between regions and bring Grenfell closer to the provincial average.

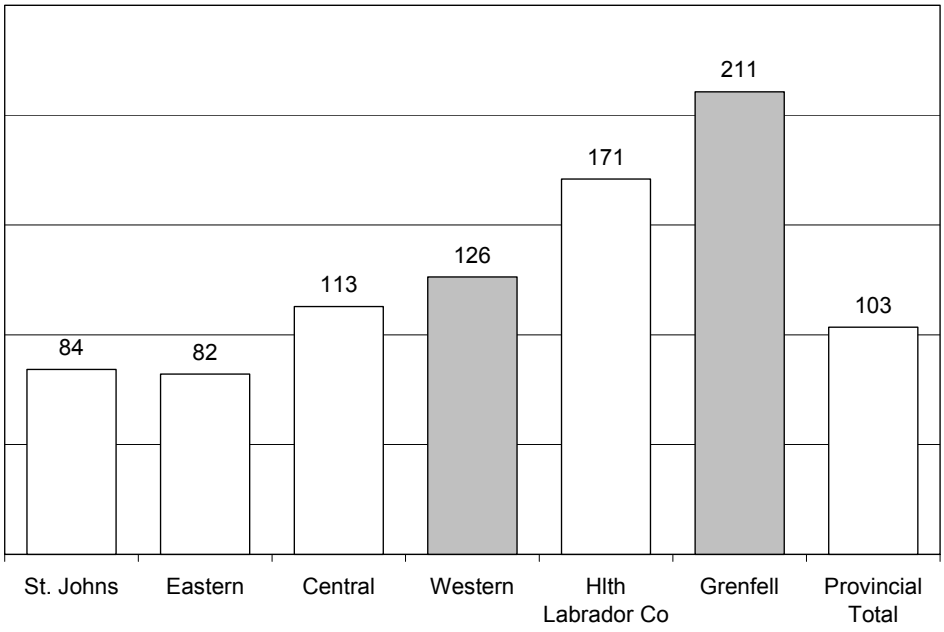
4.1.6 Analysis of 'MNRH' Admissions

CIHI identifies a subset of Case Mix Groups (CMGs) as "May Not Require Hospitalization" (MNRH). These are CMGs where, based on experience across Canada, CIHI's physician advisors have determined that care can usually (but not always) be provided on an ambulatory basis. High MNRH rates may indicate opportunities to expand day care surgery and/or ambulatory clinics.

The Grenfell MNRH rate is more than double the provincial average.

Exhibit 4.12 shows the age/gender-standardized rate of MNRH admissions per 10,000 population for the residents of each Newfoundland and Labrador health region. The Grenfell MNRH rate is more than double the provincial average (and the highest of all regions). This is not surprising, given that same day surgery is only available at the Curtis Memorial Hospital in St. Anthony.

Exhibit 4.12
2001/02 MNRH Inpatient Cases per 10,000 Population by Region



4.1.7 Opportunities to Reduce Inpatient/SDS Hospital Use

We believe that it will be possible, over time, for the GRHSB to reduce admission of avoidable hospitalization condition patients and MNRH patients to the provincial average rate (107 AHC admissions and 103 MNRH admissions per 10,000 population) once the planned primary care renewal has been implemented in the region.

If the Grenfell rate of admission of potentially avoidable hospitalization conditions was reduced from 181 to 140 admissions per 10,000 population (30% above the provincial average), as a result of successful implementation of primary care renewal, 69 annual avoidable admissions could be avoided at an annual direct cost saving of $147,000.

If the overall Grenfell acute care hospital utilization rate was reduced to 30% above the provincial average (2,384 admissions per 10,000 population), the direct cost of acute care services for Grenfell residents would be reduced by $1 million (including the $147,000 saved by reducing avoidable admissions).

Exhibit 4.13
Estimated Direct Savings from Reduction in Acute Care Hospitalization Rate

	Acute Care Utilization Rate	Estimated Cases
Current	2,673	4,488
Target	2,384	4,003
Change	- 289	- 485
Average RIW per Case Saved		0.9
Weighted Case Reduction		- 436
Direct Cost per Weighted Case		$ 2,450
Estimated Direct Savings		-$ 1,069,194

While the reduction in avoidable admissions may be delayed because it will be dependent on primary care renewal, the region should establish an explicit target for reduction in reliance on acute care services by 2006 as part of the strategic and operational plan. Excluding the avoidable admission reduction, the reduction in acute care admissions would generate direct cost savings of approximately $850,000.

Recommendation:

It is recommended that:

(36) The Board should establish, in the GRHSB Strategic and Operational Plan, a target for the utilization of acute care services by Grenfell residents to no more than 30% above the provincial average by 2006.

The impact of reduction of MNRH rates is calculated later in this report in the clinical efficiency analysis.

Both Grenfell and WHCC have utilization rates for gynaecology services (50% higher than in other regions in

Newfoundland and Labrador and at least 30% higher than the next highest region). The recent CIHI Health Care in Canada publication reported that the hysterectomy rate in the Western region was 632 cases per 100,000 population, 63% higher than the national average rate. The Medical Advisory Committees in both regions should coordinate reviews of the appropriateness of utilization of acute care gynaecology services and opportunities to change practices. GRHSB reported that there are currently 29 separate protocols already in place in obstetrics/gynaecology. The GRHSB MAC should assess the appropriateness of these protocols and the extent to which current gynaecological practices conform to these protocols.

If gynaecology utilization rates were reduced to a rate 25% above the provincial average, there would be a reduction in direct costs for WHCC of $213,000 and a reduction in direct cost for GRHSB of $33,000.

Exhibit 4.14
Estimated Direct Savings from Reduction in Acute Care Hospitalization Rate

Grenfell Gynaecological Utilization	Acute Care Utilization Rate	Estimated Cases
Current	151	254
Target	128	214
Change	- 24	- 39
Average RIW per Case Saved		0.34
Weighted Case Reduction		- 13
Direct Cost per Weighted Case		$ 2,450
Estimated Direct Savings		-$ 32,867

Recommendation:

It is recommended that:

(37) The GRHSB MAC should coordinate a review of appropriateness of acute care gynaecology services.

4.2 Population Dependence on Regions' Programs

4.2.1 Market Share of Services Used by Populations in Region

Exhibit 4.15 shows the percent of total acute care inpatient hospitalizations for the residents of Grenfell health region provided by hospitals located in the Grenfell, Western, or St. John's health regions. The percentages are based on 2001/02

data and are shown by program area for primary, secondary, and tertiary/quaternary hospitalizations.[30]

80% of all of the acute care inpatient hospitalizations for Grenfell region residents in 2001/02 were provided by hospitals located within the region.

80% of all of the acute care inpatient hospitalizations for Grenfell region residents in 2001/02 were provided by hospitals located within the region. Both the WHCC hospitals and the St. John's hospitals provided a further 9% of the total inpatient hospitalizations of Grenfell residents each. This "market share" varied by level of care:

- 87% of Primary level hospitalizations of Grenfell residents were provided in Grenfell hospitals (9% in WHCC hospitals and 2% in St. John's)
- 73% of Secondary level hospitalizations of Grenfell residents were provided in Grenfell hospitals (10% in WHCC hospitals and 15% in St. John's)
- 23% of Tertiary/ Quaternary level hospitalizations of Grenfell residents were provided in Grenfell hospitals (7% in WHCC hospitals, and 69% in St. John's hospitals)

[30] Inpatient cases have been categorized as primary, secondary, or tertiary/quaternary, using the HayGroup Level of Care methodology. Cases are assigned to a level of care based on their CMG, Plx level, and patient age. The level of care is established based on factors such as average case cost, the number of hospitals that are capable of providing the care, and the distance that patients travel to access the care.

Exhibit 4.15
Percent of Inpatient Hospitalizations of Grenfell Residents
Provided by Hospitals in Grenfell, Western, and St. John's Regions 2001/02

Program Cluster	% Cases Treated in Grenfell Region Hospitals				% Cases Treated in Western Region Hospitals				% Cases Treated in St. John's Region Hospitals			
	Prim.	Sec.	Tert./ Quat.	All	Prim.	Sec.	Tert./ Quat.	All	Prim.	Sec.	Tert./ Quat.	All
Gastro/Hepatobiliary	87%	85%	0%	87%	9%	12%	0%	9%	2%	3%	100%	2%
Cardiology	84%	72%	0%	81%	12%	11%	0%	12%	2%	12%	0%	4%
General Surgery	89%	82%	44%	83%	4%	4%	6%	4%	4%	12%	44%	10%
General Medicine	91%	78%	0%	88%	6%	14%	33%	8%	3%	8%	67%	4%
Pulmonary	91%	79%	0%	86%	8%	13%	0%	10%	1%	8%	0%	3%
Obstetrics	87%	85%	0%	86%	4%	5%	0%	4%	4%	9%	0%	5%
Orthopaedics	85%	83%	63%	83%	11%	8%	13%	9%	4%	9%	25%	9%
Urology	78%	77%	0%	77%	15%	3%	50%	13%	3%	20%	50%	7%
Neonatology	85%	64%	33%	83%	7%	0%	0%	6%	3%	36%	67%	7%
Trauma	92%	70%	20%	77%	7%	17%	20%	12%	2%	11%	60%	10%
Neurology	91%	74%	0%	83%	7%	8%	0%	8%	1%	15%	0%	8%
Gynaecology	94%	58%	0%	86%	6%	26%	0%	10%	0%	16%	100%	4%
Psychiatry	72%	66%	80%	70%	26%	18%	20%	22%	0%	14%	0%	6%
Otolaryngology	88%	61%	25%	77%	5%	10%	0%	6%	5%	29%	75%	16%
Endocrinology	90%	33%	100%	81%	5%	8%	0%	5%	0%	50%	0%	8%
Oncology	0%	73%	43%	69%	0%	4%	0%	4%	0%	23%	57%	27%
Cardio/ Thoracic	0%	50%	2%	8%	0%	17%	2%	4%	0%	33%	95%	88%
Haematology	100%	70%	0%	91%	0%	20%	0%	6%	0%	10%	0%	3%
Vascular Surgery	0%	65%	0%	57%	0%	15%	33%	17%	0%	20%	67%	26%
Nephrology	82%	0%	0%	47%	18%	29%	0%	21%	0%	71%	100%	32%
Dermatology	0%	61%	0%	61%	0%	17%	0%	17%	0%	11%	0%	11%
Not Generally Hosp.	0%	67%	0%	67%	0%	13%	0%	13%	0%	20%	0%	20%
Neurosurgery	0%	0%	0%	0%	0%	0%	0%	0%	0%	71%	100%	86%
Rheumatology	0%	54%	0%	54%	0%	15%	0%	15%	0%	31%	0%	31%
Ophthalmology	0%	67%	0%	60%	0%	22%	0%	20%	0%	11%	100%	20%
Plastic Surgery	0%	67%	0%	67%	0%	17%	0%	17%	0%	17%	0%	17%
Ungroupable	0%	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
Rehabilitation	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%
Grand Total	87%	73%	23%	80%	9%	10%	7%	9%	2%	15%	69%	9%

The Grenfell hospital market share of inpatient hospitalizations ranged from a low of 0% for neurosurgery and 8% for cardio-thoracic, to more than 85% for haematology, obstetrics, gynaecology, pulmonary, general medicine, and gastro/hepatobiliary.

Exhibit 4.16 shows the same information summarized by broad program area. More than 80% of hospitalizations of Grenfell residents for medicine, and pregnancy and childbirth are provided in Grenfell hospitals. 70% of hospitalizations of Grenfell residents for inpatient mental health are in Grenfell hospitals. 65% of inpatient surgical hospitalizations of Grenfell residents are provided by Grenfell hospitals.

Exhibit 4.16
Percent of Inpatient Hospitalizations of Grenfell Residents
Provided by Hospitals in Grenfell, Western, and St. John's Regions 2001/02

Broad Program Area	% Cases Treated in Grenfell Region Hospitals				% Cases Treated in Western Region Hospitals				% Cases Treated in St. John's Region Hospitals			
	Prim.	Sec.	Tert./ Quat.	All	Prim.	Sec.	Tert./ Quat.	All	Prim.	Sec.	Tert./ Quat.	All
Medicine	87%	79%	47%	85%	9%	10%	7%	9%	2%	9%	47%	5%
Mental Health	72%	66%	80%	70%	26%	18%	20%	22%	0%	14%	0%	6%
Neonates	85%	64%	33%	83%	7%	0%	0%	6%	3%	36%	67%	7%
Pregnancy	87%	85%	0%	87%	4%	5%	0%	4%	4%	9%	0%	5%
Surgery	90%	62%	16%	65%	7%	11%	7%	9%	0%	26%	76%	25%
Total	87%	73%	23%	80%	9%	10%	7%	9%	2%	15%	69%	9%

4.2.2 Referral of Patients to Centres Outside Region

Exhibit 4.17 shows the number of residents of the Grenfell region who were hospitalized as inpatients in hospitals outside the Grenfell region in 2001/02, by program. The table is sorted by descending volume of patients. The largest numbers of residents leaving the region for inpatient care were cardiology and gastro/hepatobiliary patients hospitalized in WHCC hospitals. The next largest volume of patients was cardio/thoracic patients hospitalized in St. John's.

Exhibit 4.17
Volume of Grenfell Residents Hospitalized as Inpatients in Other Health Regions by Program 2001/02

Program	Admissions in Other Regions		
	St. John's	Other	Total
Cardiology	17	61	78
Gastro/Hepatobiliary	10	48	58
Cardio/ Thoracic	44	2	46
General Surgery	25	18	43
Urology	11	25	36
Trauma	13	16	29
Psychiatry	6	23	29
General Medicine	10	18	28
Pulmonary	7	21	28
Orthopaedics	14	14	28
Neonatology	10	15	25
Obstetrics	10	15	25
Otolaryngology	15	7	22
Neurology	9	11	20
Oncology	15	2	17
Gynaecology	4	10	14
Endocrinology	6	8	14
Neurosurgery	12	2	14
Vascular Surgery	6	4	10
Nephrology	6	4	10
Dermatology	2	5	7
Rheumatology	4	2	6
Not Generally Hosp.	3	2	5
Ophthalmology	2	2	4
Haematology	1	2	3
Plastic Surgery	1	1	2
Grand Total	263	338	601

4.2.3 Use of Services by Patients from Outside Region

In 2001/02 there were 145 non-residents of the Grenfell region admitted as inpatients in Grenfell hospitals. 67 of these inpatients were residents of the Health Labrador region, 51 were Western region residents, and 27 came from elsewhere.

The highest volume programs for non-residents were trauma, general surgery, gastro/hepatobiliary, and orthopaedics.

Exhibit 4.18
Inpatient Hospitalizations of
Non-Residents by Program 2001/02

Program	Patients from Other Regions			
	Hlth Lab	Western	Other	Total
Trauma	18	2	10	30
General Surgery	13	12	0	25
Gastro/Hepatobiliary	5	11	2	18
Orthopaedics	7	4	5	16
Urology	10	2	0	12
Obstetrics	0	5	2	7
Cardiology	2	1	3	6
General Medicine	1	1	2	4
Gynaecology	2	2	0	4
Neonatology	0	3	0	3
Pulmonary	1	0	2	3
Psychiatry	2	0	1	3
Oncology	0	3	0	3
Ophthalmology	3	0	0	3
Neurology	0	3	0	3
Endocrinology	0	1	0	1
Plastic Surgery	1	0	0	1
Otolaryngology	1	0	0	1
Neurosurgery	0	1	0	1
Not Generally Hosp.	1	0	0	1
Grand Total	67	51	27	145

4.3 Review of Hospital Activity

Exhibit 4.19 shows the 2001/02 inpatient and SDS activity volume for the hospital and health centres within the Grenfell region. The average inpatient length of stay for the hospital/health centres in the region was 5.4 days (6.3 days at Curtis Memorial Hospital, and less than 2 days in each other health centre). SDS is available only in St. Anthony. In 2001/02, ALC days were under-reported; only 0.8% of inpatient days were reported as "alternate level of care" (ALC), or patients who no longer required acute care and were awaiting placement elsewhere.

Exhibit 4.19
Grenfell Hospital/Health Centre Activity in 2001/02

Grenfell RHSB					
Hospital	IP Cases	IP Days	Avg. LOS	% ALC	SDS Cases
Curtis Memorial St. Anthony	2,330	14,583	6.3	0.8%	1,312
White Bay Central, Roddickton	227	382	1.7	0.0%	0
Labrador South, Forteau	153	220	1.4	1.8%	0
Belle Isle HC, Flower's Cove	100	105	1.1	0.0%	0
Grand Total	2,810	15,290	5.4	0.8%	1,312

Exhibit 4.20 shows the total distribution of 2001/02 inpatient and SDS activity in the hospitals operated by the Board by Program Cluster Category.

Exhibit 4.20
2001/02 Inpatient Activity in GRHSB
Hospital/Health Centre by Program

Grenfell RHSB					
Program Cluster	IP Cases	IP Days	Avg. LOS	% ALC	SDS Cases
General Surgery	275	2,480	9.0	0.0%	148
Cardiology	345	2,477	7.2	0.0%	1
Gastro/Hepatobiliary	451	1,794	4.0	0.0%	464
Pulmonary	180	1,112	6.2	0.0%	2
General Medicine	209	938	4.5	12.6%	15
Orthopaedics	155	918	5.9	0.0%	75
Trauma	132	700	5.3	0.0%	6
Obstetrics	184	652	3.5	0.0%	2
Urology	150	593	4.0	0.0%	147
Neurology	105	500	4.8	0.0%	1
Gynaecology	94	499	5.3	0.0%	138
Psychiatry	73	461	6.3	0.0%	0
Neonatology	131	456	3.5	1.5%	0
Endocrinology	64	349	5.5	0.0%	1
Oncology	44	315	7.2	0.0%	14
Otolaryngology	76	204	2.7	0.0%	17
Vascular Surgery	14	186	13.3	0.0%	6
Haematology	33	127	3.8	0.0%	4
Cardio/ Thoracic	6	87	14.5	0.0%	0
Dermatology	12	85	7.1	0.0%	2
Not Generally Hosp.	38	81	2.1	0.0%	86
Plastic Surgery	5	79	15.8	0.0%	1
Nephrology	9	76	8.4	0.0%	0
Ophthalmology	10	43	4.3	0.0%	79
Rheumatology	7	36	5.1	0.0%	1
Rehabilitation	2	18	9.0	0.0%	0
Ungroupable	4	14	3.5	14.3%	1
Neurosurgery	2	10	5.0	0.0%	12
Dental/Oral Surgery	0	0			89
Grand Total	2,810	15,290	5.4	0.8%	1,312

The 2001/02 activity volume for each of the Grenfell hospital/health centres are shown in Exhibits 4.21 through 4.24.

Exhibit 4.21
2001/02 Grenfell Region Hospital Activity
– Curtis Memorial, St. Anthony

Curtis Memorial St. Anthony					
Program Cluster	IP Cases	IP Days	Avg. LOS	% ALC	SDS Cases
General Surgery	275	2,480	9.0	0.0%	148
Cardiology	258	2,374	9.2	0.0%	1
Gastro/Hepatobiliary	322	1,628	5.1	0.0%	464
Pulmonary	135	1,029	7.6	0.0%	2
Orthopaedics	139	898	6.5	0.0%	75
General Medicine	157	851	5.4	13.9%	15
Trauma	118	683	5.8	0.0%	6
Obstetrics	182	650	3.6	0.0%	2
Urology	118	549	4.7	0.0%	147
Gynaecology	92	497	5.4	0.0%	138
Neurology	82	472	5.8	0.0%	1
Neonatology	130	452	3.5	0.7%	0
Psychiatry	59	440	7.5	0.0%	0
Oncology	41	299	7.3	0.0%	14
Endocrinology	36	294	8.2	0.0%	1
Vascular Surgery	13	181	13.9	0.0%	6
Otolaryngology	56	171	3.1	0.0%	17
Haematology	31	125	4.0	0.0%	4
Cardio/ Thoracic	6	87	14.5	0.0%	0
Dermatology	10	83	8.3	0.0%	2
Not Generally Hosp.	37	80	2.2	0.0%	86
Plastic Surgery	5	79	15.8	0.0%	1
Nephrology	8	73	9.1	0.0%	0
Ophthalmology	9	42	4.7	0.0%	79
Rheumatology	3	24	8.0	0.0%	1
Rehabilitation	2	18	9.0	0.0%	0
Ungroupable	4	14	3.5	14.3%	1
Neurosurgery	2	10	5.0	0.0%	12
Dental/Oral Surgery	0	0			89
Grand Total	2,330	14,583	6.3	0.8%	1,312

Exhibit 4.22
2001/02 Grenfell Region Hospital Activity
– White Bay Central, Roddickton

White Bay Central, Roddickton					
Program Cluster	IP Cases	IP Days	Avg. LOS	% ALC	SDS Cases
Gastro/Hepatobiliary	56	73	1.3	0.0%	0
Cardiology	55	65	1.2	0.0%	0
Pulmonary	22	57	2.6	0.0%	0
General Medicine	21	48	2.3	0.0%	0
Endocrinology	15	36	2.4	0.0%	0
Urology	9	17	1.9	0.0%	0
Orthopaedics	11	15	1.4	0.0%	0
Oncology	2	15	7.5	0.0%	0
Otolaryngology	7	13	1.9	0.0%	0
Psychiatry	8	12	1.5	0.0%	0
Trauma	8	9	1.1	0.0%	0
Rheumatology	3	7	2.3	0.0%	0
Neurology	5	6	1.2	0.0%	0
Vascular Surgery	1	5	5.0	0.0%	0
Gynaecology	2	2	1.0	0.0%	0
Obstetrics	1	1	1.0	0.0%	0
Haematology	1	1	1.0	0.0%	0
Grand Total	227	382	1.7	0.0%	0

Exhibit 4.23
2001/02 Grenfell Region Hospital Activity
– Labrador South, Forteau

Labrador South, Forteau					
Program Cluster	IP Cases	IP Days	Avg. LOS	% ALC	SDS Cases
Gastro/Hepatobiliary	45	62	1.4	0.0%	0
Cardiology	26	32	1.2	0.0%	0
General Medicine	22	30	1.4	0.0%	0
Pulmonary	17	20	1.2	0.0%	0
Otolaryngology	10	15	1.5	0.0%	0
Urology	10	14	1.4	0.0%	0
Endocrinology	4	10	2.5	0.0%	0
Neurology	6	10	1.7	0.0%	0
Trauma	4	6	1.5	0.0%	0
Rheumatology	1	5	5.0	0.0%	0
Psychiatry	2	5	2.5	0.0%	0
Neonatology	1	4	4.0	100.0%	0
Nephrology	1	3	3.0	0.0%	0
Orthopaedics	3	3	1.0	0.0%	0
Obstetrics	1	1	1.0	0.0%	0
Grand Total	153	220	1.4	1.8%	0

Exhibit 4.24
2001/02 Grenfell Region Hospital Activity – Belle Isle HC, Flower's Cove

Belle Isle HC, Flower's Cove					
Program Cluster	IP Cases	IP Days	Avg. LOS	% ALC	SDS Cases
Gastro/Hepatobiliary	28	31	1.1	0.0%	0
Urology	13	13	1.0	0.0%	0
Neurology	12	12	1.0	0.0%	0
Endocrinology	9	9	1.0	0.0%	0
General Medicine	9	9	1.0	0.0%	0
Pulmonary	6	6	1.0	0.0%	0
Cardiology	6	6	1.0	0.0%	0
Otolaryngology	3	5	1.7	0.0%	0
Psychiatry	4	4	1.0	0.0%	0
Dermatology	2	2	1.0	0.0%	0
Trauma	2	2	1.0	0.0%	0
Orthopaedics	2	2	1.0	0.0%	0
Ophthalmology	1	1	1.0	0.0%	0
Oncology	1	1	1.0	0.0%	0
Haematology	1	1	1.0	0.0%	0
Not Generally Hosp.	1	1	1.0	0.0%	0
Grand Total	100	105	1.1	0.0%	0

4.3.1 Beds and Occupancy

The current distribution of the 135 beds in the GRHSB sites is:

- Charles S. Curtis Memorial – 52 beds (32 med/surg, 14 obs/gyn/paeds, 6 ICU)
- John M. Gray Centre for Seniors – 47 LTC beds, 1 respite
- Labrador South HC, Forteau – 20 beds (14 LTC, 1 respite/palliative, 3 adult holding, 1 obstetric holding, 1 paediatric holding)
- Strait of Belle Isle HC, Flower's Cove – 3 holding beds (2 adult, 1 paediatric)
- White Bay Central HC, Roddickton – 5 beds (1 palliative, 3 adult holding, 1 paediatric holding)
- Charlottetown Clinic – 2 adult holding beds
- Mary's Harbour Clinic – 1 adult holding and 1 paediatric holding bed
- Port Hope Simpson Clinic – 2 adult holding and 1 paediatric holding bed

Prior to 1991/92 there were 146 beds at the Charles S. Curtis Memorial Hospital in St. Anthony. In 1991/92 the bed complement was reduced to 98. Further reductions were made in subsequent years until there were 61 beds in 1996/97. On

November 1, 2002, the beds were reduced to the 52 currently staffed and in operation.

Exhibit 4.25 shows the recent beds, patient days, and percent occupancy for Curtis Memorial. The percent occupancy number is based on the adult and paediatric patient days only, and the approved bed numbers. The reported occupancy is based on the number of beds actually in operation, taking into account seasonal bed closures.

Exhibit 4.25
Charles S. Curtis Memorial Hospital Beds, Patient Days, and Occupancy

Year	Approved Beds	Adult & Paed Patient Days					Newborn Days	Operated Beds*	Reported Occup.
		Med Surg	Obs Gyn Paeds	ICU	Total	% Occup.			
2000/01	61	9,952	3,616	1,203	14,771	66%	464	60	67%
2001/02	61	9,288	3,891	1,085	14,264	64%	441	54	72%
2002/03	57	8,797	3,626	897	13,320	64%	356	49	74%
2003/04	52	8,109	3,527	870	12,506	66%	278	48	72%

* Operated beds number reflects the impact of seasonal bed closures.

4.3.2 Level of Care by Site

Exhibit 4.26 shows the distribution of inpatient cases hospitalized in Grenfell hospital/health centres by level of care. 70% of Grenfell hospital inpatients were primary level patients. Only 1% of Grenfell hospital inpatients were tertiary/quaternary patients.

Exhibit 4.26
2001/02 Distribution of Grenfell Hospital Inpatients by Level of Care by Hospital

Hospital	% Distribution of Inpatient Cases by Level of Care		
	Primary	Secondary	Tertiary/ Quaternary
Belle Isle HC, Flower's Cove	79.0%	20.0%	1.0%
Curtis Memorial St. Anthony	66.5%	32.1%	1.3%
Labrador South, Forteau	89.5%	10.5%	0.0%
White Bay Central, Roddickton	84.6%	15.4%	0.0%
Grenfell Total	69.7%	29.1%	1.1%

Exhibit 4.27 shows similar information expressed in terms of inpatient weighted cases. This shows the approximate allocation of inpatient costs by level of care. 53% of Grenfell inpatient resources were used for primary patients, 43% for secondary patients, and 5% for tertiary/quaternary patients.

Exhibit 4.27
2001/02 Distribution of Grenfell Hospital Inpatient Weighted Cases by Level of Care by Hospital

Hospital	% Distribution of Inpatient RIW Weighted Cases by Level of Care		
	Primary	Secondary	Tertiary/ Quaternary
Curtis Memorial St. Anthony	49.9%	45.2%	4.9%
White Bay Central, Roddickton	80.9%	19.1%	0.0%
Labrador South, Forteau	89.8%	10.2%	0.0%
Belle Isle HC, Flower's Cove	70.1%	27.4%	2.5%
Grenfell Total	53.1%	42.5%	4.5%

4.3.3 Source of Admission by Site

Exhibit 4.28 shows the distribution of inpatient admissions in Grenfell hospital/health centres in 2001/02 by source of entry. More than half of the admissions were direct admissions. Slightly more than one third of the inpatients were admitted via the emergency department. While the admissions in St. Anthony were primarily elective direct admissions, in the other Grenfell hospital/health centres the majority of admissions were via the ED.

Exhibit 4.28
2001/02 Distribution of Inpatient Admissions by Entry Code

Hospital	Entry Code						Total IP Cases
	Direct	ED	From Clinic	From Day Surg	New born	Still born	
Belle Isle HC, Flower's Cove	37%	63%	0%	0%	0%	0%	100
Curtis Memorial St. Anthony	58%	29%	7%	1%	5%	0%	2,330
Labrador South, Forteau	44%	56%	0%	0%	0%	0%	153
White Bay Central, Roddickton	41%	58%	1%	0%	0%	0%	227
Grand Total	55%	34%	6%	1%	5%	0%	2,810

4.3.4 ICU Cases & Days by Site

CIHI inpatient discharge records include identification of hours and days of care spent in a "special care unit" (SCU). SCUs include neonatal intensive care units, ICUs, and CCUs.

Exhibit 4.29 shows the volume of SCU cases and days in 2001/02 for all Newfoundland and Labrador hospitals that reported any SCU activity.

Exhibit 4.29
SCU Activity in Newfoundland and Labrador Hospitals in 2001/02

Hospital	SCU Cases	SCU Days	ALOS in SCU	% of Cases with SCU	% of Days in SCU
Health Sciences Centre, St. John's	2,447	14,766	6.0	11.2%	6.6%
Janeway Child Health Centre, St. John's	410	6,514	15.9	7.8%	24.0%
Western Memorial, Corner Brook	611	3,165	5.2	8.3%	5.5%
James Paton Memorial Hospital, Gander	405	2,964	7.3	11.2%	11.0%
Central Newfoundland Regional Health Centre	536	2,544	4.7	11.3%	7.3%
Carbonear General Hospital	405	1,413	3.5	14.3%	6.2%
Curtis Memorial St. Anthony	424	1,051	2.5	18.2%	7.2%
Dr. G. B. Cross Memorial Hospital, Clarenville	158	668	4.2	12.0%	8.2%
Burin Peninsula Health Care Centre	138	469	3.4	12.1%	6.8%
Sir Thomas Roddick Hospital	183	360	2.0	11.6%	3.2%
Charles L. Legrow HC	84	174	2.1	12.7%	4.4%
Labrador HC, Happy Valley-Goose Bay	55	142	2.6	3.3%	2.2%
Captain Wm Jackman Memorial Hospital	63	141	2.2	8.5%	5.5%
Notre Dame Bay Memorial HC, Twillingate	1	2	1.8	0.2%	0.0%

In the Grenfell region, SCU care was provided only at Curtis Memorial in St. Anthony. Curtis Memorial had the highest percent of total cases with an SCU stay (18.2% of all cases), but the average length of stay in SCU for the SCU cases was only 2.5 days. At Curtis Memorial some patients who would likely be discharged to a step-down unit if they had been hospitalized in a larger hospital, remain in the ICU and their days are recorded as SCU days. The ICU is also sometimes used as a recovery area for OR patients (after hours when OR staff are not available).

Exhibit 4.30 shows the distribution of SCU days in Grenfell hospitals by program area. 43% of all SCU days are for cardiology and 39% of cardiology inpatients have at least one day of stay in an SCU bed. Just over one quarter of general surgery patients have an SCU stay.

Exhibit 4.30
2001/02 Distribution of
Grenfell Region SCU Activity by Program

Program	SCU Cases	SCU Days	ALOS in SCU	% of Cases w/ SCU	% of Days in SCU
Cardiology	135	447	3.3	39.1%	18.1%
General Surgery	72	216	3.0	26.2%	8.7%
Pulmonary	41	142	3.5	22.8%	12.8%
Gastro/Hepatobiliary	19	35	1.9	4.2%	2.0%
General Medicine	23	34	1.5	11.0%	3.6%
Orthopaedics	23	33	1.5	14.8%	3.6%
Trauma	34	33	1.0	25.8%	4.8%
Neurology	18	26	1.5	17.1%	5.3%
Cardio/ Thoracic	4	21	5.2	66.7%	23.7%
Gynaecology	14	17	1.2	14.9%	3.4%
Urology	9	12	1.3	6.0%	2.0%
Endocrinology	7	8	1.2	10.9%	2.4%
Psychiatry	7	8	1.2	9.6%	1.8%
Vascular Surgery	4	5	1.3	28.6%	2.7%
Otolaryngology	4	3	0.8	5.3%	1.6%
Obstetrics	3	3	1.0	1.6%	0.5%
Haematology	1	2	2.1	3.0%	1.6%
Ungroupable	1	1	1.4	25.0%	9.8%
Oncology	1	1	1.0	2.3%	0.3%
Plastic Surgery	1	1	0.9	20.0%	1.1%
Neonatology	2	1	0.3	1.5%	0.1%
Dermatology	1	1	0.5	8.3%	0.6%
Not Generally Hosp.	0	0		0.0%	0.0%
Rehabilitation	0	0		0.0%	0.0%
Rheumatology	0	0		0.0%	0.0%
Ophthalmology	0	0		0.0%	0.0%
Neurosurgery	0	0		0.0%	0.0%
Nephrology	0	0		0.0%	0.0%
Grand Total	424	1,051	2.5	15.1%	6.9%

4.3.5 Discharge Destinations and ALC Days

Combining ALC day data with discharge disposition records can assist in identification of barriers to access of post-acute care. CIHI records require that patients who will be discharged or transferred to a health care facility (or home with home support) have a record of this post-acute care on their acute care discharge abstract. If large volumes of ALC days are recorded for patients discharged to a particular discharge disposition, then this may indicate that either lack of capacity or processing delays are causing patients to be backlogged in acute care. Because ALC status was underreported in 2001/02, the analyses of CIHI data will not identify the absolute volume of discharge delays, but the data can be used to identify the placement options that are most associated with delays.

Exhibit 4.31 shows the distribution of hospitalized Grenfell residents in 2001/02 by discharge disposition and the ALC activity associated with each placement option.

Exhibit 4.31
Distribution of 2001/02 Grenfell Inpatient Cases by Discharge Disposition, with Associated ALC Activity

Discharge Disposition	IP Cases	% of IP Cases	Total IP Days	Avg. LOS	ALC Cases	% ALC Cases	ALC Days	% of All ALC Days	% of Stay as ALC	ALC LOS per ALC Case
Died	52	1.7%	765	14.7	0	0.0%	0	0.0%	0.0%	
Home	2,797	91.2%	15,326	5.5	26	0.9%	131	71.2%	0.9%	5.0
Home with Support	31	1.0%	375	12.1	0	0.0%	0	0.0%	0.0%	
Signed Out	7	0.2%	33	4.7	0	0.0%	0	0.0%	0.0%	
Xfr to LTC facility	4	0.1%	26	6.5	0	0.0%	0	0.0%	0.0%	
Xfr to Other	2	0.1%	92	46.0	1	50.0%	53	28.8%	57.6%	53.0
Xfr to Other IP facility	174	5.7%	1,511	8.7	0	0.0%	0	0.0%	0.0%	
Grand Total	3,067	100.0%	18,128	5.9	27	0.9%	184	100.0%	1.0%	6.8

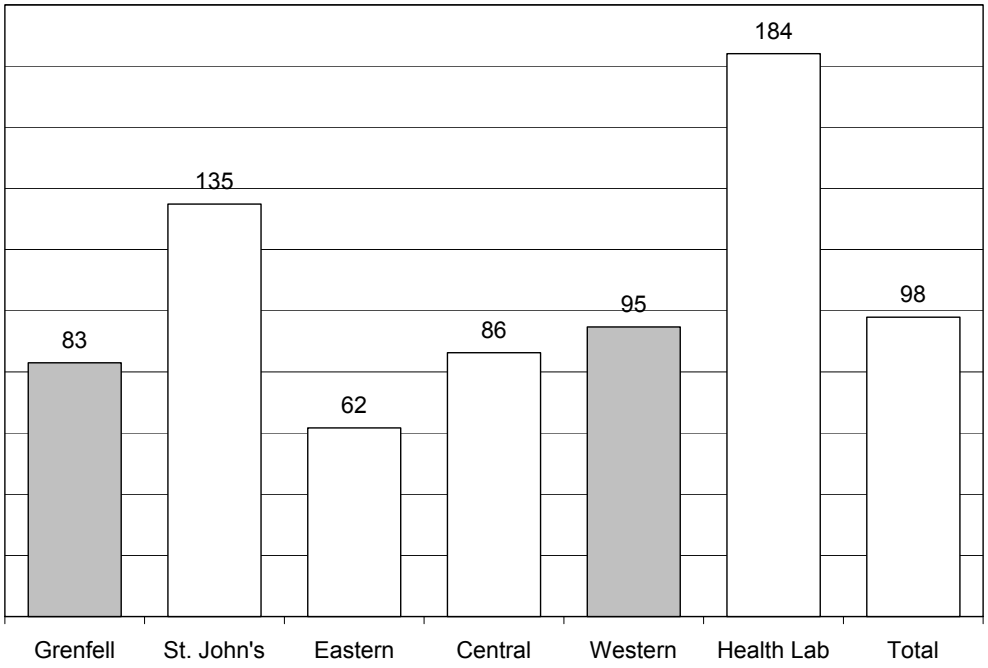
Very few ALC days were reported for Grenfell residents in 2001/02. Discharges to long-term care facilities were also under-reported.

91.2% of hospitalized Grenfell residents were discharged home without home support. A further 1% of patients were discharged home with home support. 5.7% of inpatients were transferred to another (acute) inpatient facility. Only 4 inpatients were documented as having been transferred to a long-term care facility.

4.3.6 Long-Term Care Beds

Exhibit 4.32 shows the number of long-term care beds per 1,000 population over 75 years old for each health region. Health Labrador Corporation has almost double the provincial average rate of long-term care beds. The Western region is just below the provincial average, and Grenfell is 15% below the provincial average. None of the reported discharges of Grenfell residents to long-term care had any ALC days, but given the lack of accurate reporting of discharge to long-term care and lack of ALC reporting, we cannot conclude that the low long-term care bed capacity is not a barrier to patient discharge.

Exhibit 4.32
Long-Term Care Beds per Population Over 75 Years Old



Data was not available to support comparative analysis of the capacity of other non-physician health care providers across the health regions. GRHSB staff reported that home care capacity in the Grenfell Region was lower than in other Newfoundland and Labrador health regions.

5.0 Clinical Efficiency Analysis

This section of the report focuses on an analysis of opportunities to find efficiencies in clinical care processes that will allow the Corporation to reduce its costs in meeting the needs of the population for hospital services.

5.1 Clinical Efficiency

Clinical efficiency analysis refers to the examination of opportunities to reduce use of inpatient days through a shift from inpatient to ambulatory surgery or through reduced length of stay. There are often variations between hospitals (or regions) in use of ambulatory care and variations in lengths of stay for apparently similar patients. Identifying these variations (and sharing the information with clinical staff) is an important step in reducing the variation and reducing the total cost of inpatient care.

Exhibit 5.1 shows the characteristics of inpatient hospital stays for the residents of Newfoundland and Labrador, sorted by their region of residence. Residents of St. John's have the longest average acute care hospital stays (1 day longer than the provincial average). Residents of Grenfell region have the second lowest acute care hospital stays (2 days below the provincial average). The short average LOS for Grenfell residents is partially due to admissions of short stay patients who would either not be treated in a hospital in other regions or would be treated on an ambulatory basis.[31] The average acute care hospital stay for Western region residents is 0.2 days longer than the provincial average.

[31] Ambulatory surgery is provided at only one Grenfell site. Analyses presented subsequently in this chapter show that Curtis Memorial has been the least aggressive of peer hospitals in shifting inpatient surgery to ambulatory surgery.

Exhibit 5.1
2001/02 Average Length of Stay by Region of Patient Residence

Patient Residence	IP Cases	IP Days	Avg. Total LOS	ALC Days	% ALC	Avg. Acute LOS
Unknown, Out of Province	881	4,744	5.4	27	0.6%	5.4
Grenfell RHSB	3,068	18,129	5.9	184	1.0%	5.8
H&CS - Central	12,707	92,919	7.3	4,541	4.9%	7.0
H&CS - Eastern	11,554	95,074	8.2	6,240	6.6%	7.7
H&CS - St. Johns	18,325	163,044	8.9	11,725	7.2%	8.3
H&CS - Western	10,697	86,421	8.1	5,212	6.0%	7.6
Hlth Labrador Co	3,071	14,616	4.8	200	1.4%	4.7
Grand Total	60,303	474,947	7.9	28,129	5.9%	7.4

5.2 Clinical Efficiency Methodology

For the purposes of the best practice review, we have used targets for clinical efficiency based on demonstrated performance of other Canadian hospitals. In addition to the Newfoundland and Labrador CIHI data provided by the NLCHI, CIHI data for hospitals in other provinces, as reported by peer hospitals to the annual CIHI/HayGroup benchmarking study, has been included.

Targets for use of ambulatory surgery and length of stay were developed for each hospital based on peer hospital performance for individual CMGs, age groups (and, initially, case complexity levels[32]). Targets were only applied where at least one hospital had at least 30 "typical" and outlier cases in a fiscal year in the CMG/age group category.

5.2.1 Peer Groups

The consultants identified (and the Steering Committee confirmed) groups of comparator hospitals for each hospital included in the study. Peer hospitals were selected based on clinical content, size and geography from Newfoundland & Labrador peers and from participants in the annually CIHI/Hay benchmarking study. The peer group for Curtis Memorial Hospital is shown in the following exhibit.

[32] Initial analyses were based on establishment of targets for individual CMG, patient age, and complexity ("Plx") combinations. Feedback from the project steering committee indicated that the co-morbidity diagnoses that determine CIHI complexity levels are likely under-reported in Western and Grenfell region hospitals. As a result the complexity (Plx) levels were ignored, and targets were established based only on CMG and patient age.

Exhibit 5.2
Curtis Memorial Hospital Peer Group

Curtis Memorial	
Roddick	
Dr. GB Cross Memorial	
Burin Peninsula Health Centre	
Lakeridge Health	Port Perry
Lakeridge Health	Bowmanville
Fraser Health Region	Eagle Ridge
Fraser Health Region	Ridge Meadows
Grey Bruce Health Services	Meaford General
South East Regional	Sackville
Northern Lights	
Fraser Health Region	Delta
Niagara Health System	Douglas Memorial
Stanton Territorial H.	
Vancouver Coastal	Powell River
Vancouver Coastal	St. Mary's
Interior Health Authority	Kootenay Boundary
Interior Health Authority	East Kootenay Regional
Interior Health Authority	Shuswap Lake
Interior Health Authority	Kootenay Lake Reg H
Interior Health Authority	South Okanagan Gen H
Interior Health Authority	Boundary

No individual peer hospital will be exactly the same as Curtis Memorial in terms of size, clinical content, level of care, and catchment geography. The peer hospitals are used to identify a range of clinical efficiency performance in addressing the needs of similar patients for comparison with Curtis Memorial performance. The final targets used to calculate potential cost savings through clinical efficiency will be less aggressive (in order to account for differences, particularly in catchment geography) than would otherwise be the case if the peer hospitals were identical to Curtis Memorial.

5.2.2 "Best Quartile" Targets

For each peer group, the "best quartile" target for use of ambulatory surgery and the "best quartile" target for length of stay was calculated for each possible CMG and patient age combination.

The "best quartile" target for ambulatory surgery in a CMG-patient age cell is the percent use of ambulatory surgery where one quarter of the hospitals (with at least 30 cases) in the peer group had a higher percent use of ambulatory surgery, and

three quarters of the hospitals had a lower percent use of ambulatory surgery.

The "best quartile" target for length of stay in a CMG-patient age cell is the length of stay (for typical and outlier cases, including all ALC days) where one quarter of the hospitals (with at least 30 cases) in the peer group had a shorter LOS and three quarters of the hospitals had a longer LOS.

The "best quartile" targets for length of stay were calculated after application of the "best quartile" targets for ambulatory surgery. A hospital may have a low average LOS for a CMG because patients who would be treated on an ambulatory basis in other hospitals get admitted as inpatients for 1 or 2 days. The inclusion of these very short stay cases reduces the average length of stay, and could cause the hospital to look very efficient (based on average LOS) when in fact they have opportunities to further reduce use of inpatient beds. To avoid this we simulate the achievement of "best quartile" ambulatory performance for each hospital (and remove short stay inpatient cases that could have been treated on an ambulatory basis) before calculating the target length of stay.

For a hospital that has aggressively shifted inpatient surgery to ambulatory surgery, this adjustment will have little impact. However, for a hospital that has not shifted inpatient surgery to ambulatory surgery, the adjustment will remove a large number of 1 or 2 day stay cases, and establish a new, longer, average length of stay that gets used with the assessment of length of stay reduction opportunities.

For many CMG-patient age combinations no hospital exceeded the minimum annual volume requirement of 30 cases.

Because of the relatively low patient volume in the peer group hospitals, for many CMG-patient age combinations no hospital exceeded the minimum annual volume requirement of 30 cases, so no target was established. Death, transfer, and sign-out cases (and their associated days) are excluded from the clinical efficiency analysis.

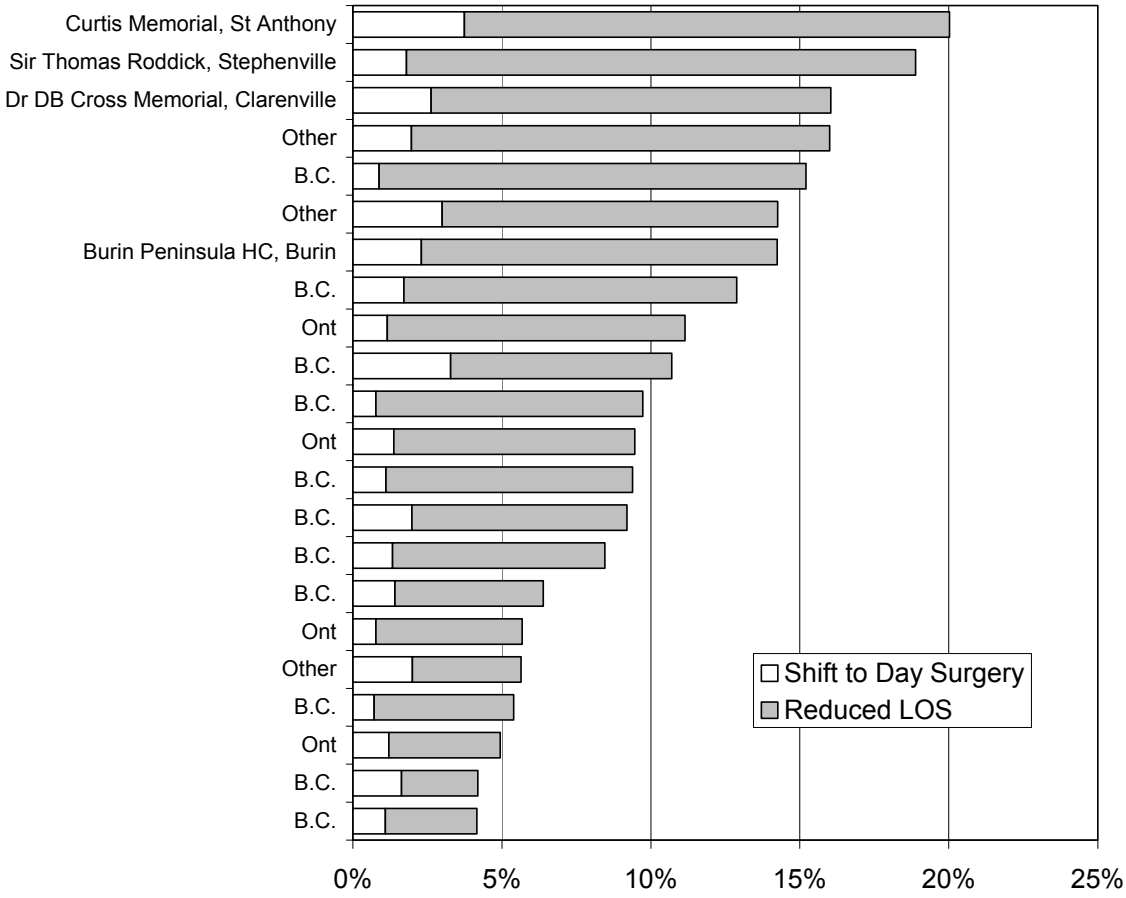
5.3 Clinical Efficiency Analysis Results

The analysis results shown in the following charts show what percent of actual total inpatient days would be saved if each hospital achieved the "best quartile" targets for both ambulatory surgery and length of stay for every CMG-patient age combination. The hospitals with the smaller estimated savings opportunities are those whose patterns of practice are already close to the "best quartile" performance levels and who would be considered to be relatively clinically efficient.

The hospitals with the larger estimated savings opportunities are those who would be considered to be clinically inefficient. No one hospital is likely to be able to achieve the "best quartile" targets across the board, so even the most efficient hospital will have some further savings opportunities identified through this analysis.

Exhibit 5.3 shows the results of the clinical efficiency analysis for Curtis Memorial Hospital. The most efficient of the peer hospitals would save 4.2% of total inpatient days at the "best quartile" targets. Curtis Memorial would save 20.0% of 2001/02 inpatient days.

Exhibit 5.3
Percent of Current (2001/02) Days Saved at "Best Quartile" Targets for Curtis Memorial Hospital



5.3.1 Inpatient Day Reduction Targets

It is not feasible to achieve "best quartile" targets across the board. Instead we have assumed that the study hospitals should be able to improve their clinical efficiency to the median level achieved in their peer group. For Curtis

Memorial Hospital, the estimated opportunity at "best quartile" performance was 20.0%. The median opportunity of the peer group was 9.6%. If Curtis Memorial operated at the median performance level of the peer group it could save 11.4% of 2001/02 inpatient days.

5.3.2 Ambulatory Surgery Opportunities by CMG

Based on the best quartile targets, we estimate that 3.7% of inpatient days could have been eliminated at Curtis Memorial Hospital in 2001/02 through expanded provision of ambulatory surgery. None of the other hospitals in the peer group would have saved more than 3% of inpatient days from application of the best quartile targets.

The following tables show the individual CMGs at each hospital that were identified as having the greatest opportunity to reduce inpatient days by shifting inpatient cases to ambulatory procedure.

Exhibit 5.4
Top 15 CMGs for Opportunity to Shift Inpatient Cases to Ambulatory Procedures – Curtis Memorial (2001/02)

Case Mix Group		IP Cases	SDS Cases	% SDS	Cases to SDS	Resulting % SDS	Days to Save
294	Esoph/Gastro/Misc Digest Dis	208	355	63.1%	67	74.9%	103
317	Laparoscopic Cholecystectomy	57	0	0.0%	37	65.0%	81
846	Aftercare Follow Surgery/Tx	56	52	48.1%	46	90.7%	74
851	Oth Factors Cause Hospitaliz	62	12	16.2%	36	64.9%	53
536	Urinary Obstruction (MNRH)	34	20	37.0%	21	75.9%	40
297	Other G.I. Diagnoses	37	77	67.5%	16	81.7%	34
269	Bilateral Hernia Procedures	21	25	54.3%	11	78.1%	18
93	Tonsill/Adenoidectomy (MNRH)	13	1	7.1%	10	80.8%	10
266	Anus & Stomal Proc (MNRH)	6	13	68.4%	4	89.5%	10
696	Upper Extremity Fractures	19	1	5.0%	7	40.0%	9
512	Oth Transureth Proc/Bx(MNRH)	11	14	56.0%	5	76.0%	9
289	Inflammatory Bowel Disease	15	10	40.0%	6	64.0%	9
586	Tubal Interruption (MNRH)	5	47	90.4%	4	98.1%	7
375	Minor Upper Extremity Proc	8	5	38.5%	5	76.9%	7
529	Lower Urinary Tract Infection	10	18	64.3%	2	71.4%	6
510	Transurethral Prostatectomy	16	0	0.0%	2	12.5%	6
All Other CMGS		1,751	662	27.4%	42	29.2%	69
Total		2,329	1,312	36.0%	321	44.9%	545

5.3.3 Total Inpatient Day Reduction Opportunities by CMG

The following table shows the individual CMGs at Curtis Memorial Hospital that were identified as having the greatest opportunity to reduce inpatient days, primarily by shortening length of stay (based on "best quartile" targets).

Exhibit 5.5
Top 15 CMGs for Opportunity to Reduce Inpatient Days – Curtis Memorial (2001/02)

Hospital:		Curtis Memorial, St Anthony									
CMG #	CMG Name	2001/02 Actual				Impact of Best Quartile Targets					
		IP Cases	IP Days	LOS	SDS Cases	IP Cases	IP Days	LOS	SDS Cases	Days to Save	% Days to Save
294	Esoph/Gastro/Misc Digest Dis	208	894	4.3	355	141	525	3.7	422	369	41.2%
317	Laparoscopic Cholecystectomy	57	259	4.5	0	20	57	2.9	37	202	77.9%
579	Maj Ut/Adnexal Proc No Malig	63	367	5.8	18	63	240	3.8	18	127	34.5%
253	Major Intestinal/Rectal Proc	8	202	25.3	1	8	78	9.8	1	124	61.3%
242	Chest Pain	39	210	5.4	1	38	88	2.3	2	122	58.2%
666	Maj Low Extremity Proc Trx	16	165	10.3	0	14	47	3.3	2	118	71.6%
143	Simple Pneumonia & Pleurisy	37	360	9.7	1	37	248	6.8	1	112	31.1%
235	Angina Pectoris	25	203	8.1	0	25	99	4.0	0	104	51.0%
365	Back & Neck Proc No Fusion	10	135	13.5	0	10	33	3.3	0	102	75.9%
648	Neo,Wt>2500G,Normal Newborn	90	270	3.0	0	90	179	2.0	0	91	33.6%
611	Vaginal Delivery	64	224	3.5	0	64	136	2.1	0	88	39.3%
510	Transurethral Prostatectomy	16	118	7.4	0	14	30	2.2	2	88	74.3%
354	Knee Replacement	6	112	18.7	0	6	30	4.9	0	82	73.6%
846	Aftercare Follow Surgery/Tx	56	169	3.0	52	10	95	9.5	98	74	43.8%
13	Spec Cerebrovasc Disord(xTIA)	14	208	14.9	0	14	142	10.1	0	66	32.0%
All CMGs		2,329	14,582	6.3	1,312	2,008	11,662	5.8	1,633	2,920	20.0%

If the proposed reductions in length of stay were achieved, the Curtis Memorial Hospital average LOS would equal the CIHI Expected LOS.

In 2001/02, the Curtis Memorial Hospital "typical" case length of stay was 25.8% above the CIHI expected LOS for the combinations of CMGs, patient age, and patient complexity, of Curtis Memorial inpatients. If the proposed reductions in length of stay (8.9% of total days) were achieved only by reducing the LOS for "typical" patients, the Curtis Memorial Hospital average LOS for these typical patients would be equal to the CIHI expected LOS. For internal LOS monitoring and management purposes, Curtis Memorial should target to achieve the CIHI ELOS performance level.

5.3.4 Estimated Potential Cost Savings From Clinical Efficiencies

The previously presented analyses show the estimated percent of inpatient days that could be saved through improved clinical efficiency. The targets have been established by applying the "best quartile" targets at the CMG-patient age level to all of the hospitals in a peer group, and then using the median performance level in the peer group to create a target for reduction in use of inpatient days for the study hospitals.

Percent targets for reduction in use of inpatient days do not translate into the same percent targets for reduction in costs. Cost savings estimates will be lower because:

- Not all costs will be reduced when inpatient days are eliminated. Some fixed costs cannot be reduced (particularly in small facilities) or will not change unless entire nursing units can be closed.

- Clinical efficiency savings target elimination of lower cost days at the end of a patient's stay or the shift of minor surgical procedures to SDS (which may eliminate a day or two of inpatient care, but won't impact the surgical costs).

To model the potential cost savings impact of the proposed targets for reduction of inpatient days, we have used the CIHI RIW components to calculate the marginal impact of reduction of days at the end of an inpatient stay. For shifts from inpatient surgery to SDS, we have eliminated the "typical" inpatient RIW and added the corresponding DPG RIW for the procedure.

For length of stay reductions, we assume that the first days saved will be ALC days, and use the CIHI "low severity" per diem RIW to estimate the impact of removal of these days. If the days to save are greater than the reported ALC days, we assume that the savings associated with elimination of these additional days will be based on the CIHI "routine/ancillary" (R/A) per diem weight for the CMG. These estimates are used to calculate a hospital-specific estimated RIW reduction per inpatient day saved and apply an estimated cost saving target per RIW (based on actual direct cost per RIW values from peer hospitals) to generate a direct cost savings figure.

Exhibit 5.6 shows the results of this cost saving analysis for the application of clinical efficiency targets to Curtis Memorial Hospital in St. Anthony. While the overall target for reduction of inpatient days is 11.4% of total days, we estimate that the corresponding reduction in direct costs would be only 7.3% of total direct costs or **$436 thousand**.

Exhibit 5.6
Estimated Direct Cost Savings from Clinical Efficiencies

Region	Hospital	Actual IP Days	Actual Total RIW	% Days to Save @ Tgt	Estimated IP Day Savings	RIW Red'n per Day Saved	Est. Direct Savings per RIW	Direct Cost Savings	% RIW Red'n
Grenfell	Curtis Memorial	14,582	2,437	11.4%	1,662	0.107	$ 2,450	$ 435,785	7.3%

5.4 Estimated Timing of Savings

We estimate that 25% of estimated direct cost savings from clinical efficiency opportunities could be achieved in the first year of implementation, 50% in the second year, and the remaining 25% in the third year.

Exhibit 5.7
Estimated Clinical Efficiency Direct Cost Savings by Year

Region	Direct Cost Savings	Year 1	Year 2	Year 3
Grenfell - St. Anthony	$ 435,785	$ 108,946	$ 217,892	$ 108,946
Total Annual Savings in Year		$ 108,946	$ 326,838	$ 435,785

Recommendation:

It is recommended that:

(38) The Board of the Grenfell Regional Health Services Board should establish a target for reduction of use of inpatient days at St. Anthony Hospital based on the clinical efficiency analyses conducted during the Best Practices Review.

5.5 Utilization Management

As has been discussed, there is no utilization management committee for the GRHSB. GRHSB administrative staff have participated on a provincial bed utilization committee.

The Chief of Staff is expected to assume a role in the management of utilization of clinical resources, including length of stay management and assessment of measures of clinical resources utilization. The Medical Director, Chief of Staff and the Medical Advisory Committee share the responsibility for utilization management. There appears to be no organized attempt to monitor and manage utilization. There is an assumption that it is not possible to meet standards of efficiency seen in other communities or regions because of the low volumes of activity in some of the centres, the lack of community services, and the barriers imposed on access by a geographically disparate population.

The consultants were told that patients are also sometimes transferred to the Curtis Memorial Hospital (by air or ambulance) without objective assessment of whether admission to an acute care hospital is required, or in response to patient or family demands. We were also told that patients are also admitted in St. Anthony to gain access to diagnostic technologies that are not available in outlying communities.

Patients may be kept as inpatients longer than would be the case in a densely populated urban centre because of the distance from their home to the hospital, and the limited

access they have to the hospital if post-discharge complications arise.

There is no systematic approach to quality management. Quality management is approach on a reactive rather than proactive basis.

In reality, GRHSB physicians are left individually responsible for their patterns of utilization and the quality of their care. Any greater emphasis on utilization management would be seen by the physicians (including the medical leadership) as potentially conflicting with their responsibility to fully meet the medical care requirements of their patients.

Summarized length of stay data (as provided by CIHI) is provided to the Health Records Committee. Physicians at monthly medical staff meetings review a statistical report, supplied by the Health Records manager.

6.0 Operational Analyses

Pressures to manage operating costs are challenging health service organizations to find new ways of doing things, while at the same time demanding that service quality be maintained and even improved. Service delivery is composed of three integrated components, as follows:

- Human Resources – staffing, organization, competencies, training and education
- Technology – "tools" used in delivering services (information systems, equipment, etc.)
- Process – methods and organization of how services are delivered.

One of the principal objectives of the Best Practices Review of GRHSB has been to identify potential opportunities where GRHSB could improve the efficiency and cost effectiveness of its sites, services and functional centres.

On-Site Interviews and Observations

On-site reviews and interviews were conducted in the following sites:

- Charles S. Curtis Memorial Hospital in St. Anthony
- John M. Gray Centre in St. Anthony
- Labrador South Community Health Centre in Forteau
- Straits of Belle Isle Community Health Centre in Flowers Cove
- White Bay Central Community Health Centre in Roddickton

related to the following service areas:

- Special Care Areas (ED, ORs, PARRs, CCUs)
- Acute Care Nursing Units
- Long-Term Care Nursing Units
- Community Services
- Therapeutic Services
- Diagnostic Services
- Support Services
- Administrative Services

Functional centers and sites were visited when there was a reasonable expectation of achieving improvements in operating efficiency or when there were concerns that low staffing levels might be having a deleterious impact on service quality. The areas of focus during the on-site reviews were:

- Management processes
- Operations and procedures
- Inter-departmental coordination and processes
- Inter-site coordination and processes
- Facilities, Equipment and Supplies
- Productivity Review
- Opportunities for improvement, including redesign or reengineering of work processes, alternative service delivery approaches, improved use of information technology, etc.

The degree and magnitude of improvements in productivity and reductions in cost that the functional centres could achieve were determined through these on-site interviews, and observations and through follow-up data analyses and comparisons with the performance of peer hospitals and health care organizations.

The performance of GRHSB functional centres was compared to the performance of a peer comparator group consisting of Newfoundland and Labrador and Canadian hospitals and health regions.

For purposes of this review it was agreed by the project's Steering Committee that the performance of the GRHSB functional centres would be compared against a peer comparator group comprised of the following Newfoundland and Labrador and Canadian hospitals and health regions:

- Burin Peninsula Health Care Centre, NF
- Dr GB Cross Memorial Hospital (Clarenville), NF
- Stanton Territorial Health Authority, NT
- Northern Lights Health Region, AB
- Interior Health Authority, Kootenay Boundary Regional Hospital, BC
- Interior Health Authority, East Kootenay Regional Hospital, BC
- Interior Health Authority, Kootenay Lake District Hospital, BC
- Interior Health Authority, Boundary, BC

- Interior Health Authority, South Okanagan General Hospital, BC
- Fraser Health Authority- Eagle Ridge Hospital, BC
- Fraser Health Authority, Ridge Meadows Hospital, BC
- Fraser Health Authority, Delta, BC

Each of GRHSB's functional centre's performance was compared to peer performance.

Each GRHSB functional centre's performance was compared to peer performance[33] in relation to the following parameters of the distribution of peer performance:

- Best quartile Performance Level
- Median Performance Level
- Mean Performance Level
- Worst Quartile Performance Level

The peer performance ranges were developed using each peer organization's reported 2002/03 data in accordance with the Canadian Management Information Systems (MIS) reporting guidelines.[34] Comparisons of GRHSB functional centres performance was primarily based on the GRHSB 2002/03 performance as reported to the project team by the hospital[35] since only YTD performance (as of December 31, 2003) was available for 2003/04.

The best quartile is considered to be a reasonable surrogate for best practice performance.

The best quartile is considered to be a reasonable surrogate for best practice performance and is a reasonable expectation for the level of performance for high performing functional centres in Canadian hospitals and health care organizations. It

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[33] The only major exception to this is in Long Term Care. Significant differences in the organization of long-term care services among provinces makes inter-provincial comparisons of productivity in long-term care facilities quite difficult. Nursing home care in Grenfell includes care that in other provinces might be considered chronic hospital care, nursing home care and personal care. We have drawn on our experience in working in LTC in other provinces to assess the staff:workload relationship in GRHSB.

[34] While the MIS Guidelines provide a uniform set of reporting guidelines there continues to be vagaries in reporting of workload, staffing and costs among Canadian hospitals. The budget for this project did not allow for reviewing the reporting of comparator hospitals to confirm the accuracy of their data. However, given the number of comparators and the use of the best quartile rather than the 'best practice' performance level, the vagaries in reporting should not have a significant impact on the reasonableness of the performance targets established in this project.

[35] Prior to conducting the comparisons a data review and refinement exercise was undertaken with GRHSB staff to address obvious errors/omissions identified in GRHSB reported data.

is generally thought that best productivity performance (the fewest hours/unit of workload) is not a reasonable target for the purposes of this type of comparison and for this type of operational/funding review. (However, it should be noted that many health care organizations are benchmarking and attempting to achieve best practice performance as part of their Continuous Quality Improvement Exercises.) Using the best quartile in place of the best productivity also allows for errors in measurement that might contribute to extremely good performance results.

Performance targets have been recommended for each functional centre based on both the comparative analyses and the on-site reviews.

The use of the best quartile performance level as the surrogate for best practice *does not imply* that this is the ideal, expected or achievable performance level for GRHSB functional centres. Performance targets have been recommended for each functional centre based on both the comparative analyses and the on-site reviews.

- For many functional centers we have recommended improvements in levels of performance to achieve best practice.
- In some functional centers there are factors that militate against achieving best practice performance. Poor facilities, inadequate technologies and low volumes are some of these factors. The suggested/targeted performance levels will leave the functional centre less productive than the best quartile performance level of the comparator organizations.
- In other areas current performance is better than the best quartile performance of the peer organizations. If quality was not an issue, in these functional centers the performance target was set at the current level of performance rather than the best quartile performance level of the peer group.

Functional centre performance targets and the reported workload were used to determine required staffing or costs. These were compared to the staffing and costs reported by GRHSB to determine the potential savings were the organization to achieve the recommended performance targets[36].

As GRHSB moves forward with the recovery plan opportunities for further improvements in performance may be

[36] FTE Savings Potential =(Target productivity - actual productivity) * workload * FTE/Worked Hour; $ Potential = FTE Potential * $/FTE.

identified. Also, it should be noted that the selected comparators are relatively small, low volume organizations or sites. Like GRHSB they too struggle to achieve efficiencies with small volumes and variable workload. As GRHSB strives to improve its performance, it might consider the levels of efficiency achieved by larger organizations and health care sites. These likely would better reflect industry best practice.

6.1 Charles S. Curtis Memorial Hospital

6.1.1 Combined Emergency/Outpatient

6.1.1.1 Department Description and Operations

This area is presented as a combined area based on how the Board tracks and reports hours and workload.

The two areas are located in the same physical corridor of the hospital. The space for the ED and the OP area are not well situated. The ED patient observation areas are separated and each area requires a staff person to be present whenever there are patients in it. It makes it difficult to achieve efficiencies. RNs provide the care in the ED. Paramedics are available to assist when they are not on a call.

OP activity takes up some space intended to be part of the ED. The organization uses LPN staff in the OP area.

The hospital has conducted a space utilization study that suggested relocating the ED to a different wing of the building. This may assist in creating a more acceptable space for patients and reduce the stress on the nursing staff working in this area. However, the organization should move ahead cautiously to ensure that no staffing inefficiencies result from locating the ED some distance away from other areas and the need to ensure core staffing

6.1.1.2 Workload

Based on the information provided by the region, the visits are provided separately for ED and for OP.

Exhibit 6.1
ED and OP visits

	2000/01	2001/02	2002/03	2003/04
ER (71310)	8,037	7,886	7,636	7,853
OP (71350)	31,049	31,574	27,845	30,218

Based on this information the ED averages only approximately 20-22 patients per day. This is a very low visit volume and, as a result it will be difficult to achieve efficiency in ED staffing. The Hospital registers all outpatients in this area whether they go to the ED and OP for their visit or to physiotherapy, DI, laboratory, etc. The Hospital however had some difficulty distinguishing between the number of patients who actually visited the OP from those who visited a diagnostic or therapeutic service. This makes it difficult to determine the current actual productivity of the OP area. It is also assumed that the visit volume for the sub-acute clinic, which is staffed by the ED staff, is reported in the OP visit volume statistic.

Staffing was reported as the combined staffing for both areas. The combined staffing hours are presented in the following exhibit.

Exhibit 6.2
ED/OP - FTEs

ER & OP - FTEs

	2002/03	2003/04
Total Worked Hours	19,369	20,466
FTE	13.02	13.55

6.1.1.3 Productivity and Staffing

Productivity is measured and compared as the total worked hours (unit producing, management and operations support) per visit (worked hours per visit). The productivity range for comparison purposes is also presented.

Physical layout and low visit volume make it difficult to achieve efficiency.

Because the hours were reported combined and the workload is not workload associated only with the ED/OP, productivity in the ED was analyzed based on the reported staffing pattern. During the site visit it was reported that there were 52 worked hours of RN staff (excluding the Nurse Practitioner):

- 1 Team Leader 0800-1600hrs
- 2 RNs 0800-2000 hours
- 1 RN 1200-2400 hours
- 1 RN 2400-0800 hours

This level of staffing would result in worked hours of 2.42 worked hours per visit in 03/04 and 2.49 worked hours per visit in 02/03. As can be seen by comparison with the productivity range table below this is more than twice the worst quartile performance of the peers.

Exhibit 6.3
Comparators ED/OP Productivity Range

Productivity Range	Peers	Best Quartile	Median	Worst Quartile	Mean
Wkd Hr/Visit	11	0.94	1.17	1.29	1.33
var NL non-drug $/Visit	12	$ 4.61	$ 5.50	$ 6.77	$ 5.57

The Department should maintain the recommended minimum staffing levels

The ED should maintain a minimum staffing level that is reduced from the current 52 hours to 36 hours per 24 hours as follows:

- 1 Team Leader 0800-1600 hours
- 1 RN 0800-2000 hours
- 1 RN 1600-2400 hours
- 1 RN 2400-0800 hours.

This level will provide a minimum of 2 staff per 24 hours except on nights where the current process of relief and connection to support is through the site administrator role.

6.1.2 Combined OR/PARR

6.1.2.1 Department Description and Operations

There are 4 ORs that are staffed with RNs, one room being dedicated to urology. Endoscopy is done in the area. The following table provides a breakdown of the types of procedures reported to be performed in the ORs in 2003/04.

Exhibit 6.4
Surgical Case Volume

Main Operating Room Cases (2003/04)			Minor Operating Room Cases (2003/04)	
General Surgery	333		Gastroscopy	326
Urology Surgery	230		Colonoscopy	495
Ophthalmology Surgery	52		Colposcopy	251
ENT	14		Wart treatment	12
Orthopedic Surgery	198		Excision and Biopsy	106
Gyne Surgery	195		Vasectomy	11
Dental Surgery	103		All other procedures	207
Total	**1,125**		**Total**	**1,408**

The nursing staff is hard working, dedicated and have been trained in multiple tasks to cover the ORs. However, they are doing non-nursing tasks that might be delegated to unregulated, less expensive individuals.

6.1.2.2 OR Facilities

The operating rooms are antiquated with respect to lights, anaesthetic machines, and ventilation. There is no laminar flow to support orthopedic surgery. The cost of upgrading the ORs to an acceptable standard for orthopedics may not be justified for the volume of cases performed or anticipated.

Recommendation:

It is recommended that:

(39) The Executive Director should provide for replacement/updating of lighting, anesthetic machines and ventilation to support basic general surgery.

6.1.2.3 OR Turnaround

Cases are often delayed because of extended turn around times and nursing staff doing non-nursing duties between cases. Cases often appear to be scheduled at the convenience of the surgeon without sufficient consideration of nursing shift times. Often instruments from the previous day have not been cleaned because of a late case during the night and nurses have to clean them. These duties should be performed by less expensive personnel. The AED Nursing Acute Care should establish an unregulated support staff position in the OR to clean instruments, support turnaround of ORs for turnaround and other duties to ensure smooth patient flow.

Recommendation:

It is recommended that:

(40) The AED Nursing Acute Care should establish an unregulated support staff position to support nursing in the ORs.

6.1.2.4 Workload

The workload and staffing for this program is presented in the following exhibit. The FTEs are based on the actual total worked hours and benefit hours reported for the period.

Exhibit 6.5
Combined OR/PARR – Cases and FTEs

	2002/03	2003/04
Total Cases	2,551	2,862
Total Worked Hours	20,920	19,953
FTE	13.26	13.60

6.1.2.5 Productivity and Staffing

Productivity is measured and compared as the total worked hours (unit producing, management and operational support) per case (worked hours per case).

Exhibit 6.6
Combined OR/PARR – Productivity

	2002/03	2003/04
Wkd Hr/Case	8.20	6.97
var NL non-drug $/Case	$ 102.58	$ 110.20

Very few comparators report a single OR/PARR functional centre. To provide for additional comparators for this functional centre, we have summed the staffing in the OR and PARR of the other comparators to provide a surrogate measure of their OR/PARR staffing per OR case.

Exhibit 6.7
OR & PARR Peer Hospital Productivity

Productivity Range	Peers	Best Quartile	Median	Worst Quartile	Mean
Wkd Hr/Case	11	6.54	6.89	7.78	7.03
var NL non-drug $/Case	11	$ 252.11	$ 288.15	$ 322.65	$ 283.46

The OR/PARR should should reduce staffing to achieve productivity of 6.54 worked hours per case.

Based on the information provided to us by the region regarding worked hours and workload, in 2003/04, this functional centre is achieving only median level performance of its peer group for the combination of OR and PARR. Given the nature of the cases, and the potential to improve work process, we feel that productivity in this area can be improved. Thus, we recommend that the Department should reduce its staffing to achieve best quartile performance of the peer group or 6.54 worked hours per case. As noted above, one of the staff in the OR should be converted to a support staff position to improve turnaround and facilitate more effective use of RN staff. This should be achieved through the reallocation of current staffing, rather than the addition of another position.

Recommendation:

It is recommended that:

(41) The AED Nursing Acute Care should reduce staffing to achieve a targeted productivity for the OR/PARR of 6.54 worked hours per case.

6.1.3 Day Surgery Unit

6.1.3.1 Department Description and Operations

In this unit the RNs have an advanced practice role. They do the history and physicals and anesthetic assessment of the patients. They consult with the attending physician and/or anesthetist with any concerns. The LPN and Ward Clerk porter patients to the OR and inpatient areas as necessary.

6.1.3.2 Workload

Based on the information provided by the region, the workload for Same Day Surgery follows.

Exhibit 6.8
Same Day Surgery Visits and FTEs

	2002/03	2003/04
Total Visits	2,767	2,700
Total Worked Hours	7,101	7,714
FTE	4.69	5.03

The work content of the visits to the Day Surgery Unit, as reported by the Board for 2003/04, is presented in the exhibit following table.

Exhibit 6.9
Types of Visits

Activity	Visits
Pre-admission clinic	641
Same Day Admission	177
Special Procedures	536
Day Surgery (Main OR)	613
Day Surgery (Minor OR)	589
Chemotherapy	247

6.1.3.3 Productivity and Staffing

Productivity is measured and compared as the total worked hours (unit producing, management and operations support)

per visit (worked hours per visit). The productivity range of the peer hospitals is also presented.

Exhibit 6.10
Same Day Surgery Productivity

	2002/03	2003/04
Wkd Hr/Visit	2.57	2.86
var NL non-drug $/Visit	$ 1.69	$ 2.07

Exhibit 6.11
Productivity Range

Productivity Range	Peers	Best Quartile	Median	Worst Quartile	Mean
Wkd Hr/Visit	5	2.42	3.24	5.07	4.02
var NL non-drug $/Visit	4	$ 6.35	$ 6.89	$ 8.83	$ 8.28

The Department should maintain its current performance level of 2.86 worked hours per visit.

RN staff of this functional centre are fulfilling advanced practice roles which are appropriate for the size and activity of the hospital. However this role is not normally seen in many organizations. As a result, it is likely not possible for the hospital to achieve best quartile performance of its peers. Thus, we recommend that the Department should maintain its current performance level of 2.86 worked hours per visit.

6.1.4 ICU

6.1.4.1 Department Description and Operations

This ICU contains 5 adult beds & 1 pediatric/neonatal bed. It was reported that occupancy is about 60%. This unit is not located in close proximity to the medical/surgical unit and is some distance from other providers. This creates challenges for efficient nurse staffing and back-up.

Units of this type and small size are very difficult to staff efficiently. There is no RT support (and insufficient workload to support a 24/7 RT position) and as a result RNs do all ventilation for patients on the unit. There are site coordinators who cover days and nights and they are all trained ICU staff and are able to provide assistance as required. There is a team leader plus 3 staff on days and 2 staff on nights.

The organization should consider minimum staffing model on this unit of 2 nurses per 12-hour shift. The site coordinator on days could be acting as team leader for this unit.

6.1.4.2 Workload

The workload and staffing for this program are presented in the following exhibit.

Exhibit 6.12
ICU Patient Days and FTEs

	2002/03	2003/04
Total Patient Days	897	1,016
Total Worked Hours	17,693	18,651
FTE	11.25	11.96

6.1.4.3 Productivity and Staffing

Productivity is measured and compared as the total worked hours (unit producing, management and operations support) per patient day (worked hours per patient day).

Exhibit 6.13
ICU Productivity

	2002/03	2003/04
Wkd Hr/Pt Day	19.72	18.36
var NL non-drug $/Pt Day	$ 65.69	$ 43.95

Exhibit 6.14
Productivity Range

Productivity Range	Peers	Best Quartile	Median	Worst Quartile	Mean
Wkd Hr/Pt Day	8	15.56	18.15	21.75	18.97
var NL non-drug $/Pt Day	8	$ 29.83	$ 40.32	$ 84.96	$ 77.10

Low census, small size and distance to other patient care areas are impediments to efficiency.

Based on the worked hours and workload information provided to us by the region, in 2003/04 this functional centre's productivity was between the median and the worst quartile level of performance of its peer group for the ICU. Because of its low census, small size and distance to other patient care areas it will be difficult for the ICU to improve its productivity.

No more than minimum staffing of 2 RNs on days and 2 staff on nights is required to address patient care requirements of this unit. However, because of its location, no fewer than 2 nurses per shift is safe. Team leader support should be provided by the site administrator role. There may be peaks in census and acuity that generate workload that exceeds the capacity of this minimum level of staffing and the hospital will need to adjust staffing accordingly.

The ICU should operate at minimum staffing levels of 2 nurses per shift.

It is recommended that the ICU operate at minimum staffing levels that will require 10.13 FTEs. Budgeting should provide for an additional approximately 1.6 FTEs as variable staffing to respond to fluctuations in workload. This will provide the unit with approximately 20,000 worked hours of nursing to respond to approximately 1000 ICU patient days, which will result in productivity of 20 worked hours per patient day. This minimum staffing is still above the median performance level of the peer hospitals. Thus the hospital should budget for 11.73 FTEs until such time as workload increases beyond the capacity of these minimum staffing levels. At that point the hospital should maintain staffing to provide the median quartile performance of its peer hospitals of 18.15 worked hours per patient day.

Recommendations:

It is recommended that:

(42) The AED Nursing Acute Care should reduce staffing of the ICU to minimum staffing levels of 2 nurses per shift.

(43) The AED Nursing Acute Care should adjust staffing for the ICU in response to fluctuating census and workload to ensure that its staffing is never less than 18.15 worked hours per patient day.

6.1.5 Combined Medicine/Surgery and Psychiatry

6.1.5.1 Department Description and Operations

This is a 31 bed unit that includes 1 bed for palliative care. In addition to medical/surgical care, service is provided for mental health patients. The lack of private rooms on the unit results in issues related to keeping patients with "clean" surgery separated from others.

There is a team leader on days and a staff mix of RNs and LPNs.

Patient housing problems contribute to lengths of stay in this unit.

The problem of patients being admitted to the hospital in St. Anthony from other communities and not being able to return home when ready for discharge because of weather has contributed to longer lengths of stay. The hospital should eliminate these extended lengths of stay by discharging the patient from the hospital and having them stay in a hotel or bed & breakfast until they can leave St. Anthony. Although, it is not the responsibility of the hospital to provide hotel

services, the hospital could assist in mitigating the hardship and expense to the patient or sponsoring agency by contracting with local facilities to provide preferred rates to referred patients.

Recommendation:

It is recommended that:

(44) The Executive Director should negotiate preferred rates with local facilities for the housing of patients that no longer require in-patient hospital care but cannot return to their home community.

6.1.5.2 Workload

The workload and staffing for this unit is presented the following exhibit. Patient days are presented separately for Medical/Surgical (M/S) and Psychiatry and then combined and are estimated for 03/04. The combined workload is used for purposes of looking at productivity which follows in the next section.

Exhibit 6.15
M/S Patient Days and FTEs

	2002/03	2003/04
Total Patient Days	8,997	9,000
Total Worked Hours	38,499	37,252
FTE	24.34	23.79

Exhibit 6.16
Psychiatry Days and FTEs

	2002/03	2003/04
Total Patient Days	382	460
Total Worked Hours	8,054	8,294
FTE	5.24	5.43

Exhibit 6.17
Combined M/S & Psychiatry Workload

	2002/03	2003/04
Total Patient Days	9,379	9,460
Total Worked Hours	46,553	45,546
FTE	29.58	29.22

6.1.5.3 Productivity and Staffing

Productivity is measured and compared as the total worked hours (unit producing, management and operations support) per patient day (worked hours per patient day). Because the

staff hours were reported for the combined unit, the combined productivity is used for purposes of comparison. A blended productivity range for comparison purposes is also presented.

Exhibit 6.18
Combined M/S and Psychiatry Productivity

	2002/03	2003/04
Wkd Hr/Pt Day	4.96	4.81
var NL non-drug $/Pt Day	$ 17.53	$ 19.79

Exhibit 6.19
Blended Productivity Range

Blended Productivity Range	Peers	Best Quartile	Median	Worst Quartile	Mean
Wkd Hr/Pt Day	6	5.26	5.37	6.59	6.11
var NL non-drug $/Pt Day	7	$ 10.26	$ 10.97	$ 14.16	$ 12.62

The unit should maintain its current productivity performance level of 4.91 worked hours per patient day.

Based on the information provided to us by the Board regarding worked hours and workload, in 2003/04, this unit achieved better than the best quartile level of performance of its peer group for Medical/Surgical (/Psychiatric) nursing. Productivity does not seem to be having a negative impact on the quality of service on the unit. Thus, we recommend that the unit should maintain its current performance level of 4.81 worked hours per patient day.

6.1.6 Maternal & Child

6.1.6.1 Operations

Obstetrics has seen a significant decline in patient volume in recent years. The dramatic drop in obstetrical cases has made it impractical to have a full time obstetrician that can maintain skills and guide a team to support the care of the patients.

Midwives do all ante-natal clinics and support most of the births.

The birthing unit is not co-located near other inpatient units. The volume on this unit makes it difficult to achieve efficient levels of nurse staffing. Like other low volume birthing units, staff of the inpatient unit provide support for outpatient clinics. The unit is staffed at levels beyond the requirements of the current patient volume and related patient workload (both inpatient and outpatient)

6.1.6.2 Workload

The workload[37] and staffing for this program is presented the following exhibit.

Exhibit 6.20
Birthing Patient Days and FTEs

	2002/03	2003/04
Total Patient Days	900	1,129
Total Worked Hours	27,808	25,330
FTE	17.83	16.48

6.1.6.3 Productivity and Staffing

Productivity is measured and compared as the total worked hours (unit producing, management and operations support) per patient day (worked hours per patient day). The productivity range of the peer hospitals is also presented.

Exhibit 6.21
Birthing Productivity

	2002/03	2003/04
Wkd Hr/Pt Day	30.90	22.44
var NL non-drug $/Pt Day	$ 37.24	$ 30.53

Exhibit 6.22
Productivity Range

Productivity Range	Peers	Best Quartile	Median	Worst Quartile	Mean
Wkd Hr/Pt Day	6	7.49	8.19	9.35	8.33
var NL non-drug $/Pt Day	7	$ 13.72	$ 21.59	$ 28.06	$ 23.64

Productivity is dramatically worse than the worst quartile performance of its peer group.

Based on the worked hours and workload information provided to us by the region, in 2003/04 this functional centre's productivity is dramatically worse than the worst quartile level of performance of its peer group for birthing. However, because of its low census, small size and distance to other patient care areas it will be difficult for the birthing service to improve its productivity.

The birthing program should operate at minimum staffing levels of 2 nurses per shift.

Because of the small size and relatively low census of this unit no more than minimum staffing of 2 RNs on days and 2 staff on nights is required to address patient care requirements. However, because of its location, no fewer than 2 nurses per

[37] For low volume birthing units, patient days is used as a surrogate for the combination of inpatient and outpatient workload. The ratio between inpatient and outpatient workload accommodated by unit staff is relatively constant among these low volume birthing units.

shift is safe. There may be peaks in census and acuity that generate workload that exceeds the capacity of this minimum level of staffing and the hospital will need to be able to adjust staffing accordingly. Support is available to the unit from mid-wives. However, additional RNs should be on-call to provide support should more mothers be in labor than the available staff can safely manage. The role of the Team Leader for this unit should be evaluated given the current low level of activity. The hospital should consider designating one of the two RNs on the shift as in-charge.

Staffing should never be less than the median performance of its peer hospitals of 8.2 worked hours per patient day.

It is recommended that the Birthing program operate at minimum staffing levels that will require 10.13 FTEs. Budgeting should provide for an additional approximately 1.6 FTEs as variable staffing to respond to fluctuations in workload. This will provide the unit with approximately 20,000 worked hours of nursing to respond to approximately 1,100 patient days, which will result in productivity of 18.2 worked hours per patient day. This minimum staffing is still significantly above the median performance level of the peer hospitals. Thus the hospital should budget for 11.73 FTEs. Until such time as workload increases beyond the capacity of these minimum staffing levels. At that point the hospital should provide staffing levels to ensure that staffing is never less than the median performance of its peer hospitals of 8.2 worked hours per patient day.

Recommendations:

It is recommended that:

(45) The AED Nursing Acute Care should reduce staffing of the birthing program to minimum staffing levels of 2 nurses per shift.

(46) The AED Nursing Acute Care should adjust staffing for the birthing program in response to fluctuating census and workload to ensure that its staffing is never less than 8.2 worked hours per patient day.

6.1.7 Pharmacy

6.1.7.1 Current Characteristics

The Pharmacy manager reports to an Assistant Executive Director (AED) of Medical Services. Along with Pharmacy, the AED has responsibility for Medical, Dental and Diagnostic Services. There are 1.5 FTE Pharmacy Technician

and 1 FTE Pharmacy Buyer who reports to the Pharmacy Manager. The manager is a licensed pharmacist.

The GRHSB Pharmacy services the Hospital, 2 Long Term Care facilities, 4 Community Clinics, 3 Health Centres and provides emergency supply of drugs for the Airport.

The GRHSB Pharmacy services the Hospital, 2 Long Term Care facilities, 4 Community Clinics, 3 Health Centres and provides emergency supply of drugs for the Airport. The Pharmacy also stores vaccination drugs for the Public Health Department.

In South Labrador, because of the lack of a retail pharmacy, the GRHSB Pharmacy also provides drugs to the consumers in the community.

The Pharmacy provides medications to the LTC and Nursing Units at the hospital on an as needed basis. The drug distribution system is a traditional ward stock system. Other sites fax in orders for drugs. There is no computerized inventory at the Heath Centres or Community Clinics. Drugs are provided to outpatient clinics for patients who need them for their duration of stay in the clinic.

The facilities recently underwent renovations whereby a separate chemotherapy preparation hood was built adjacent to the pharmacy department. In addition, a new refrigerator was purchased to replace an aging and damaged one.

6.1.7.2 Issues in Management and/or Operations

The following issues related to pharmacy management and operations were observed:

- GRHSB Pharmacy operates a traditional ward stock drug distribution system. There are several disadvantages to this system compared to unit dose drug distribution systems. Numerous studies concerning unit dose drug distribution systems have been published over the past several decades. These studies indicate categorically that unit dose systems, with respect to other drug distribution methods, are (1) safer for the patient, (2) more efficient and economical for the organization, and (3) a more effective method of utilizing professional resources. Despite the efficiencies, unit-dose systems do tend to require additional labour in order to operationalize the system. The Hospital does have a unit-dose machine, but it is currently not in use.
- The manager of pharmacy as indicated that the Formulary at GRHSB was last updated in November 1999. After our site visit we learned that the P&T committee is in the

process of updating the formulary. There is an opportunity to improve formulary system management at GRHSB. There seems to be inherent problems with adherence to the drug formulary developed by the P&T Committee. Possible causes of this include a permissive culture in the organization related to physician requests that results in compliance with physician requests for non-formulary drugs when there are adequate substitutes. There are three key elements for the establishment and maintenance of a credible formulary as stated by the American Society of Hospital Pharmacists. They are:

- A collaborative work relationship among health-care professionals, such as occurs in an organized healthcare setting.
- A defined medical staff (or physician-provider network) that practices within that health-care setting.
- An interdisciplinary P&T (Pharmacy & Therapeutics) committee as a committee of the medical staff.

The P&T committee should develop more stringent policies that govern the use of drugs and the formulary in the hospital and follow the above best practices.

- Given the need to respond to the pharmacy requirements of the remote sites, the staffing levels seem low. There is only one pharmacist for the region. We have been told that this results in limited and infrequent site visits resulting in deficits in needed clinical pharmacy expertise in the remote communities. At the Curtis Memorial Hospital the pharmacist currently does not spend time on nursing units to advise on clinical pharmacy matters or enforce the formulary, due to a lack of time. Vacation time may also impact staffing efficiencies as staff are entitled to five weeks vacation and relief coverage is reported to be difficult to find. There are opportunities for work process re-engineering that may make the pharmacist staffing more efficient and thus provide more capacity to respond to pharmacy needs in the region. For example, the buying process can be centralized to the purchasing department and the buyer could be trained to perform technician duties, spreading workload and freeing up more time for the pharmacist.
- GRHSB as well as the province lacks a standardized workload measurement system for pharmacy. This poses a significant barrier in measuring and improving performance of the department.

- A pharmacy order-entry information system is not currently in place. There are many manual, paper-based tasks that could be replaced by automated processes with a pharmacy order-entry information system. Meditech Pharmacy Module is available, but the department lacks the staff needed to assist in implementation of the system.
- The Pharmacy Manager reported that patients in South Labrador do not have a retail pharmacy; therefore they purchase drugs from the health centre, but do so at special hospital contract prices. The hospital may be experiencing a loss of revenue as these prices are much cheaper than retail pharmacy prices.

6.1.7.3 Opportunities to Reduce Operating Costs

Pharmacy workload is currently not being reported in the hospital's MIS financial and statistical data. Discussions with the pharmacy manager indicate that there is no formal workload measurement system in place for the region. There is a provincial group responsible for developing a workload system, however none has been put in place and the future progress has been impeded for lack of funding for a pilot project.

In lieu of workload data, drug costs were examined in order to measure the performance of the pharmacy department.

Exhibit 6.23
Drug Costs as a percent of Net Operating Costs

GRHS	2003/04	3.34%
	2002/03	3.50%
	2001/02	3.45%
2002/03 Peer Data	25th %ile	2.11%
	Median	2.54%
	75th %ile	2.91%
	Min	0.70%
	Max	3.73%

The drug costs presented in Exhibit 6.23, exclude dialysis and oncology related drug costs so as not to skew the analysis. The GRHSB value for 2003/04 is projected based on nine months of data. Exhibit 6.23 indicates that GRHSB drug costs as a percent of net operating costs is higher than peer hospitals in 2002/03. GRHSB performance was 3.50% which is higher than the 75th percentile peer performance.

There are number of factors that may be contributing the high drug costs at GRHSB compared to the peer hospitals. They are as follows:

- The use of ward stock drug distribution system versus unit dose. Unit dose systems have been proven to be more effective and economical than alternative distribution systems. Unit dose systems allow for a reduction in the size of inventories located in the patient care areas.
- It was reported that there is a culture in the organization of ordering whatever medication is requested for the patient without regard for the formulary policies. Patients are not encouraged enough to use their own medication when available and appropriate. Also, in many cases, expensive medication such as crèmes and liquids are ordered for patients who stay in hospital only a few days, the ordered medication then goes to waste and is not eligible for reimbursement.
- The department maintains costs of oxygen related products, where this would normally fall under respiratory therapy in other hospitals.
- The problems with formulary compliance discussed in the previous section can be contributing to higher costs as physicians order more expensive drug substitutes even though appropriate formulary drugs exist.

If GRHSB were to achieve the same performance level as the median performance level (2.54%), then a savings opportunity of $269,403 would result.

There are opportunities to increase revenues and reduce costs by strengthening formulary compliance policies, improving patient drug use policy, improvements in efficiency and selling drugs to the public at retail rather than contract prices.

Based on our site observations and interviews we believe there are opportunities to further reduce costs to achieve median level performance by strengthening formulary compliance policies, improving patient drug use policy, and improvements in efficiency (pharmacy order-entry, work re-design). However, these savings will be tempered by the introduction of a unit dose drug distribution system, as it is recognized that pharmacy staff time requirements and costs are higher in unit dose hospitals.

Recommendations:

It is recommended that:

(47) The AED of Medical Services and the Manager of Pharmacy should establish a formal drug review system to improve control over drug usage.

(48) The Manager of Pharmacy should implement a single unit-dose distribution system across the organization.

(49) The Manager of Pharmacy should implement a pharmacy information system to improve efficiency and automate manual tasks.

(50) The AED of Medical Services and the Manager of Pharmacy should develop and implement a policy regarding patients use of own drugs while admitted to the hospital.

(51) The Manager of Pharmacy should ensure that hospital charge retail prices when selling drugs to the general public.

6.1.8 Clinical Laboratories

6.1.8.1 Departmental Description

The GRHSB clinical laboratories encompass 4 areas of Haematology (including coagulation, blood bank and specimen collection), Biochemistry, Microbiology and Histology/Pathology.

The Laboratory department implemented Meditech on July 9th, 2003. This implementation resulted in a significant change to the type and amounts of workload data captured.

The GRHSB Health Centres offer basic specimen collection and coagulation services while all other laboratory requirements are sent to the Curtis Hospital site in St. Anthony. Goose Bay also sends pathology requirements to the Curtis Hospital.

Performance of water testing for government services is anticipated to begin in September.

The following table presents the FTE counts for Clinical Laboratories:

Exhibit 6.24
GRHSB Clinical Laboratory FTEs

	2000/01	2001/02	2002/03	2003/04
Laboratories	16.15	15.91	15.44	16.96

6.1.8.2 Organization Design

A single Diagnostic Services Manager is responsible for both Laboratories and Diagnostic Imaging. This position reports through the AED Medical Services and is currently vacant; the AED Human Resources, previously in the position of

Diagnostic Services Manager, has assumed managerial responsibilities.

6.1.8.3 Facilities, Equipment and Supplies

The following observations and findings are made:

- The physical layout of the laboratory presents a challenge to modernization and efficiency efforts. The space necessitates such inefficiencies as laboratory technicians performing specimen procurement activities.
- Opportunities to utilize space better through establishing a core laboratory have never been investigated.

6.1.8.4 Analysis of Operations

The core lab concept refers to a multidisciplinary laboratory incorporating automated chemistry and hematology equipment and multi-skilled technologists. The automated equipment forms the core of all larger medical laboratories and typically operates 24 hours per day, seven days of the week. The core lab is organized to provide the most rapid, efficient service with the minimum number of staff (rather than the traditional model of organizing labs around professional disciplines like chemistry, hematology etc. Benefits to be realized include:

- Significant space savings;
- Cross training of technologists, technicians and laboratory assistants allowing more efficient and flexible schedules as well as optimum use of the available expertise; and
- More rapid throughput of a standardized test mix.

Placement of the chemistry and hematology automated equipment in close proximity to the portal of entry of specimens to the laboratory, coupled with implementation of front-end automation allows efficiencies in this core part of the laboratory.

The unpredictability of transportation and the traditional unreliability of results reporting from distant laboratories such as St. John's has encouraged a self-sufficiency mentality among at the GRHSB laboratory. Changes in the clinical services offered by GRHSB (as recommended as part of this review) along with greater reliance on electronic reporting, however, suggests the need for a thorough review of the laboratory services that are required and that can be efficiently provided locally within the region.

6.1.8.5 Productivity and Staffing

The Clinical Laboratories productivity is measured as the total worked hours per patient care workload unit. The department's productivity (based on the workload units provided to this study by the Board) is presented in the following exhibit.

Exhibit 6.25
Clinical Laboratories Productivity Comparison

Clinical Laboratory		Worked Hours / Workload Unit
GRHSB	2000/01	0.0207
	2001/02	0.0213
	2002/03	0.0198
	2003/04	0.0200
Peer Range 2002/2003	Best quartile	0.0211
	Median	0.0221
	Worst quartile	0.0252

The Department, minimally, should maintain its current performance level of 0.02 worked hours per patient care workload unit.

The clinical laboratory performance is better than the best quartile performance of the peer group of hospitals. Departmental productivity does not seem to be having a negative impact on the quality of service. Thus, we recommend that the Department, minimally, should maintain its current performance level of 0.02 worked hours per patient care workload unit.

However, based on our on-site interviews, observations and analyses, there are still opportunities to further improve efficiencies and overall service delivery as follows:

1. The AED Medical Service should undertake a detailed review to determine the mix of laboratory tests that continues to be required to be done locally within the region following any reconfiguration of clinical services resulting from the recommendations of this review and those that can be referred out of the region.

2. The region should establish a core laboratory service at the Curtis Hospital site to perform the tests that will continue to done locally.

3. The region should determine and acquire the technological infrastructure required to support specimen transfer and results reporting of testing to be done outside of the region.

Recommendations:

It is recommended that:

(52) The AED Medical Service should undertake a review of all laboratory operations to determine the test mix that continues to be required to be done within the region.

(53) The GRHSB should develop a core laboratory service at the Curtis Memorial Hospital site.

6.1.9 Diagnostic Imaging and Electro-Diagnostics

6.1.9.1 Departmental Description

Diagnostic Imaging and Electro Diagnostics have been combined for these analyses. The GRHSB Diagnostic Imaging service encompasses General Radiology, X-ray, Mammography, Computed Tomography, and Ultrasound. Electro-diagnostic services encompasses EEG and ECG.

The following table presents the FTE counts for Diagnostic Imaging and Electro Diagnostic Services

Exhibit 6.26
GRHSB Diagnostic Imaging FTEs

	2000/01	2001/02	2002/03	2003/04
D. I. – General	2.42	2.00	2.08	2.48
X-Ray	4.96	5.62	5.70	6.32
Ultrasound	0.93	0.35	0.00	0.00
Electro Diagnostics	1.0	0.98	1.01	1.04
DI/Electro Diagnostics	9.31	8.95	8.79	9.84

6.1.9.2 Organization Design

A single Diagnostic Services Manager is responsible for Laboratories, Diagnostic Imaging and Electro Diagnostics. This position reports through the AED Medical Services and is currently vacant; the AED Human Resources, previously in the position of Diagnostic Services Manager, has assumed managerial responsibilities.

6.1.9.3 Facilities, Equipment and Supplies

The following observations and findings are made:

- PACS (Picture Archiving and Communication System) was implemented at the Curtis Hospital site in April 2003.

- The International Grenfell Association has provided the GRHSB with a significant investment in PACS and digital X-ray equipment.
- This investment has occurred at the Curtis Hospital site. All three Health Centres have analog general X-ray equipment. Images from these locations can be digitized if necessary and sent to the Health Science Centre (HSC) in St. John's to be read.
- Meditech has not yet been implemented at the three Health Centres.

6.1.9.4 Analysis of Operations

The following observations and findings are made:

- There has been no on-site radiologist for approximately 2 years. Although recruitment efforts are underway, a full-time on-site position is not strictly required. However, an on-site position would be helpful for the medical specialists on staff to have access to radiology consults and some inappropriate ordering of exams might also be eliminated and various clinical protocols might be better enforced. There are also some procedures (Doppler and vascular procedures) that are being performed by technologists that require a Radiologist.
- A locum radiologist does come from the HCCSJ in St. John's every six weeks to perform invasive diagnostic procedures (i.e. Barium enema, upper GI, small bowel series, myelogram, etc.). Contrast media injections are performed by the local physicians.
- GRHSB has investigated a formal relationship with a radiologist group closer to the Grenfell region, however, the closer groups are experiencing their own recruiting challenges. GRHSB has determined that the HCCSJ group is the best group to work with anyway, since when patients are transferred out of region, it is often to St. John's.
- Diagnostic tests, other than mammograms, are analyzed by HCCSJ in St. John's using PACS and are available immediately after the image is taken – the transmission time is approximately 15 minutes. HCCSJ radiologist (actually private consortium providing services to the HCCSJ and to GRHSB) analyzes the images and transcribes notes directly into the Curtis Meditech system.
- As electronic endorsement of the radiologists report has not yet been implemented, the transcribed notes cannot be

used although they are available immediately. A hard copy of the notes is sent by mail with the Radiologists signature. Two systems are required to be implemented to add the functionality of electronic endorsement as the Meditech and the PACS vendor do not yet have a direct communication interface.

- Mammography tests are physically sent to St. John's as a PACS system is not yet available in the industry for such tests. The electronic notes are available immediately after transcription– but are similarly unsigned.
- There are currently 7 radiology technologist positions, the majority of whom are cross-trained in two modalities to improve scheduling flexibility and efficiency. Efforts are proceeding to have all the technologists cross-trained in this manner; however, resistance from the union has been an obstacle.
- The CT serves the region and recently experienced a reduction in workload when Goose Bay installed its own CT machine. There is virtually no waiting list for CT procedures and as a result there are some referrals from the Northern part of the Western Health Care Corporation. Curtis Memorial Hospital is also a closer alternative for some of the communities in the northern peninsula.
- The PCI module facilitates communication between the PACS system and Meditech and integrates the image and the images report – currently two different systems are required to view the image and to view the report. As a result there is currently duplicate entering of patient results in the PACS system and the Meditech system. The need for the PCI system has been previously identified by management.
- Staffing at the three Health Centres consists of a combined Laboratory/X-ray technologist position

6.1.9.5 Productivity and Staffing

Diagnostic Imaging and Electro Diagnostics productivity are measured as the total worked hours per patient care workload unit. For analysis and comparison, workload and staffing of these functional centres have been combined. These departments' productivity, based on the workload information provided by GRHSB, is presented in the following exhibit.

Exhibit 6.27
Diagnostic Imaging Productivity Comparison

Diagnostic Imaging & Electro Diagnostics		Worked Hours / Workload Unit
GRHSB	2000/01	0.0317
	2001/02	0.0334
	2002/03	0.0354
	2003/04	0.0395
Peer Range 2002/2003	Best quartile	0.0397
	Median	0.0452
	Worst quartile	0.0555

DI and Electro Diagnostics, minimally, should maintain its current performance level of 0.0395 worked hours per patient care workload unit.

Diagnostic Imaging and Electro Diagnostics performance is better than the best quartile performance of the peer group of hospitals. Departmental productivity does not seem to be having a negative impact on the quality of service. Thus, we recommend that the Department, minimally, should maintain its current performance level of 0.0395 worked hours per patient care workload unit.

However, based on our on-site interviews, observations and analyses, there are still opportunities to further improve efficiencies and overall service delivery:

- Implementation of the electronic endorsement system.
- Implementation of the Meditech Patient Care Inquiry (PCI) system.
- Facilitation of a more formal and regular relationship with the St. John's Radiologist group with sufficient service so as not to require a position in St. Anthony.

Recommendations:

It is recommended that:

(54) The AED Medical Service should proceed with the implementation of the electronic endorsement system.

(55) The AED Medical Service should establish a relationship with a remote Radiologist group to provide sufficient service to obviate the need for a Radiologist position in St. Anthony.

6.1.10 Health Records and Registration

6.1.10.1 Departmental Description

Under a single manager, the department includes Health records, Switchboard and Admitting/Registration. Health records includes coding, transcription, chart completion, records processing, and data analysis and reporting. The transcription function also provides services directly to the physicians in the form of dictation, individual physician charts and secretarial support. Health Records at the Curtis hospital location provides coding service for the entire region while there are Health Records Clerks responsible for records processing and chart completion in the health centres and nursing stations. Staff in the coding area are also responsible for covering the Curtis hospital library.

The switchboard operation performs a variety of functions including security monitoring, serving as a general information desk and providing community emergency measures such as directing ambulance calls and alerting voluntary firefighters.

Outpatient registration is partially decentralized and separate from admitting. The admitting office also operates the hostel.

The following table presents the FTE counts for the department:

Exhibit 6.28
GRHSB Health Records and Patient Registration FTEs

	2000/01	2001/02	2002/03	2003/04
Health Records	11.88	12.90	12.74	12.96
Admitting / Registration	3.39	3.58	3.70	3.99

6.1.10.2 Organization Design

There is a single manager of Health Records who is also responsible for admitting / registration and switchboard. This manager reports to the Assistant Executive Director, Finance and Administration who is also responsible for Facilities Management, Food services, Finance, Information Systems and Materials Management.

6.1.10.3 Facilities, Equipment and Supplies

The coding function is physically separated from the main Health Records office. This results in unnecessary and

frequent movement of charts from one location to another contributing to unnecessary workload and difficulties in locating charts. The coding function should be physically adjacent to the file room.

The space allocated to the switchboard operations was never intended to accommodate the technologies or numerous functions currently being performed. As a result, the space is overcrowded and inefficient. Previous studies have also highlighted this concern.

6.1.10.4 Analysis of Operations

Chart completion has not been well enforced, resulting in delays and difficulty retrieving charts.

The following observations and findings are made:

- Excessive incomplete charts have been identified as contributing to inefficiency. Chart completion has not been well enforced and has therefore resulted in delays and difficulty retrieving charts that are often located in physicians offices or filed separately for coding or chart completion.
- Chart retrieval is not well standardized as several areas use their own staff to retrieve and sign-out charts. As a result the Meditech system is not always up-to-date contributing to further delays and inefficiencies in locating charts.
- The Meditech Patient Care Inquiry (PCI) module has not yet been implemented. This module represents the decision support tool in Meditech and allows a single electronic chart to be accessed on-line at all regional locations while full implementation ultimately results in an electronic health record.
- The PCI module also facilitates communication between the PACS system and Meditech and integrates the image and the images report – currently two different systems are required to view the image and to view the report. As a result there is currently duplicate entering of patient results in the PACS system and the Meditech system.
- The Community Services Health Record is established electronically by the Client Referral Management System (CRMS). The implementation of the PCI module would allow the community and hospital record to be integrated.
- The need for the PCI module has been identified by management. Management has received partial funding for the module from the Department of Health & Community Services and is seeking further funding through a proposal to become a demonstration site for the

implementation of the electronic health record. If this additional funding is not forthcoming, a business case for the implementation of the PCI module should be undertaken as the module will provide GRHSB with a number of benefits.

- Patient registration is automated through Meditech at the Curtis hospital location, however, the registration module has not yet been implemented at the Health Centres or Community Clinics.
- Registration is partially decentralized. Emergency registration, is carried out within the emergency department while most clinics perform their own patient registration functions (Day Surgery, Ophthalmology, Psychiatry, Stress testing). Outpatient registration for non-scheduled appointments, however, is centralized but separate from the admitting office.
- The admitting office is centralized and open for 12 hours each day with the exception of Sunday when it is open for 8 hours. The admitting staff also manage the hostel operation. Admissions after hours are performed by the nursing staff.

6.1.10.5 Productivity and Staffing

The performance indicator for Health Records is "net cost as a percentage of direct care cost." The department's performance is presented in the following exhibit.

Exhibit 6.29
Health Records Productivity Comparison

Health Records		% of Direct Care Costs
GRHSB	2000/01	2.30%
	2001/02	2.53%
	2002/03	**2.34%**
	2003/04	2.53%
Peer Range **2002/03**	Best quartile	2.12%
	Median	2.42%
	Worst quartile	2.59%

Health Records performance is between the best quartile and the median performance of the peer hospitals. Based on our on-site interviews, observations and analyses, there may be opportunities to further improve efficiencies and overall service delivery as follows:

- Decentralize all registration functions where feasible and assign any remaining activities to the admitting office;
- Combine the admitting office and switchboard. Given the various functions of both services, a single location will offer greater flexibility and efficiency in staff coverage.

Recommendations:

It is recommended that:

(56) The AED Finance and Administration should establish a Health Records net operating cost performance target equivalent to 2.25% of the total direct care net operating costs.

(57) The AED Medical Services, in collaboration with the Health Records Manager should implement the Meditech Patient Results Inquiry (PCI) module.

(58) The AED Finance and Administration should establish a combined admitting and switchboard function appropriately planned to incorporate all necessary 24 hour administrative functions.

6.1.11 Food services

6.1.11.1 Departmental Description

Food service operates a traditional kitchen under contract with Aramark to provide food and nutrition services for inpatients at the Curtis Hospital and the M. Gray long-term care facility. A single kitchen services the Curtis hospital as well as the M. Gray Centre. Because the service is contracted out, no FTEs are reported for food services.

6.1.11.2 Organization Design

A single food services manager is responsible for both patient and retail operations as well as inpatient nutrition. The Food services manager is an employee of Aramark and reports to the AED Finance and Administration who is also responsible for Materials Management, Facilities services, Finance, Information Systems and Health Records.

6.1.11.3 Analysis of Operations

After a competitive tender, the Aramark contract was most recently renewed in May 2002 for three (3) years; the contract includes cost savings targets.

While Aramark provides some management advice to the community nutritionist activity, these individuals are employees of GRHSB and there is no formal link between Community Nutrition and Aramark. Typically there has been a cooperative relationship between the community and inpatient activities. It has been suggested, however, that planning and coordination of these activities could be improved to avoid duplication.

6.1.11.4 Productivity and Staffing

The performance indicator for Food Services is "net cost per patient day." Patient days include patient days in the hospital and resident days in the nursing home. The department's performance is presented in the following exhibit.

Exhibit 6.30
Food Services Productivity Comparison

Food Services		Net Cost / Patient Day
GRHSB	2000/01	36.03
	2001/02	39.50
	2002/03	**38.54**
	2003/04	38.28
Peer Range **2002/2003**	Best quartile	29.35
	Median	45.71
	Worst quartile	59.14

Food service performance is between the best quartile and the median performance of the peer organizations. Based on our on-site interviews, observations and analyses, there may be opportunities to further improve efficiencies and overall service delivery as follows:

- Establish a formal link between community nutrition and inpatient nutrition to promote an integrated approach and eliminate any potential duplication of activity;
- Review the business case associated with modernizing kitchen facilities to more efficient current standards, such as a cook-chill operations;
- Investigate the business case associated with contracting out the food service operation at the Forteau facility; and
- Review the standards and requirements monitoring procedures in place for food services ward stock.

Although the small production volumes of the region and its remoteness may affect both efficiency and cost of materials,

the AED Finance and Administration should work to further reduce the cost of food services in negotiations with food services contractors. Although the best quartile performance may not be achievable in St. Anthony, improvement should be possible. We would suggest that GRHSB should work to an initial target for the net cost per patient day for food services of $33.00 per patient day.

Recommendations:

It is recommended that:

(59) The AED Finance and Administration should review the business case associated with modernizing kitchen facilities to more efficient current standards, such as a cook-chill operations.

(60) The AED Finance and Administration should establish a target of $33.00 per patient day for the net cost per patient day for food services.

6.2 John M. Gray Centre and Complex

6.2.1.1 Operations

The John M Gray Centre and complex is the LTC facility in St. Anthony. The facility is comprised of:

- 2nd Floor with 24 beds – 10 of these beds are in a separate locked Alzheimer's unit
- 3rd Floor with 24 beds – residents here are primarily level 3 residents. CCC including patients with enteral feeding, dialysis etc. reside on this floor.

Residents are placed here through a single point of entry. There is regional assessment and placement team that meets every 3 months unless there are vacancies on the priority list. Residents are admitted from the priority list.

The majority of residents are care level 3 and have the following characteristics:

- Personal functions – dependent for transfer of mobility, requires supervision/assistance for eating or feeding, has incontinence of bowel or bladder
- Mental/Sensory - may have severe cognitive impairment or varying degrees of difficulty with orientation

- Medical Status – have medical problems that require continuous supervision and may require frequent professional intervention

The facility is relatively new. There is enough space and adequate equipment to assist with lifting, seating, etc. There are electric beds for all residents, including hi-lo beds.

The mix of staff includes RNs and LPNs. There are no Personal Care Attendants (PCAs).One Recreational Therapist is available 5 days per week augmented by a volunteer system to support programming in the Centre.

The workload and staffing for this unit is presented the following exhibit.

Exhibit 6.31
John M. Gray Patient Days & FTEs

	2002/03	2003/04
Total Patient Days	16,790	16,060
Total Worked Hours	51,304	54,512
FTE	33.60	34.93

6.2.1.2 Productivity and Staffing

Productivity is measured and compared as the total worked hours (unit producing, management and operations support) per patient day (worked hours per patient day).

Exhibit 6.32
John M. Gray – Productivity

	2002/03	2003/04
Wkd Hr/Pt Day	3.06	3.39
var NL non-drug $/Pt Day	$ 2.83	$ 3.71

Peers reported a range of 2.67 to 3.98 worked hours per patient day. No recommendation for change to productivity is suggested.

Discussion and recommendations on skill mix are presented at the beginning of this chapter.

6.3 Health Centres

There are 3 Health Centres in the region:

- Strait of Belle Isle Health Centre, Flower's Cove
- Southeast Labrador Health Centre, Forteau
- White Bay Central Health Centre, Roddickton

The Health Centres serve as the focus of health care activity in their own and surrounding communities. Each centre has an emergency service capability. Service is provided 24/7. They offer basic laboratory and x-ray capability and technicians are cross-trained to carry out both functions.

The Health Centre in Forteau also has long term care beds.

6.3.1.1 Department Description and Operations

The model of care is that nursing staff and physicians see patients independently in the outpatient areas. The medical staff support the nursing staff, working collaboratively with them, reviewing patients and seeing the patients in consultation, if necessary. Patients appear to self-select to see the physician or nurse practitioner.

There are public health nurses who provide a wide range of services including post-natal visiting, newborn care, pre-school and well baby assessments, lifestyle clinics, pre-natal classes, etc. Home care nurses ensure home support services. There is generally a dental clinic and diagnostic laboratory and x-ray facilities.

The centres operate 24 hours / 7 days per week. There is twenty-four hour ambulance service and 24-hour nursing personnel for ambulance escort.

The centers have two to four bed acute care inpatient areas for patient stays of up to 48 hours, if necessary.

Flower's Cove

Flower's Cove does not generally hold patients for observation.

The facility is in need of significant repair/upgrading or a new building. There are issues associated with small, cramped work-spaces and patient waiting areas. Major work is currently underway with respect to a supporting wall.

A second paramedic shift has been added in Flower's Cove for a total of 16 hours of ambulance coverage by paramedics. This has worked out to be cost neutral because it has reduced the amount of call-back for nurses. It has also improved quality of life for nursing staff because of reduced on–call hours.

Roddickton

Roddickton will hold patients up to 48 hours before transfer. They also have 1 palliative care bed. The facility is new and has good space to support its current activity.

Forteau

Forteau has 15 LTC beds in addition to beds that are used for acute care holding. It has relatively new space for long term care beds. There does not appear to be adequate programming support for long term care residents.

There is adequate space and equipment for the provision of acute and emergency service. Some of the patient waiting space is cramped and location of services within is disjointed.

Forteau has the most challenges in terms of transportation and weather related issues. It is noted elsewhere in this report that there may be value in reducing the need to transfer to St. Anthony and thereby reduce the amount overtime and call-back for nursing if a relationship can be established with the nearby hospital in Quebec.

6.3.1.2 Workload and Productivity Comparison for the Health Centres

For purposes of comparison, we combined patient days reported for inpatient acute and long-term care to create a total patient days. From studies conducted elsewhere we have created a surrogate for equating a patient day with emergency/outpatient visits. For acute inpatient days we have previously used a factor of 4. That is, 1 inpatient day would be the equivalent of 4 visits. A factor of 3 is used for LTC days. Workload for the health centers is presented as equivalent visits in the exhibit below.

Exhibit 6.33
Strait of Belle Isle HC, Flowers Cove

	2002/03	2003/04
Total Patient Days	83	117
Total ER/OP Visits	18,070	23,384
Workload	18,402	23,852
Worked Hours	25,841	28,223
Worked hrs/workload	1.40	1.18

Exhibit 6.34
Southeast Labrador HC, Forteau

	2002/03	2003/04
Total Acute Patient Days	400	245
Total LTC Patient Days	5,328	5,358
Total ER/OP Visits	9,097	12,403
Workload	26,681	29,457
Worked Hours	34,398	36,268
Worked hrs/workload	1.29	1.23

Exhibit 6.35
White Bay Central HC, Roddickton

	2002/03	2003/04
Total Patient Days	412	505
Total ER/OP Visits	14,515	20,682
Workload	16,163	22,702
Worked Hours	25,574	23,570
Worked hrs/workload	1.58	1.04

It can be seen that productivity ranges from 1.04-1.58. This productivity measure is a gross/broad measure.

It would not be possible to make staffing recommendations based on this analysis alone. It is suggested that the organization examine staffing in all the centers to ensure equity across the sites.

6.4 Nursing Station/Clinics

Nurse Practitioners and RNs provide most of the clinical services in the clinics/nursing stations. Family physicians visit the nursing stations on a rotating basis.

Consolidation of clinics into a single site will enhance the quality and comprehensiveness of care and reduce costs.

There has been discussion in the past regarding consolidating the four community clinics and creating one centralized clinic/health centre central to the geographic region. This will not only reduce costs, but, the concentration of service in a single site will likely allow for investment in technologies and staff that could not be considered on 4 sites and thus will likely enhance the quality and comprehensiveness of service.

In order for this to occur there will need to be some investment in facility changes to ensure an appropriate facility for the type of services to be provided. This may mean renovation of a current site or creation of new space. Road travel in the winter is a concern and discussions will need to be undertaken with the Province to ensure appropriate road access to centralized services is available.

The region has estimated that it could save approximately $700,000 by the consolidation of the clinics.

Recommendation:

It is recommended that:

(61) The Executive Director, working with the Department of Health, should consolidate the clinic activity of Southeast Labrador on one site.

6.5 Ambulance Operations

6.5.1.1 Departmental Description

GRHSB Air Operations operates a single gulf stream turbo commander aircraft (GWT). The service normally consists of 4 pilots, 2 engineers and 3 dispatch personnel. In addition to providing a direct medevac air transportation service, Air Operations coordinates medevac air transportation of patients as required using Fixed Wing Charters, Helicopter Charters, the Health Labrador Service Twin Otter aircraft and the Provincial Government Air Services that operate 2 King Air aircraft. The radiotelephone (RT) room, in addition to air dispatch, provides any required radio communications with land ambulances operated by GRHSB.

Elective patient air travel between St. Anthony, the Southern Labrador Coast and the Labrador Straits area is now provided through a charter with Strait Air operated 3 times per week. This move was considered necessary as a result of the frequently changing flight schedules, delays and cancellations of the commercial airlines (Air Labrador). A significant reduction in patient travel on scheduled airlines in fiscal 2003/2004 is partly attributable to this change (3827 in 2001/2002, 3692 in 2002/2003, 2858 in 2003/2004).

Management's recent decision to combine security and land ambulance services will save $40,000 annually beginning in fiscal 2004/2005.

The land ambulance service operates 2 hospital-based ambulances out of the Curtis Memorial Hospital in St. Anthony. There are 3 paramedics available for this service; these individuals work in the Curtis Emergency Room when they are not required in the ambulance. Hospital security personnel have received Emergency Medical Responder or Paramedic training and act as ambulance drivers. Management recently decided to combine security and land ambulance services. This action was made possible by capital funding received from the Department of Health and Community Services. This initiative is anticipated to save $40,000 annually beginning in fiscal 2004/2005.

The following table presents the FTE counts for Air and Land Ambulance:

Exhibit 6.36
FTE Staffing of Land and Air Ambulance

	2000/01	2001/02	2002/03	2003/04
Land Ambulance	3.34	3.23	3.27	3.36
Air Operations	12.41	11.48	10.44	10.87

The land ambulance positions have remained virtually unchanged while the FTE reductions in Air Operations reflect the elimination of two positions: Operations manager and Engineer.

6.5.1.2 Organization Design

Air Ambulance Operations Report directly to the Executive Director through the combined position of Director of Air Operations / Chief Pilot. This position was newly created in October 2002 following the elimination of the Operations Manager position.

Land Ambulance services, along with Paramedics, Medevac, and Emergency as well as shared governance and Ambulatory Clinics, are the responsibility of a Team Leader reporting through a Site Coordinator to the Acute Care Director who reports to the AED, Nursing Service and finally to the Executive Director.

The three additional management levels associated with ground ambulance services in comparison to the air ambulance service seem excessive. Additional commentary on the number of management levels in the nursing service is included elsewhere in the report.

6.5.1.3 Operations and Staffing Review

Throughout the region, there are three distinct operating structures for ground ambulance services; Hospital Operators, Private Ambulance services and Community Ambulance services. Each such service operating in the region is responsible for a given service area and individually required to have a widely communicated emergency phone number and dispatch system. Coordination between the different services can be problematic. In response, a Draft Dispatch Protocol identifies the communication procedures required between the individual services. Such protocols have been described as cumbersome, however, and the cause of ambulance delays.

Such delays occur particularly when an *Out of Service Area Response Authorization Form* (for transports outside of designated service areas) is required prior to dispatch.

The actual GRHSB land ambulance emergency phone is located in the Curtis Memorial Hospital Emergency Room and answered by Emergency room staff. Ambulance dispatch occurs from the hospital's outpatient department. Any necessary radio communications with arriving or dispatched ambulances are provided by Air Operations RT room.

The GRHSB Air Operations is one of three air operations in the Province. Health Labrador utilizes a Twin Otter aircraft out of Goose Bay. This service is operated through a contract between Health Labrador and Labrador Airways. The Provincial Government Air Services operates 2 King Air aircraft located and dispatched out of out of St. John's.

A new process introduced in 2002 requires that Health Labrador have Medevac requests approved by the Department of Health in St. John's and dispatched through Government Air Services. Previously, requests had gone directly to Grenfell Air Operations. The new process was implemented in 2002 and saw a reduction in Medevacs from Goose Bay by 50%.

Amalgamating all land and air ambulance dispatch will improve coordination and communication.

Operating a 24 hour dispatch service is resource intensive. The GRHSB land ambulance dispatch has minimized the costs associated with such an operation by utilizing existing 24 hour staff in Emergency. There are opportunities to improve dispatch coordination and communication by amalgamating all regional land and, possibly, air dispatch activities in the region. This in itself, however, would not likely produce large cost savings for GRHSB land ambulance as there are no dedicated land ambulance dispatch personnel. There may be cost savings in the private and community dispatch land ambulance operations; there will certainly be improved regional coordination of dispatch activities.

This move would also create the infrastructure to establish a single regional emergency phone number for both land and air ambulance. Once established, such an infrastructure may also provide the necessary foundation to collaborate with regional police and fire dispatch to establish a '911' service for the region.

Similarly, the province should consider consolidation of dispatch for air ambulance services in the province. Consolidation will likely provide:

- economies of scale in dispatch operations -
- economies of coordination
- facilitated implementation of provincial standards

Were the consolidated air ambulance dispatch services for the province located in St. Anthony, it should be, minimally, co-located, and preferably integrated with the Grenfell land ambulance dispatch operations.

Recommendations:

It is recommended that:

(62) The Executive Director should work with the Director of Emergency Health Services, Department of Health and Community Services to amalgamate and consolidate all land ambulance dispatch activities in the Grenfell Region

(63) The Executive Director should work with the Director of Emergency Health Services, Department of Health and Community Services to consolidate the land ambulance dispatch activities with the air ambulance dispatch operation in the Grenfell Region.

(64) The Executive Director should work with the Director of Emergency Health Services, Department of Health and Community Services to establish a '911' service in the Grenfell Region.

(65) The GRHSB should collaborate with the Department of Health and Community Services and the Provincial Department of Works, Services and Transportation to consolidate all air dispatch operations in the province at a single site.

The current air operations statistics provide the number of individuals traveling by month by:

- GWT;
- Helicopter Charter;
- Fixed Wing Charter; and
- Labrador Twin Otter.

It further breaks down these modes of transport into;

- Medevacs

- Patients
- Staff Escorts
- Family Escorts
- Other Staff and
- Others.

Statistics are also kept for the number of elective patients traveling on scheduled airlines (Air Labrador and Provincial). The statistics do not provide the rationale for the transport. Further, GRHSB does not have in place a system to prioritize medevac requests. The Provincial government, however, does use a system to determine the category / urgency of a Medevac request. Such a system would allow an assessment of the appropriateness of medevac transports. It would also improve the safety of the system by identifying night transports that might be delayed until daylight.

The information derived from the introduction of such a system will allow GRHSB to assess and investigate the appropriateness of the volume of medevac transports. Such information combined with standardized medevac protocols and procedures as well as a single provincial dispatch operation would allow an assessment of the appropriateness of all Provincial Air Operations. It would then be possible to address such questions as, for example, whether the contracted charter arrangement by Health Labrador provides a more or less appropriate service than the direct ownership approach in GRHSB.

Recommendation:

It is recommended that:

(66) The Director of Air Operations / Chief Pilot should implement a system of categorizing and establishing priorities for Medevac requests.

Both the land and air ambulance will have some opportunity to generate additional revenue in the fiscal year beginning April 1, 2004. Patient recoveries for land ambulance will be increased to $100 from the previous $75 to be consistent with rates throughout the rest of the province. This should result in a revenue increase of approximately $15,000. Management has already implemented this change. There will, however, be no benefit to the Grenfell Board as a result of this change as the province will recover this additional revenue.

Senior Management has noted a potential to increase Air Transportation charges to patients traveling to and from Labrador. The patients share of the cost would be increased by $10 (from $40 to $50) while a $25 charge for personal escorts would be implemented. These changes would also be made by Health Labrador to maintain consistency and would represent the first such increases for over a decade. Management has estimated that this would generate an additional $30,000 in revenue.

Recommendations:

It is recommended that:

(67) The Director of Air Operations / Chief Pilot should seek approval from the Department of Health and Community services to increase the patient share cost of air transportation from $40 to $50.

(68) The Director of Air Operations / Chief Pilot should seek approval from the Department of Health and Community services to implement a $25 charge for personal escorts of patients using air transportation.

6.6 Community Services

6.6.1.1 Current Characteristics

GRHSB Community Services consist of four areas that are primarily allied health related:

- Child Youth & Family Services (child welfare, family & rehabilitation, child care, community/youth corrections)
- Health Promotion (nutrition, youth services, public health nursing, communicable diseases)
- Mental Health (social work, addictions, psychology, mental heath nursing)
- Therapeutic/Intervention (diabetic education, social work, intervention services, physiotherapy, speech language pathology)

These services are organized under an AED for Community Services. Each of the four areas is lead by a Team Leader that reports to the AED. The Team Leaders are unionized positions that carry a caseload in addition to managing the administrative details of the portfolio.

6.6.1.2 Issues in Management and/or Operations

The Community Services Department covers a wide breadth of services under one umbrella. GRHSB management staff identified three main challenges facing the management and operations of this portfolio:

- Staffing – It was reported that there is not enough staff to cover caseloads in various portfolios (ex. Therapeutic/Intervention lacks speech language pathologist)
- Geography – It was reported that the distances between sites and traveling needed to reach remote areas on the periphery add to the workload and make it difficult to provide care (e.g. 2 physiotherapists to service the entire region)
- Team Leader Role – An interview with a team leader identified that the Administrative portion of the Team Leader's duties have taken up more time than expected and in some case are taking time away from their caseloads (ex. Social workers in Child Youth & Family Services are struggling to cover caseload and comply with administrative duties and provincial requirements)

The staffing and geography challenges contribute to the following gaps in services:

- Home Care (Family & Rehabilitation) – Currently this is provided to individuals who are physically and mentally challenged. The AED reports that funding is not enough to maintain adequate level of service.
- Home support for Mental Health is reported to be a major gap in service; the AED indicates that GRHSB is lacking in PCA (personal care attendant) roles.
- There is only one addictions counselor for the region. The AED indicates that there is a need to improve the level of specialty services by adding a case manager, enhanced crisis response and dedicated beds for psychiatry and detox.
- There are currently no child psychiatry services being offered.
- The AED reports that many areas are receiving infrequent service visits due to distance and inclement weather during the winter.

- Speech Language Pathology: GRHSB has been unable to successfully recruit for the position; therefore the service is not currently being provided.

Staff recruitment is a challenge in the GRHSB environment. GRHSB has identified a requirement for the following positions: speech language therapist, occupational therapist and personal care aides. Geography, lifestyle and the lack of qualified individuals have all been cited as barriers to success in recruiting for these individuals.

6.6.1.3 Opportunities to Reduce Operating Costs

GRHSB uses the National Workload Measurement system for allied health services according to the MIS guidelines as prepared and maintained by CIHI. Worked hours and workload by functional centre were used to examine productivity for Physiotherapy, Occupational Therapy and Social Work. These services are centralized to the Charles S. Curtis Memorial Hospital in St. Anthony. Total worked hours combines both UPP + M&O worked hours. Workload is measured as attendances.

Productivity for Physiotherapy seems to be improving. Based on projected values, 2003/04 productivity has improved by almost 60% from the previous year. Physiotherapy worked hours per attendance of 1.23 is still above the 75th percentile performance level. However, this may be a result of the added travel requirements of physiotherapy staff at GRHSB as they are responsible for both community and institutional care in the region.

Exhibit 6.37
Physiotherapy Total Worked Hours per Workload

GRHS	2003/04	1.23
	2002/03	2.86
	2001/02	2.83
2002/03 Peer Data	25th %ile	0.76
	Median	0.80
	75th %ile	1.05
	Min	0.45
	Max	1.59

Occupational Therapy productivity has improved since 2002/03. However, in 2002/03 productivity was 3.06 worked hours per attendance, significantly higher than the 75th percentile performance level. There is currently only one occupational therapist on staff that has responsibility for the region.

Exhibit 6.38
Occupational Therapy Total Worked Hours per Workload

GRHS	2003/04	2.08
	2002/03	3.06
	2001/02	1.50
2002/03 Peer Data	25th %ile	0.79
	Median	0.94
	75th %ile	1.66
	Min	0.57
	Max	3.24

Social Work productivity has improved significantly since 2002/03. In 2003/04 GRHSB Social Work worked hours per workload was 0.62, which is well below the 25th percentile performance level.

Exhibit 6.39
Social Work Total Worked Hours per Workload

GRHS	2003/04	0.62
	2002/03	2.11
	2001/02	1.11
2002/03 Peer Data	25th %ile	1.19
	Median	1.63
	75th %ile	1.71
	Min	0.90
	Max	2.08

Although performance comparisons using the MIS data indicate an opportunity to be more productive in some allied health areas, based on our site visit interviews and observations, we find it difficult for community services to achieve higher levels of productivity given the current staffing levels and service needs of the community. Travel times and the lack of clerical support are factors contributing to the inefficiency.

There is an opportunity to utilize technology such as video-conferencing, where appropriate, that may assist allied health care providers in more efficiently reaching the remote communities in the region where services are needed.

6.7 Overarching Operational Issues for Nursing Services

6.7.1 Utilization of Advanced Practice Nursing Skill Levels

The region is commended for sponsoring staff to become Nurse Practioners.

The region makes good use of advanced practices nurses, particularly Nurse Practitioners. There are Nurse Practitioners working in the Health Centres, in the nursing stations in South East Labrador, and one is in the ED at the Curtis Hospital.

The organization has been sponsoring staff to complete the Nurse Practitioner course and should continue this practice.

6.7.2 Nursing Staff Skill Mix

Longer life expectancies, advances in medical science, and changes to the health care delivery system are among those factors that are leading to increased care needs in the long term care population. The type of care required by residents should drive the amount of care available from nursing as well as the mix of staff required to deliver that care.

Staff mix here refers to the combination or grouping of different categories of workers employed for the provision of care to a designated population of clients. For the purposes of this study it includes Registered Nurses (RNs), Licensed Practical Nurses (LPNs), and unlicensed care providers here referred to as Personal care attendants (PCAs).

As part of the Best Practice Review, a review of empirical research on the relationship between skill mix and outcomes of different client groups in specific areas such as acute care, sub-acute care, long term care was undertaken.

6.7.2.1 Literature Review

There appears to be a continuing shortage of credible studies that address skill mix of nursing staff in relation to outcomes.[38] Some of the more rigorous studies were summarized by Hailey and Hartsall and are presented in a table in Appendices in this report.

As the staff skill mix ratio decreases the number of nursing hours required per patient increases.

A recent landmark study of 19 hospitals in Ontario showed that nursing staff mix had a statistically significant, negative influence on nursing hours, because as the staff skill mix ratio (regulated:unregulated) decreased the number of nursing hours required per patient increased.[39] At P=0.05, for instance, staff mix models that included a lower proportion of RNs and LPNs were related to the use of more nursing hours, although only RN and LPN- not unregulated staff- hours were considered.

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[38] Hailey, D., Hartsall, C. "Nursing Skill Mix and Health Care Outcomes" Alberta Heritage Foundation for Medical Research, IP-* Information Paper, December, 2001.

[39] Hall, LM, Doran, DI et al. "A study of the impact of nursing staff mix models and organizational changes strategies on patient, system and nurse outcomes, a summary report of the Nursing Staff Mix Outcomes Study. Toronto: University of Toronto, 2001.
Available: http://www.fhs.mcmaster.ca/nru/web.McGillis%20Hall.pdf.

Moreover, the data show that costs rise as nursing care hours increase, even though salaries for non-RN staff are lower. Mc Gillis Hall and colleagues do not, however, offer an optimal skill mix.

As skill mix increases the incidence of adverse events decreases.

The authors also found that skill mix has a significant effect on medication errors and wound infections, as skill mix increases the incidence of these adverse events decreases. The authors did not find any significant correlation between nurse experience level and patient outcomes. The authors suggests that efforts must be made by unit managers to balance both the experience level and the mix of nursing staff to ensure quality patient outcomes are not compromised in an effort to reduce costs. This study was focused on acute care and McGillis Hall is in the process of undertaking a similar study for long term care.

Anderson et al[40] considered patterns of resource allocation that related resident outcomes for all nursing homes in Texas. Secondary data were obtained from the state Department of Health Services and 11 items selected that reflected outcomes of care. Comparing pattern scores by resident outcome groups, for those with the best and worst average outcomes, differences for RNs, LPN type category and aides were statistically non-significant.

Hailey et al in their review for the Calgary Health Region noted earlier suggest that at present there is little in the literature to assist with decisions about the nursing workforce. Those studies that are available, particularly for LTC, tend to have only marginal relevance to practical issues that will be faced by regions and they also have some methodological limitations. They suggest there is a need to recognize the importance of context and practice settings and also the influence of non-nursing staff outcomes.

The way forward for regions may be to introduce enhanced LPN roles and/or PCA roles in specific areas with appropriate evaluation.

6.7.2.2 Skill Mix in Other Canadian Jurisdictions

In Ontario, the Nursing and Health Outcomes Project (NHOP) was created in response to recommendations 5 and 6 of the

[40] Anderson, RA, Hsieh P, Su H. "Resource allocation and resident outcomes in nursing homes: comparisons between the best and worst. Res Nurs Health 1998;21:297-313.

Good Nursing Good Health: An Investment for the 21st Century report. The purpose of The Nursing and Health Outcomes Project is to identify nursing-sensitive patient outcomes and their attendant nursing inputs and processes that could be abstracted from patients' charts or provided in other formats. This would allow administrators and researchers in the future to describe how different nursing interventions and different numbers and types of nurses (RNs, RPNs) affect patient outcomes. In the longer term, it may be possible to develop a funding formula that is nursing-specific. The project focuses on acute care, long-term care, complex continuing care and community care (home care). Many of the identified inputs are collected in the Ontario hospitals MIS. Some information on nursing inputs is also collected within Ontario's long term care and home sectors but it is not centrally reported. As noted above there are emerging studies examining staff mix and outcomes and the evidence is increasing that staff mix matters. Information on RN hours, RPN (LPN) hours and unlicensed assistive personal (UAP or PCA) hours for long term care is now becoming available.

In a study[41] examining the current utilization of LPNs in British Columbia, most of the Health Authorities are involved in looking at staff mix. The Vancouver Island Health Authority and Vancouver Coastal Health Authority are both examining the best staff mix of RN, LPN and PCA role across the acute, sub-acute and residential care areas. Fraser East is involved in a three-year project to introduce a new collaborative practice model for the RN/LPN/PCA role working in residential care.

In Nova Scotia, the Department of Health published a Task Force Report on Resident/Staff Ratios in Nursing Homes in February 2002. In their review of nursing home staffing standards used in other provinces, they identified that drawing comparisons in staffing standards across the country is impaired by several factors including:

- The quality to which other provinces completed the survey of the task force
- Regionalization and the level to which provinces are involved in funding

[41] Greenlaw, B "Licensed Practical Nurses: Current Utilization: Hospital Employees Union, Burnaby, BC: February 2003. Available: www.heu .org under special reports.

- Different funding methods e.g. Global budgeting, case mix payments systems, and population needs based funding methods.

Due to these differences the study was not able to draw useful comparisons with Ontario, British Columbia, Alberta, Saskatchewan, and PEI. The study was able to compare existing information in the other provinces. Each of these provinces has a different method of classifying residents into levels of care. Staffing levels vary by level of care. For the purposes of the study, provinces were given a set of standard level of care definitions and were asked to fit their information to those categories. The summary of their findings is presented in the table below.

Exhibit 6.40
Staffing Standards for Skill Mix and Direct Hours of Care from the Nova Scotia Task Force

	Direct Care Hours* by RN/LPN/PCW			
Province	**Level 1**	**Level 2**	**Level 3**	**Level 4**
NS	n/a n/a	NS level I = 1.5 hrs budget target for PCW - others unspecified	NS level II = 3.25 hrs budget target 15/15/70	n/a n/a
MB	0.5 hrs 10/0/90	2.0 hrs 10/20/70	3.5 hrs 20/15/65	3.5 hrs 20/15/65
NB	n/a n/a	2.5 hrs 20/40/40	2.5 hrs 20/40/40	n/a n/a
NF	0-1 hrs 100% PCW	2.0 hrs 100% PCW	3.0 hrs 20/80 (LPN & PCW)	3.2 hrs. 20/80 (LPN & PCW)

*excludes M&O hours

The Department of Health in Newfoundland provided the Best Practices Review team with findings from comparisons made in 2003. These are presented in the following table.

Exhibit 6.41
Nursing Home Standards Canadian Comparisons

Province	Hours of Care	Skill Mix (RN/LPN/PCW)
Newfoundland		
standard	3.0-3.2	20/80/00
actual	3.0-3.5	25/69/06
Nova Scotia	3.25	15/15/70
New Brunswick	2.5-3.0	20/40/40
PEI	3.0-3.5	10/5/85
Ontario	2.6	12/16/1972
Manitoba	2.0-3.0	20/15/65
Saskatchewan	3	20/30/50
Alberta	2.0-4.0	22/02/76
British Columbia	2.0-3.0	n/a

6.7.2.3 Findings for LTC in the Region

As noted above there is a growing body of research regarding the link between staff mix and nursing-sensitive client outcomes. It points to the need for decision-makers to consider the appropriate utilization of professional nurses (RNs and LPNs) and unregulated providers (PCAs).

The changing characteristics of residents in long term care facilities in the region will impact the model of nursing care delivery in the LTC facilities. The prevalence of disease in the current senior's population is showing a steady increase.[42] The needs of LTC clients are increasingly complex in both community and institutional settings. Nurses are caring for clients with complex care and treatment plans some of whom are technologically dependent. The goals of nursing are to improve health outcomes, quality of care, quality of life, and to ensure the provision of safe, ethical nursing care.[43]

These changing needs will impact the models of nursing care delivery in the future. LTC requires a variety of care providers with varying levels of knowledge and expertise who are responsible for meeting the basic and complex needs of residents. There has been discussion regarding the role of the

[42] Government of Canada, national Advisory Council on Aging (2001). Report card seniors in Canada. Ottawa, Public Works and Government Services Canada.

[43] Association of Registered Nurses of Newfoundland and Labrador, **The Role of the Registered Nurse in Long Term Care Position Statement and Guidelines**, February, 2004.

RN, LPN and the use of non-regulated health care providers in this setting in the region.

Role of the RN in LTC

Given the patient population and the changing needs, the Region should ensure a nursing care delivery model that utilizes the RN in a coordinating and consulting role. This means that the RN will follow the guidelines established by the provincial association. This means the RN will utilize the nursing process to:

- Conduct a holistic needs assessment of each resident on a regular basis
- Oversee and ensure the implementation of the plan of care
- Provide direct nursing care
- Evaluate the outcomes of the plan of care for each resident.

Essentially the RN will use their knowledge and skills to oversee and provide care for such things as bowel/bladder management, medication use, restraint use, behavioral management, wound and skin care, adjustment strategies, fall prevention and restorative care.

RNs need to be more actively involved in planning and evaluating care and communicating with families in giving clinical leadership at the unit level and not relying on managers.

Role of the LPN in LTC

LPNs can autonomously care for residents who have less acuity and less complex care needs with predictable responses and outcomes. As care requirements become more unpredictable, the greater the need for LPNs to collaborate with RNs.

GRHSB has identified opportunities to enhance the role and utilization of the LPN so that they are working to the full scope of their practice. There is provision in the Primary Health Care Project to conduct a pilot project looking at the medication administration role of the LPN.

Role of Personal Care Attendants

Given the increasing complexity of care of residents in the LTC setting the use of personal care attendants (PCA) in the region needs to be done in appropriate resident care environments. Currently, much of the care being provided by LPNs is care that is being provided by PCAs in other jurisdictions. When introducing the role of the PCA, clear standards of care, expectations for performance and monitoring of performance should be in place.

6.7.2.4 Moving to Change the Skill Mix in the Region

Grenfell Region currently has 9.3 RN and 28.6 LPN between Curtis and Forteau. There is one PCA at Curtis, none at Forteau. The current skill mix in LTC is

- RN: 24%
- LPN: 74%
- PCA: 2%

No common standards across the country with respect to the appropriate skill mix in LTC.

There are no common standards across the country with respect to the appropriate skill mix in LTC. From the data noted above, generally, the professional nurse mix (RN plus LPN) is in the range of 25-60%.

It is clear that there is an opportunity for the region to change the current skill mix to be more in line with other provinces with respect to the use of PCAs. It appears that there is an opportunity for the region to achieve some savings while still ensuring an appropriate standard of care for residents.

Based on the literature and the diversity of current practice across the country, we are not in a position to make a firm recommendation regarding mix. However, it may be reasonable for the Region to consider moving toward a mix of 60% professional nursing to 40% unregulated provider.

The Department and the Region work together to establish an acceptable target for the mix of regulated and unregulated nursing staff in different treatment settings.

We would suggest the Department and the Region work together to establish an acceptable target for the mix of regulated and unregulated nursing staff and then develop a plan to introduce the role of the PCA. Appropriate training will need to be ensured for the role of the PCA and for the other team roles that will work with this new role. It is suggested that by care area, the GRHSB identify opportunities to incorporate the role of a PCA with both the RNs and LPNs working to their scope of practice. The Region should then develop a plan for implementation of the new role in the appropriate care areas.

Recommendations:

It is recommended that:

(69) AED Nursing should develop and implement a new model of nursing care delivery for LTC that includes RN and LPN providers working to their full scope of practice and that introduces the role of PCA in appropriate settings.

(70) AED Nursing should incorporate a 60:40 ratio of regulated:unregulated nursing staff within the new model for LTC nursing..

6.7.3 Guidelines for Transport and Escort

The region/department should give consider greater use of LPNs and paramedics for patient transport.

The Department of Health has set guidelines outlining who can transport/escort patients. The guidelines are followed in order to ensure payment. However, these guidelines constrain the ability of the Region to provide escort that is appropriate to the actual need/acuity of the patient. It appears that RNs are used primarily, even when the patient condition may not warrant that level of support.

Elsewhere in this report it was noted that criteria should be developed between the physicians regarding transport from remote sites to St. Anthony. There should be guidelines by patient conditions regarding the type of accompaniment. The physicians should be actively involved in the development of these standards as there appears to be variation of practice among the physician groups as well. The region/province should give more consideration to the use of LPNs and paramedics for appropriate transfers.

Recommendations:

It is recommended that:

(71) The Department of Health should ensure a process to review transport/escort guidelines such that patient need will determine who accompanies the patient.

(72) The Chief of Staff and the AED Acute Care Nursing should establish a process to develop guidelines for transport and escort for patients by need and acuity.

6.7.4 Call-back

There are concerns about call back in the Region. Call-back occurs for nursing staff and for lab/technical staff. As noted above, guidelines should be established for transfer which may help reduce the amount of call-back. There is also concern about the amount of call-back for lab and x-ray particularly in some of the health centers. There may be a tendency for new/inexperienced physicians to call back too readily. Call back for these areas should occur only when results would change the management of the patient

Grenfell spent $1.2 million on OT & Callback in 2003/04:

- Callback of $385,277 was 1.12% of total labour cost.
- Overtime of $821,026 was 2.39% of total labour cost.

It is of interest to note that WHCC[44] had callback expenses of only $554,637 or 0.45% of total labour cost and overtime of $1,120,734 or 0.92% of total labour cost. Some call-back and overtime will be expected. However, there appears to be an opportunity to reduce the use of both call back and overtime and achieve significant savings. (45) The Chief of Staff the AED LTC and Community Services should develop guidelines for the use of call-back and overtime, especially for the health centres.

If GRHSB had achieved the WHCC rates of overtime & callback usage, then callback would have been reduced by $229,400 and overtime by $506,000 for a combined reduction of $735,400. However, given the differences in the range of services offered and the geographical challenges of the region, we don't think that GRHSB would be able to achieve the performance of WHCC. However, we do feel that improvement is both desirable and achievable and that a reasonable target for GRHSB is a reduction in callback to 0.9% of total labour cost and overtime to 1.85% of total labour cost.

Recommendations:

It is recommended that:

(73) The Executive Director should establish a target for call-back expense of no more than 0.9% of total labour costs.

(74) The Executive Director should establish a target for overtime expense of no more than 1.85% of total labour costs.

6.7.5 Recruitment and Retention

This is an ongoing concern across the region regarding the recruitment and retention of nurses.

In Forteau, there are issues associated with losing Nurse Practitioners up the coast primarily related to better benefits.

[44] Data on call-back and overtime hours and costs are not available for the peer comparators; as a result, the performance of WHCC was used as a point of reference in this analysis.

At the present time most of the staff are local or live in/close to the community. Since 2003 they have been fully staffed. This is identified as an unusual situation.

In St. Anthony, the hospital uses a Float Pool to provide full-time positions into which new staff are recruited. The Board hires 8-10 new graduates right after graduation, and usually by the end of the calendar year they are down to 2-3 or no staff available in the float pool. The use of the float pool has helped significantly in the ability to recruit staff because of the availability of full-time positions.

6.8 Materials Management

6.8.1.1 Departmental Description

Materials Management at the Curtis Memorial Hospital location provides service for the entire region. The department includes purchasing and contract management, stores, distribution, mailroom, sterile processing, waste management and WHMIS.

The following table presents the FTE counts for Materials Management:

Exhibit 6.42
GRHSB Materials Management FTEs

	2000/01	2001/02	2002/03	2003/04
MM – Sterile processing	1.00	1.53	2.58	2.12
MM - Combined	5.10	4.73	4.12	4.35

6.8.1.2 Organization Design

There is a single manager in the department reporting to the AED Finance and Administration who is also responsible for Facilities Management, Food services, Finance, Information Systems and Health Records.

6.8.1.3 Analysis of Operations

The following observations and findings are made:

- The department consists of a manager along with a single individual responsible for each of purchasing, mailroom / printing, stores/receiving / shipping.
- GRHSB takes full advantage of the Province Wide Group Purchasing (PWGP) through the Newfoundland and Labrador Health Boards Association. As a small isolated facility, the arrangements provide great advantage to

GRHSB as all supplies are FOB St. Anthony. Approximately 80% of all purchasing by GRHSB is done through the PWGP including medical supplies, drugs, linen, office requirements, maintenance supplies and domestic supplies. For items not available through the PWGP, government contracts are available through the Central Purchasing Authority.

- The biggest challenge faced by the department is distribution of goods from St. Anthony. As road access to many locations is reliable for only about 4 months per year, inventory levels of basic supplies are monitored carefully and reorder points are set at higher levels than would normally be required.
- The recent change to a regular charter service for non-emergent patient transport has also resulted in more reliable and more cost effective air transport for freight. Other innovative arrangements, such as Air Labrador carrying the daily mailbag without charge, are also in place.
- Electronic Data Interchange (EDI) was recently introduced such that purchase orders and invoices are now transferred electronically between the hospital and vendors.
- There are 2 FTEs in sterile processing. This service is only provided at the Curtis hospital location and it services the Operating Room and ICU.

6.8.1.4 Productivity and Staffing

The performance indicator for Materials Management is "net cost as a percentage of direct care cost." The department's performance is presented in the following exhibit.

Exhibit 6.43
Materials Management Productivity Comparison

Materials Management		% of Direct Care Costs
GRHSB	2000/01	1.58%
	2001/02	1.52%
	2002/03	1.51%
	2003/04	1.43%
Peer Range 2002/03	Best quartile	2.47%
	Median	3.09%
	Worst quartile	3.26%

The performance of Materials Management is significantly better than the best quartile performance of the peer

organizations. There is essentially a single individual performing each of the departmental functions. This level of productivity is made possible because of the PWGP contracts. During our review, it had been suggested that the manager position may not be replaced upon the retirement of the current individual in February 2005. The current manager performs much of the daily activity required for a number of the department functions (specifically contract management and purchasing). Hence, while recruitment at the managerial level may not be warranted, the functions of the individual will continue to be required and there is little capacity to absorb this workload within the current department staff complement.

6.9 Facilities Management

6.9.1.1 Departmental Description

The Facilities Management Department encompasses the following functions:

- Housekeeping;
- Laundry;
- Maintenance;
- Biomedical Engineering;
- Security
- Planning; and
- Renovation Projects.

The department provides service to all of the GRHSB facilities including 15 houses and over 100 apartments used for assisted living and long-term care.

The following table presents the FTE counts for the Department.

Exhibit 6.44
GRHSB Facilities Management FTEs

	2000/01	2001/02	2002/03	2003/04
Housekeeping	36.03	33.84	34.95	37.79
Laundry	9.34	7.81	7.04	7.33
Plant Operations	38.78	33.44	33.55	32.97
Bio-medical Engineering	3.07	3.15	2.98	3.01
Security	7.01	6.24	6.44	6.74
Facilities Total	**94.23**	**84.48**	**84.96**	**87.84**

6.9.1.2 Organization Design

A single facilities manager is responsible for all of the department activities. The Facilities Manager reports to the AED Finance and Administration who is also responsible for Materials Management, Food services, Finance, Information Systems and Health Records.

There are currently four (4) team leaders reporting to the Facilities manager:

- Biomedical;
- Projects & Maintenance;
- Laundry; and
- Housekeeping.

Recent re-organization has reduced the number of team leaders from 6 to the current 4. Projects and Maintenance were merged into one position while a Housing team leader position was eliminated and duties reassigned. Security staff report directly to the facilities manager and are in the process of being amalgamated with Ambulance Operations.

6.9.1.3 Facilities, Equipment and Supplies

The age of the main Curtis Hospital facility presents challenges to the Facilities management department to maintain a clean and safe environment. The department has an extensive Preventative Maintenance Program in place that has succeeded in maintaining the infrastructure at a reasonable level. An internal construction crew for smaller projects and renovations is also in place; this is an internal service since there are no such services available in the community.

6.9.1.4 Review of Operations

The following observations and findings are made:

- Security services are in the process of amalgamating with Ambulance operations. Hospital security personnel have received Emergency Medical Responder or Paramedic training and act as ambulance drivers. The combining of security and land ambulance was made possible through capital funding received from the Department of Health and Community Services. This is anticipated to save $40,000 annually beginning in fiscal 2004/2005.
- While space at the Curtis hospital site is currently under utilized, no specific locations have been taken out of service such that the entire facility still requires housekeeping. The badger unit at the Curtis Hospital location, has been out of service for some time.
- A comprehensive space utilization review has been undertaken by management. The recommendations in the review are intended to increase space usage at the Curtis hospital and eliminate the need for other sites within St. Anthony (e.g. Public Building). Management has suggested that the implementation of the recommendations from the space utilization review would contribute operating savings. These savings have not been included in our assessment of the opportunity.
- Portering activities are combined with Laundry services and reported together in the Laundry and Linen functional centre.
- Management recognizes that laundry operations are an area where economies of scale are typically achievable but notes that the current operation is an inefficient size. The closest alternate laundry facility, however, is in Corner Brook (450 km). If laundry were outsourced, concerns have been raised regarding reliability and cost of transportation, and the cost of maintaining contingency inventory and potential required increases in inventory.
- Plant Operation expenses include the Preventative Maintenance Program as well as project costs that are not separately funded (such as the recent installation of a protective care room for mental health). Capital works requests are regularly submitted to offset the costs of such projects as well as those associated with the preventative maintenance program. Historically between 10% and 15% of capital works projects submitted to the Department of Health and Community Services are approved.
- The Plant operations and maintenance staff located in the Health Centres and nursing stations typically perform

multiple and varied tasks such as ambulance driving, portering, receiving and skilled work.

- Preventative Maintenance expenses associated with diagnostic imaging and laboratories had been shared in partnership with the Goose Bay Facility (Health Labrador Corporation) until that facility added staff in this area.
- An energy retrofit and performance contract was entered into in February 2000. The hospital is awaiting the results of an audit evaluation of the agreement by the provincial auditor-general. As a result of the retrofit, 3 FTEs in Engineering and 2 FTEs in laundry were eliminated. There was a planned payback of 8.2 years associated with the contract; this payback is now estimated at 7.5 years. The contract has been approved to be funded as an operating expense by the Province while the contract partner (Johnson Controls) has guaranteed the reduction in operating costs will equal or exceed the costs incurred under the contract. As a result, actual savings in operating costs will not be significant until the end of the contract.

6.9.1.5 Productivity and Staffing

Housekeeping

The performance indicator for Housekeeping is "net cost per cleanable square foot." The department's performance is presented in the following exhibit.

Exhibit 6.45
Housekeeping Productivity Comparison

Housekeeping		Cost per Area
GRHSB	2000/01	31.92
	2001/02	34.09
	2002/03	**34.43**
	2003/04	37.65
Peer Range **2002/03**	Best quartile	46.32
	Median	49.45
	Worst quartile	59.22

Housekeeping performance is better than the best quartile performance of the peer organizations

Plant Operations and Maintenance

The performance indicator for Plant Operations & Maintenance is "net cost per square foot." The department's performance is presented in the following exhibit.

Exhibit 6.46
Plant Operations & Maintenance Productivity Comparison

Plant Operations & Maintenance		Net Cost per Square Foot
GRHSB	2000/01	61.92
	2001/02	64.34
	2002/03	61.94
	2003/04	58.57
Peer Range 2002/03	Best quartile	57.27
	Median	67.42
	Worst quartile	73.72

Plant Operations performance is between the best quartile and median performance of the peer organizations

Biomedical Engineering

The performance indicator typically used for Biomedical Engineering is "net cost as a percentage of direct care costs." The department's performance is presented in the following exhibit.

Exhibit 6.47
Biomedical Engineering Productivity Comparison

Bio-medical Engineering		% of Direct Care Costs
GRHSB	2000/01	0.65%
	2001/02	0.84%
	2002/03	0.68%
	2003/04	0.68%
Peer Range 2002/03	Best quartile	0.24%
	Median	0.26%
	Worst quartile	0.34%

Bio-medical Engineering is above the worst quartile performance of the peer organizations. Management reports that a portion of this difference is attributable to the fact that GRHSB purchases fewer equipment service contracts than comparable facilities. Management has stated that the biomedical expenses are less than the costs of such contracts as such contracts are very costly for remote facilities. Based on our on-site interviews, observations and analyses, there may be opportunities to further improve efficiencies and overall service delivery by Investigating the potential for group purchasing of preventative maintenance contracts for specialized equipment (Diagnostic Imaging, Laboratories) as well as alternatives such as the Canadian Medical Equipment Protection Plan.

Laundry Services

Analysis of productivity of Laundry service has proven difficult because of a limited number comparators. Because of the limited number of comparators[45], two performance indicators are provided for Laundry services: a) "net cost as a percentage of direct care costs" and b) "total linen cost per kilogram." The department's performance is presented in the following exhibit.

Exhibit 6.48
Laundry & Linen Productivity Comparison

Laundry and Linen		Net Cost % of Direct Care Costs
GRHSB	2000/01	N/A
	2001/02	1.08%
	2002/03	1.02%
	2003/04	0.97%
Peer Range 2002/03	Best quartile	0.62%
	Median	0.87%
	Worst quartile	0.91%

Based on this indicator, Laundry and Linen performance is not as good as the worst quartile performance of the peer organizations. The department's performance using Cost per kg of laundry is presented in the following exhibit.

Exhibit 6.49
Laundry & Linen Productivity Comparison

Laundry and Linen		Cost / kg laundry
GRHSB	2000/01	N/A
	2001/02	2.44
	2002/03	2.46
	2003/04	2.42
Peer Range 2002/03	Best quartile	2.21
	Median	2.23
	Worst quartile	2.35

Based on this indicator, Laundry and Linen performance is also not as good as the worst quartile performance of the peer organizations. Based on our on-site interviews, observations and analyses, there may be opportunities to improve efficiencies. To do so, management should investigate the business case and feasibility of taking advantage of the natural economies of scale that exist in laundry and linen services. This may be accomplished by outsourcing the service to a

[45] Many organizations have contracted out laundry services.

larger provider, although transportation and supply levels are recognized as potential barriers. Management has also suggested that GRHSB could explore marketing its laundry service to the private sector to generate revenue and reduce costs with increased volumes. In any case, there should be opportunities to reduce the cost of laundry services. The Facilities Manager should establish the median performance of peer hospitals, $2.23 per kg of laundry, as the initial productivity product for laundry services in Grenfell.

Recommendations:

It is recommended that:

(75) The Facilities Manager should investigate the potential for group purchasing of preventative maintenance contracts for specialized equipment (Diagnostic Imaging, Laboratories).

(76) The Facilities Manager should investigate the potential to cost-share or otherwise partner in the provision of all facilities services between Forteau and Blanc Sablon.

(77) The Facilities Manager should investigate avenues to improve economies of scale in the laundry operation.

(78) The Facilities Manager should establish a performance target for the cost of laundry services at $2.23/kg of laundry.

6.10 Information Technology

6.10.1.1 Current Characteristics

The GRHSB Information Technology department is lead by the Information Systems Manager, who reports to the Assistant Executive Director, Financial Administration. The department is staffed with three full-time computer support specialist positions and one temporary position.

The GRHSB IT function primarily services the hospital, three health centres and the mission store. It also services Child, Youth and Family Services, located in the Public Building in St. Anthony. There is a separate IT function that supports community health, administered by the province, which is largely centered on the CRMS – Client Referral Management System. The CRMS is an electronic patient record for community services.

The GRHSB IT function is largely responsible for maintaining current systems. There is no specific network administrator or network security officer, these functions are currently been carried out by the IS Manager. The IT function also serves as a helpdesk/technical support centre with a limited offering of training in office applications.

Meditech software is implemented at GRHSB, but currently only at the main hospital site. Bandwidth and connectivity issues have impeded the implementation of Meditech modules at other sites. Sites send in basic patient information to be later keyed-in at the hospital site in order to populate the admission-discharge-transfer information system.

GRHSB is hoping to be chosen as a demonstration site for implementation of the Electronic Patient Record (EPR) as part of its primary health care project. If chosen, GRHSB will receive funding and support through the Office of Primary Health Care to move forward wit the EPR.

6.10.1.2 Issues in Management and/or Operations

The IT operation at the GRHSB is largely focused on providing the technical support to end users and dealing with connectivity issues. The following observations relating to management/operations issues were made:

- A significant impediment to connectivity between GRHSB sites is the lack of technology. High-speed (DSL) technology is not available for some sites, thereby limiting the types and amount of applications available. GRHSB has identified connectivity issues in its 2001 strategic planning process especially in terms of its potential impact on primary health care renewal in the region. It was reported that Flowers Cove and Roddickton will be connected in 2005.
- GRHSB is still in the process of implementing various Meditech modules in order to build an electronic patient record (EPR) for the organization. The lack of IT resources and connectivity issues are posing a barrier to implementation of modules. Funding to purchase outstanding modules (such as Order-Entry) is also a major barrier.
- There is currently no information technology strategic plan in place for the organization. There is a steering committee with corporate and physician leadership that is working on developing a plan.

- Lack of resources (e.g. a network administrator – the manager is juggling this role). The network is the cornerstone of connectivity. A strong network ensures that patient confidentiality and security is not compromised.

6.10.1.3 Information Technology Performance Comparisons

Assessing the performance of information technology departments in health care organizations is difficult. In contrast to other functional centres; the output of the functional center is not as easily measured. There are outputs of departmental activity such as level of automation, information flow, EPR development, access to information and improved patient care for example, that are difficult or even not possible to determine given the lack of data to support such measurement.

Alternatively, we have examined the level of spending on information technology services for GRHSB and peers by calculating the Net Operating Cost of the Information Systems Functional Centre (excluding Medical Staff and Equipment costs) as a percent of the Total Direct Net Costs.

In the case of this metric, we are not associating a low number with good performance; rather it provides a measure of where GRHSB stands among its peers with respect to IS spending. The GRHSB 2003/04 value is projected based on 9 months of data, thus annual expenditures that occur in this period may be overstated in this projection. In 2002/03 GRHSB information systems costs as a percent of total direct costs was 1.83%, lying in between the median and 75th percentile performance level. It is important for GRHSB to maintain its current level of spending on information systems and technology both to enable better patient care and improved business processes and in GRHSB' case to support patient focused service delivery across multiple sites.

Exhibit 6.50
Net Cost of Information Systems
as a Percent of Total Direct Net Costs

GRHS	2003/04	2.46%
	2002/03	1.83%
	2001/02	1.74%
Peer Data 2002/03	25th %ile	1.56%
	Median	1.79%
	75th %ile	1.94%
	Minimum	1.06%
	Maximum	2.40%
	Mean	1.76%

GRHSB faces challenges of providing care across a wide geography. Similarly, the department faces the challenges of providing the required information resources and technology to support these care processes.

The information technology department is a relatively small department that is quite busy. Based on our interviews and observations there are three key areas where departmental effort should be focused on, in order to improve overall organizational effectiveness:

- Upgrading and maintenance of network infrastructure: including enhancing connectivity, network security and patient record confidentiality.
- Developing an information technology strategic plan with corporate and clinician sponsorship that identifies clear, relevant and realistic objectives. This strategy should operate within a 3-year planning horizon.
- Committing the necessary information resources in order to carry out objectives in strategic plan.

Recommendations:

It is recommended that:

(79) The Information System Manager and the IT Steering Committee work together to develop an Information Technology Strategic Plan for GRHSB.

(80) The Information System Manager should ensure that network infrastructure and security is upgraded and maintained through a dedicated network resource.

6.11 Financial Services

6.11.1.1 Departmental Description

Financial services at the Curtis hospital location provide service for the entire region. No financial services are provided at the health centres or nursing stations. The department consists of General Accounting, Accounts receivable, accounts payable, budgeting as well as payroll.

The following table presents the FTE counts for Financial services:

Exhibit 6.51
GRHSB Financial Services FTEs

	2000/01	2001/02	2002/03	2003/04
Financial Services	9.02	8.46	8.42	10.34

The recent increase in FTEs arises largely from a temporary increase in benefit hours.

6.11.1.2 Organization Structure

Financial services fall under the authority of the Assistant Executive Director, Finance and Administration who is also responsible for Facilities Management, Food Services, Health Records, Information Systems and Materials Management. The department is organized on functional lines with a single manager in the finance department responsible for payroll, accounts receivable, accounts payable, general accounting. The Finance Manager also holds responsibilities outside of the scope of finance that include workload measurement as well as Housing and Seniors Complex operations.

Financial reporting and budgeting report directly to the AED.

6.11.1.3 Review of Operations

Meditech installation at GRHSB was performed in such a way that the finance modules were among the first modules implemented. All modules are now implemented. The payroll module, however, is not distributed such that timesheets continue to be submitted to finance on paper and manually entered. Direct entry in the payroll module by the various staff scheduling personnel would improve accuracy and reduce clerical workload.

6.11.1.4 Productivity

The performance indicator for Finance is "net cost as a percentage of direct care cost." The department's performance is presented in the following exhibit.

Exhibit 6.52
Finance Productivity Comparison

Finance		% of Direct Care Costs
GRHSB	2000/01	2.18%
	2001/02	2.00%
	2002/03	**2.26%**
	2003/04	2.57%
Peer Range **2002/03**	Best quartile	1.77%
	Median	2.11%
	Worst quartile	2.49%

The Finance Department's performance is between the median and worst quartile performance of the peer organizations. Based on our on-site interviews, observations and analyses we feel that performance can be improved. Although performance equivalent to the best quartile may not be achievable by GRHSB, the department should move toward this level of performance. We feel that it would be reasonable for Financial Services to achieve a net operating cost of 2.0% of the total net operating cost of the Board.

Recommendation:

It is recommended that:

(81) The AED Finance and Administration should establish a Financial Services performance target of 2.0% of the total direct care net operating costs for the net operating cost of the department.

6.12 Summary of Operating Efficiency Opportunities

Savings through improvements in operating efficiency are estimated at $833,000. These savings are summarized in Exhibit 6.53.

Exhibit 6.53
Savings Through Improvements in Operating Efficiency

	Department		Productivity			
Rec #	or Area	Action	Current	Proposed	FTE	Total
41	OR/PARR	Achieve median performance of 6.54 worked hours per patient day	6.97	6.54	(0.80)	$ (34,000)
42/43	ICU	Achieve recommended minimum staffing levels (11.73 FTE) until such time as workload increases beyond this capacity and then median performance of 18.15 worked hours per patient day should be used	18.36	18.15	(0.14)	$ (6,000)
45/46	Birthing	Achieve recommended minimum staffing levels (11.73 FTE) until such time as workload increases beyond this capacity and then median performance of 8.2 worked hours per patient day should be used	22.44	8.20	(4.73)	$ (205,000)
56	Health Records & Registration	Achieve Health Records net operating cost performance target equivalent to 2.25% (median) of total direct care net operating costs	2.34%	2.25%		$ (19,000)
60	Food Services	Establish a target of $33/patient day for the net cost per patient day for food services	$ 38.28	$ 33.00		$ (201,000)
67/68	Air Ambulance	Increase patient share cost from $40 to $50 and the $25 charge for personal escorts.				$ (30,000)
73	Call-back	Establish a target for call-back expense of no more than 0.9% of total labour costs	1.12%	0.90%		$ (76,000)
74	Overtime	Establish a target for overtime expense of no more than 1.85% of total labour costs	2.39%	1.85%		$ (185,000)
78	Laundry	Establish a performance target for the cost of laundry services at $2.23/kg of laundry.	$ 2.42	$ 2.23		$ (27,000)
81	Finance	Achieve Finance net operating cost performance target equivalent to 2.00% of total direct care net operating costs	2.23%	2.00%		$ (50,000)
Totals					**(4.87)**	**$ (833,000)**

7.0 Opportunities for Service Rationalization and Realignment

This section of the report focuses on an analysis of opportunities for service rationalization that will allow the Corporation to best meet the needs of the population within the resources available to it. Our approach to service rationalization is designed to create a viable model for the future that optimizes access, quality and sustainability.

7.1 Community Health Centres and Clinics

Primary care in the region makes extensive use of family physicians and nurse practitioners.

The model for providing primary care in the region is a model that makes extensive use of family physicians and nurse practitioners. The latter have varying degrees of responsibility and are able to prescribe medications in certain circumstances. In many cases, particularly in the nursing stations, they provide medical health care services that are similar to those provided by the Region's primary care physicians.

There are currently three Community Health Centres in GRHSB:

- Strait of Belle Isle Health Centre in Flower's Cove, Newfoundland,
- White Bay Central Health Centre in Roddickton, Newfoundland, and
- Labrador South Health Centre in Forteau, Labrador.

The Labrador South Health Centre also has long term care beds. Superficially at least, the White Bay Central Health Centre in Roddickton and Labrador South Health Centre in Forteau are in good condition, whereas the facility in Flower's Cover appears to be in a relative state of disrepair.

The Health Centres in Flower's Cove and Roddickton each have a budgeted complement of three full-time primary care physicians, while Forteau has a budgeted complement of two[46].

The model of care employed by the CHCs is that nursing staff and physicians see patients independently. The medical staff

[46] Current physician staffing is below the budgeted complement. Currently, Forteau has 2, Roddickton has 2 and Flowers Cove has 1 primary care physicians

supports the clinical activity of nursing staff, reviewing the patients and seeing them in consultation if necessary. It appears that patients may self-select to see the physician or the nurse practitioner. Each Community Health Centre also has dedicated dental staff. Ancillary staff includes a social worker, public health nurse, a home care nurse, a PCN/LPN, and paramedics.

Each Community Health Centre has basic x-ray facilities (e.g., to do plain film x-rays) and basic laboratory services. There are no other diagnostic imaging capabilities in the Community Health Centres, so, for example, a patient requiring an ultrasound has to be sent to St. Anthony.

The Community Health Centres have emergency care capability and have two to four inpatient holding/observation beds that can be used for up to 48 hours.

Although, for the most part the Community Health Centres deliver patient care through ambulatory clinics, each Community Health Centre has capability for emergency care. The Community Health Centres each have two to four inpatient holding beds that can be used for up to 48 hours if necessary. Patients who have medical conditions that require longer stay in hospital, or more complex treatment than is possible locally are sent to St. Anthony.

In the case of Forteau, patients are sent to St. Anthony either on scheduled commercial flights or on the Region's fixed wing aircraft either on an emergency basis or on one of three regularly scheduled flights each week. Patients transferred from Roddickton and Flower's Cove to St. Anthony are sent by ground ambulance. In either case, patient transfer can be, and often is, delayed due to the unpredictable weather conditions.

There could and should be more frequent visits by primary care physicians to the Labrador Community Clinics and the Forteau CHC.

The Labrador South Health Centre in Forteau is the most challenged by vagaries of the weather, thus creating the potential for significant delays in air lifting patients from Forteau to St. Anthony. Although Forteau can be quite isolated from St. Anthony, it is important to note that there is a hospital, in Lourdes de Blanc-Sablon just across the Quebec Newfoundland border. This hospital does not have the range of specialty medical services available in St. Anthony and in fact patients requiring specialized medical services may be sent from Blanc-Sablon to St. Anthony on occasion. However, the hospital in Blac-Sablon does provide emergency care and could deal with most patient conditions requiring emergent treatment and hospitalization more quickly than can be provided through patient transfer to St. Anthony. It may be safer, more timely and more cost effective to send patients who require emergency inpatient care to Blanc-Sablon, rather

than sending them by Medevac to the Charles S. Curtis Memorial Hospital in St. Anthony. A relationship between GRHSB and the Quebec government should be reinvestigated for purposes of providing hospital access of patients in Forteau and its catchment area to the Centre de Santé de la Basse-Côte-Nord in Lourdes de Blanc-Sablon. Also, if access to the hospital resources is secured, then there may no longer be a need to maintain physician coverage in Forteau. Urgent access to primary care medicine could be provided by the family practitioners in Blanc-Sablon. If a relationship is established, then the full-time physician resources at the Labrador South Health Facility could and should be removed from Forteau and relocated to St. Anthony in order to augment primary care staffing in St. Anthony. The Labrador Central Health Facility should then be operated much in the same manner as the existing Community Clinics in Labrador, namely St. Lewis, Mary's Harbour, Fort Hope Simpson and Labrador. The only difference would be that the CHC in Forteau could continue to offer additional services such as diagnostic and long-term care services. With additional medical staff in St. Anthony, there could and should be more frequent visits by primary care physicians to the Labrador Community Clinics and the Forteau CHC, with visits taking place at not less than four-week intervals rather than every six weeks, which is the current pattern.

Recommendations:

It is recommended that:

(82) The Executive Director should investigate the feasibility of directing emergent and urgent patients from Forteau to the hospital in Blanc Sablon.

(83) The Executive Director should seek to restructure the services of the Labrador South Health Centre in Forteau to focus on Nurse Practitioner services supported by clinics offered by visiting medical staff.

Nurse Practitioners and RNs provide most of the clinical services in the community clinics. Family physicians visit the clinics on a rotating basis.

Consolidation of Community Clinics into a single site will enhance the quality and comprehensiveness of care and reduce costs.

As has been discussed earlier in this report, the GRHSB has considered the potential consolidation of its four Community Clinics in Labrador to create one larger, more richly resourced centralized clinic/health center. It would be located central to the geographic region currently served by the four clinics. This will not only reduce costs, but, the concentration of

service in a single site will likely allow for investment in technologies and staff that could not be considered on 4 sites and thus will likely enhance the quality and comprehensiveness of service available locally to the residents of the Labrador communities currently served by the 4 clinics. To make the consolidation viable there will need to be discussions with the Province to ensure appropriate four-season road access to the centralized service and some facility redevelopment to accommodate the expanded role and service volumes.

More patients can and should be cared for more extensively in the CHCs and Clinics rather than being transferred to the hospital in St. Anthony.

All community based facilities including Community Health Centres and Community Clinics rely heavily on the facilities and the skills of medical specialists in St. Anthony. It appears that the operating culture has always been deference to and primacy of practitioners in the field with respect to decisions to refer patients to hospital-based resources in St. Anthony; they can refer patients to St. Anthony at their discretion. This is equally true for physicians at the Community Health Centres and for Nurse Practitioners at the four Community Clinics in Labrador.

What complicates this situation are varying levels of experience and confidence among providers, relatively lesser levels of technical resources in the field, lack of inpatient capacity in the more remote sites, concerns about vagaries in the weather, and pressure from patients and families to send patients to St. Anthony for assessment.

There is limited use of technology for remote assessment of patients and simple technologies that may facilitate decision-making are not available in the CHCs or Clinics.

More patients can and should be cared for more extensively in the CHCs and Clinics. There is relatively little negotiation between specialists and primary care physicians in St. Anthony and providers in the field. If providers in remote clinics feel uncomfortable, they are able to and will transfer the patient. We heard anecdotes by physicians in the Community Health Centres and by specialists in St. Anthony about discussions to manage patients at the local centres without transferring them, but in many such cases, patients were transferred regardless. There does not seem to be any formal process for screening patients. There is little use of technology available for remote assessment of patients (e.g., telemedicine). Simple technologies that may facilitate decision-making locally are simply not available (e.g., near patient or point of care testing for cardiac markers etc.).

As a result of these circumstances, there appears to be a low threshold for transferring patients from the Community Clinics and the CHCs[47]. It appears that there may be excessive reliance on both ground and air ambulance services to transport patients to St. Anthony. There is considerable expense associated with patient transport and thus an opportunity for savings through enhancing the capability to manage patients in remote sites so as to avoid unnecessary patient transport. As noted earlier, the rate of admission of Grenfell residents for care that may not require hospitalization (MNRH) is more than double the provincial average and higher than in any other region.

To enhance local capability, telephone assistance should be more readily available and provided by specialists to primary care physicians at the CHCs and by primary care physicians to the Nurse Practitioners at the Clinics.

To reduce the number of potentially unnecessary transfers, criteria should be co-developed by primary care physicians and specialists to screen patients who are potential candidates for transportation from remote sites to St. Anthony. Where such criteria are in place, they should be validated and utilized to enhance local capability, telephone assistance should be more readily available and provided by medical and surgical specialists to primary care physicians at Community Health Centres and by primary care physicians assigned to Community Clinics to the Nurse Practitioners at the Clinics with a view to facilitating the management of patients at these sites whenever it is medically appropriate to do so.

Further, technologies to facilitate decision-making locally should be available at Community Health Centres and Community Clinics. These include:

- Point of care testing for cardiac markers to rule out or rule in heart attack.
- Visual telemedicine links to facilitate local diagnosis and treatment[48].
- Digitized imaging for plain x-rays to facilitate distant interpretation.
- Basic ultrasound equipment in the Community Health Centres and one or more Community Clinics. Such equipment can be operated by local providers.

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[47] This may be less of a problem in Flower's Cove where one of the family physicians has worked for many years and functions quite self-sufficiently.

[48] With the introduction of broadband connectivity throughout the region, GRHSB plans to extend its telemedicine capabilities to the CHCs in Flower's Cove and Roddickton. Videoconferencing is currently available in the CHC in Forteau and the Community Clinics in Labrador.

Recommendations:

It is recommended that:

(84) The AED, Medical Services and the MAC should develop and implement and/or utilize criteria for appropriate patient transfer from CHCs and Clinics to St. Anthony.

(85) The AED, Medical Services should ensure that telephone assistance is readily available and provided by medical and surgical specialists to primary care physicians at Community Health Centres.

(86) The AED, Medical Services should ensure that telephone assistance is readily available and provided by primary care physicians to the Nurse Practitioners at the Clinics.

(87) The AED, Medical Services should ensure that technologies that facilitate local decision-making are available at Community Health Centres and Community Clinics.

7.2 Medical Services

Considerations of service quality, patient safety and cost are compelling reasons to reconsider the model for providing specialty services to residents of the theGrenfell region.

Grenfell Regional Health Services has a long history of providing a very extensive range of medical services through a comprehensive range of medical specialists and family physicians. As a consequence the Region and its population have become very dependent on a model of care that will become increasingly difficult to maintain. The mission spirit that has brought many physicians to Grenfell may be less compelling today than it was twenty or thirty years ago. Physicians are more pragmatic about life style and are more interested in managing stress levels through practice arrangements such as shared call and in fact situations in which they do not have to take any call at all. As medicine becomes increasingly sub-specialized and technology dependent, it will become increasingly difficult to find physicians in specialty medicine and family practice who are prepared to locate for the long term in difficult practice arrangements.

Of perhaps greater importance, the increasing complexity of specialty and subspecialty medicine will make it at minimal risk and provide successful outcomes for their patients. These challenges of rural and remote medicine have long been

recognized by physicians practicing in the Grenfell Region. In his memoirs, Dr. Harry Paddon wrote:

"..obviously no one who wanted to make a successful career for himself by keeping abreast of the march of scientific progress outside would come to Labrador for more than a short period. Any surgeon knows that to do good surgery, with speed, dexterity, confidence and boldness, combined with soundness, constant practice is essential, which is impossible for the pioneer in the back-of-beyond. And if this is true of surgery, what about the almost bewildering advances in many branches of medicine?"[49].

More recently, there is a constantly growing body of evidence that associates better outcomes of complex care with higher volumes for both individual practitioners and for hospitals. In considering the association of high surgical volume to improved outcomes in the context of rural health Williamson et al. concluded that:

"The leaders of small rural hospitals must recognize not only the fiscal and service benefits of surgical services—and these are considerable—but also the potentially adverse effect of low surgical volume on patient outcomes. Policies that encourage the proper training and distribution of surgeons, the retention of basic rural surgical services, and the rational regionalization of complex surgery are likely to enhance the convenience and safety of surgery for rural citizens.[50]"

Thus, GRHSB should consider an alternative physician human resources plan that is less dependent on resident medical subspecialties and is more reliant on family physicians trained in rural medicine along with general surgeons and general internists who are comfortable in working in small call groups providing a wide variety of elective and emergent services. Additionally, GRHSB will need to provide these clinicians with technologies and access to clinical consultation that will facilitate relative self-sufficiency within their clinical practices and an ability to manage a relatively wide variety of medical and surgical cases, while at the same time ensuring that arrangements have been made to ensure referral of both

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[49] "The Labrador Memoir of Dr Harry Paddon 1912-1938"

[50] Williamson, HA Jr., LG Hart, MJ Pirani, RA Rosenblatt (1994). Rural hospital inpatient surgical volume: cutting-edge service or operating on the margin? Journal of Rural Health, 10(1): 16-25, Winter 1994.

emergent and elective cases that are beyond the clinical training and competence of GRHSB medical staff.

There will need to be a trade off between the benefits of providing access to services close to home and the potential increased risk to patient safety and higher cost of doing so. Considerations of quality and cost are compelling reasons to reconsider the model by which specialty services, in particular, are provided to residents of the Grenfell region.

The GRHSB physician human resource plan calls for a total of 36 physicians; but only 27.5 of these postions are currently filled.

The current physician human resource plan calls for a total of 36 physicians[51]. It should be noted that significant volumes of primary care services are provided by nurse practitioners at Community Health Centres and at Community Clinics in outlying centres. Current medical staff complements for the Region are set out in the table below.

With the exception of one family physician that is reimbursed under a Fee-For-Service model, each of the physician specialties and family practice groups described below are salaried. Payment for salaried physicians is based on standards set by the Province of Newfoundland. GRHSB does not have budgetary responsibility for physician salaries.

Exhibit 7.1
Current Physician Human Resources at Grenfell Regional Health Services *

Specialty Type	Location	Current Staffing	Current Budget	Average Years of Service
Anaesthesia	St. Anthony	2.5	3	
Family Practice (FFS)	St. Anthony	1	1	1 - 25 years
Family Practice Salary	St. Anthony	6	8	1 - 25 years; 5 - 4 years or less
	Flower's Cove	2	3	1-10 years; 1-6 month locum
	Forteau	2	2	2 - less than 1 year
	Roddickton	2	3	2 - 2 years
Internal Medicine	St. Anthony	2	3	1 leaving, other likely to leave
Obs and Gynae	St. Anthony	2	2	1 - 5 years; 1 - less than 1 year
Ophthalmology	St. Anthony	0	1	
Paediatrics	St. Anthony	2	2	1 - 7 years; 1 - 4 years
Pathology	St. Anthony	1	1	1 - 9 years
Public Health	St. Anthony	0.5	0	15 years
Psychiatry	St. Anthony	1	2	6+ years
Radiology	St. Anthony	0	1	
General Surgery	St. Anthony	2.5	3	1-25 years; 1-15 years; 1-6 years
Orthopaedic Surgery	St. Anthony	1	1	2 years
Total GRHSB		27.5	36	

* Not including Dentistry

[51] Dentists in St. Anthony and in the Community Health Centres are not included in these numbers.

The proposed restructuring of physician services presented here is based largely on the combination of the following factors:

- risks to quality and patient safety in providing complex services in low volumes;
- safety and relative absence of risk in transferring patients outside the region for care;
- availability and accessibility of such services, in almost every instance, outside the region;;
- the high unit cost of providing low volume services locally; and
- a presumed inability to ensure that sufficient numbers of physicians can be recruited to maintain specialty services in the future.

The proposed restructuring of medical services is discussed in the paragraphs following.

7.2.1 Family Practice

There are currently six salaried family physicians working in St. Anthony, two physicians short of the full complement of eight positions. There are supposed to be three in Flower's Cove and Roddickton and two in Forteau. Although the total number of family physicians in the Region is adequate to meet the demands of patient care, especially considering the volume of primary care services delivered by nursing staff, the distribution of family physicians can be improved to the benefit of primary care services in the community.

- Assuming access to services from the hospital in Blanc Sablon[52], the two family physicians in Forteau can and should be relocated to St. Anthony to increase the number of family physicians practicing in St. Anthony to nine.
- Upon withdrawal of family physicians from Forteau, there should be regularly scheduled visits by family physicians to the Labrador Central Health Facility.
- The number of family physicians currently staffing the Community Health Centres at Roddickton (2) and Flower's Cover (2) should be maintained.

[52] If arrangements cannot be made to access services in Blanc-Sablon, then the Board will need to maintain two family practice physicians in Forteau. However, it should still increase the number of family practice physicians in St. Anthony to nine.

7.2.2 General Internal Medicine

General Internal Medicine is a vital to the viability of health and community services in Grenfell Region.

There are currently two internists in St. Anthony who are practicing general internal medicine. One of these is leaving and it appears that the other may be leaving as well, leaving the community, potentially, without any resident general internists. General internal medicine is a vital resource in this community and all possible efforts must be made to recruit for these positions and to ensure stability over the long term. GRHSB must recruit to ensure that there are at least two and possibly three well-trained specialists in general internal medicine resident in St. Anthony. In particular, given the illness patterns in the community, these specialists should have experience in the treatment of cardiovascular disease, respiratory diseases and diabetes and its related complications.

7.2.3 Surgical Services

The Curtis Memorial Hospital is the regional centre for the geographic area and is expected to provide those necessary surgical services for which there is both sufficient volume and required infrastructure to provide the expected standard of care.

Scope of Surgery

In the past, urology, general, orthopaedic, gynecological, dental, ENT, ophthalmologic, vascular and thoracic surgeries have been performed. Recently, the ophthalmologist has retired and there has been only one each of a thoracic and a vascular procedure performed in the last two years. It is reported that there have been only 19 arthroplasties (8 total knee and 11 total hip arthroplasties) in the past year.

The scope of surgery is variable among the general surgeons. Hospitals should have processes that ensure that surgical procedures conform to current standards of care regardless of where they are being performed. The individuals performing a surgical procedure must be up to date in training and CME in the new techniques. There are many procedures that, in the past, were successful in treating conditions but that have been supplanted by newer techniques that have lower complication rates and better outcomes. Thus the older techniques have become out dated and fall below the current ‘standard of care’.

There does not appear to be a Surgical Quality Assurance Program in GRHSB to monitor the surgical services being provided in relation to current standards of care. Nor is there any monitoring of the outcomes of surgery. All surgical procedures should be monitored for quality of care and outcomes and be measured against standards of care such as

operative procedure times, complications during surgery, post-surgical complications, infection rates, referral to intensive care, length of stay, , and outcomes at a minimum. The surgical services should be achieving current 'standards of care'.

The Chief of Staff and the MAC should develop a list of all the procedures that each surgeon is certified to perform based on training and experience as confirmed through the credentialing/privileging process of the hospital. Privileges should be reassessed regularly by the MAC. This procedure list should be available in the Operating Room suite and should be routinely checked against the surgeons schedule for each day. Also, patient volumes must be sufficient such that all members of the surgical team maintain their competence and their professional qualifications and are familiar with their role within the team for each procedure to be performed at the hospital. The infrastructure for surgery must also be up to current standards of practice. This includes the physical plant, instrumentation and the necessary nursing and rehabilitation services.

The Chief of Staff should ensure an annual report of the surgical activity at the Curtis Hospital is presented to the MAC and compared to volumes of service acceptable to the Royal College of Physicians and Surgeons of Canada and the respective recognized national specialty society specialty e.g.: the Canadian Association of General Surgeons and/or as established by the MAC.

Recommendations:

It is recommended that:

(88) The Chief of Staff and the MAC should develop a list of the procedures that each surgeon has been granted the privilege to perform at the hospital.

(89) The Chief of Staff should ensure that the surgical procedures performed are within the scope of training and the privileges granted to the surgeon performing the surgery.

(90) The Chief of Staff should ensure a surgical quality assurance program is established to measure and monitor operating times, complication rates and lengths of stay.

(91) The Chief of Staff should ensure an annual report of the surgical activity at the Curtis Hospital is presented to the MAC.

7.2.4 General Surgery

The Region has 2.5 FTE general surgeons who provide a full range of services including some orthopaedic surgery and urological surgery. Elective and emergent general surgery is vital resource in St. Anthony and needs to be protected. Future recruitment efforts should be directed toward recruiting generalists who can perform minor paediatric surgery, limited gynecological surgery, non-operative orthopaedics and trauma surgery in order to ensure a continuum of surgical services in the Region. However, to better manage quality and outcomes, elective surgical procedures performed at the Charles S. Curtis Memorial Hospital should be limited to those where there is sufficient volume of cases to ensure safe care and that the hospital has sufficient infrastructure and trained staffing to support.

The General Surgeons, however, will need to be able to stabilize and transfer patients with emergency conditions outside their scope of practice. For example, orthopaedic fractures can be stabilized, splinted/casted and referred out. Compound fractures debrided, stabilized and splinted and transferred out. Open reduction and internal fixation is the standard of care for many fractures and this is not part of the training of a general surgeon. Thoracic and vascular surgery should only be performed for the most emergent cases.

The number of general surgeons practicing in Grenfell should be increased from the current 2.5 to the budgeted level of 3 general surgeons.

7.2.5 Orthopaedic Surgery

The Region has a single, highly skilled orthopaedic surgeon performing relatively few orthopaedic procedures per year (191 in 2003/04) and a very low volume of arthroplasties. Low volumes present potential problems in quality and safety of care. Also it is difficult to maintain continuity of any service requiring emergency response where there is only a single specialist and it is difficult to evaluate quality and currency of care.

Elective orthopaedic procedures can be performed in other centres where there is a sufficient volume of cases to ensure lower risk to patients and more consistently successful

outcomes. General surgeons can stabilize most limb threatening orthopaedic emergencies and, if necessary by family physicians trained in fracture management and the patient can then be safely transferred to a referral centre..

The preponderance of evidence suggests that low volumes of surgeries exposes patients to a higher risk of poor outcomes.

Of significant concern is the low volume of joint replacement procedures. Although these procedures have been performed successfully and apparently without complication, continuing to provide arthroplasties at Curtis Memorial Hospital is questionable. It is reported that the GRHSB surgeon is performing fewer than 20 arthroplasty procedures per year(in 2003/04 he performed only 8 total knee and 11 total hip arthroplasties).

Although research in orthopaedic surgery does not unequivocally conclude that a low volume of surgeries results in poor outcomes, the preponderance of evidence does suggest that low volume exposes patients to a higher risk of poor outcomes. Neither does the literature provide absolute guidance regarding the threshold volumes that would minimize the risk of poor outcomes. However integrating the findings of several studies:

- there appears to be a continuum where higher volume results in better outcomes; and
- a minimum hospital volume of approximately 50 cases annually of each of hip and knee arthroplasty has provided better patient outcomes.

Importantly, research has not focused solely on mortality; there is a very low risk of death from joint replacement surgery. Rather it suggests that low volume increases the risk of post surgical infection, results in higher rates of revision operations, increases serious complications during the index hospitalization, provides less improvement in physical composite scores, lowers patient satisfaction and increases length of stay in hospital as well as resulting in higher in-hospital and 30-day mortality.

Examples of the findings of research into the relationship of volumes and outcomes in hip and knee replacement surgery are presented in the following paragraphs:

- “Maximal improvement in physical composite score was seen in patients who had their surgery performed in institutions that performed greater than 50 knee replacements per year….A lower likelihood of

complications were found with surgeons who performed greater than 20 knee replacements per year[53]"

- "Surgeons need frequent practice to maintain their skills and to minimize the likelihood of complications.[54]"
- The "probability of a likely in-hospital complication declines rapidly from 53 through 107 operations per year, then levels off.[55]"
- "Patients at hospitals that do more operations have better outcomes than patients at hospitals that do fewer.[56]"
- In terms of hospital volume "patients operated at low-volume hospitals (48 TKAs per year) were 2.2 times more likely to require revision within 1 year of their index procedure than high-volume hospitals (> 113 TKAs per yr.).[57]"
- "Surgeon volumes of at least fifteen procedures per year and hospital volumes of at least eighty-five per year were significantly and linearly associated with lower mortality rates[58]"
- "Patients treated at hospitals and by surgeons with higher annual caseloads of primary and revision total hip replacement had lower rates of mortality and of selected complications[59]"
- Although unable to identify a threshold volume that distinguished favorable from poor outcomes, there is "a

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53 Heck, DA, RL Robinson, CM Partridge, RM Lubitz, DA Freund (1998). Patient Outcomes After Knee Replacement. Clinical Orthopaedics and Related Research, 1(356): 93-110, November 1998.

54 Ibid

55 Norton, EC, SA Garfinkel, LJ McQuay, DA Heck, JG Wrights, R Dittus, RM Lubitz (1998). The effect of hospital volume on the in-hospital complications rate in knee replacement patients. Health Services Research, 33(5): 1191-210, December 1998.

56 Ibid

57 Kreder, H.J. et al, "Provider volume and other predictors of outcome after total knee arthroplasty: a population study in Ontario.", Can J Surg.., February 2003 , 46(1):8.

58 Hervey, S. L. et al, "Provider Volume of Total Knee Arthroplasties and Patient Outcomes in the HCUP-Nationwide Inpatient Sample, J Bone Joint Surg Am, September 2003, 85-A(9): 1775-83.

59 Katz, et al, The Journal of Bone and Joint Surgery, Volume 83-A(11), November, 2001.

steady trend across all volume strata toward better outcomes associated with higher volume[60]"

- "The volume of Total Hip Replacements performed by individual surgeons is the most important determinant of orthopaedic complications and should be considered in efforts to improve THR outcomes. [61]"
- "Sixty-nine percent fewer events occurred in hospitals where >100 THRs in Medicare patients were performed annually, compared with hospitals where <26 THRs were performed.[62]"
- "Patients of low-volume surgeons have higher rates of revision THR than patients of high–volume surgeons…[63]"

Absence of laminar flow in the operating room creates unnecessary risk of infection for TKA/THR patients

And, compounding the problem of low volumes, the infrastructure to care for these patients at Curtis Memorial Hospital is inadequate. The most significant deficit is the absence of laminar flow in the operating room that creates unnecessary risk of infection for patients who have these procedures at the hospital.

And, it is expensive; maintaining an inventory of prosthetics, purchasing and maintaining the necessary instruments and equipment, and maintaining staff skill levels is a very high fixed cost for a low volume provider of arthroplasties.

The Region should establish formal consulting relationships between orthopaedic consultants in St. John's and Corner Brook to facilitate consultation and referral for both emergent and elective orthopaedic cases. With these arrangements in place, the orthopaedic surgery service in GRHSB can and should be eliminated.

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60 Ibid

61 Solomon, et. al., "Contribution of hospital characteristics to the volume-outcome relationship: dislocation and infection following total hip replacement surgery", Arthritis & Rheumatism, Volume 46, Issue 9, September, 2002.

62 Ibid.

63 Losina, E, et. al., Arthritis & Rheumatism, Volume 50, Issue 4, April, 2004.

Recommendation:

It is recommended that:

(92) The AED, Medicine and The Chief of Staff should develop arrangements for orthopaedic surgery to be referred to the HCC in St John's and/or WMRH in Corner Brook.

7.2.6 Ophthalmology

There were only 52 ophthalmologic procedures performed in the main OR in the most recent year for which data were kept. And, the majority of these ophthalmologic procedures are elective (e.g., cataract surgery). Emergent problems that require immediate assessment by an ophthalmologist can and should be sent to other centres such as St. John's or Corner Brook. The vacant position for an ophthalmologist should not be filled. However, it is reported that the opthalmologist had an extremely busy outpatient practice, and he undertook regular traveling clinics throughout the Grenfell (and Health Labrador) region. In the first 8 months of 2003/04, it is reported that there were 1,505 outpatient ophthalmology visits or approximately 185 visits per month. A visiting ophthalmologist should be recruited to visit St. Anthony, and smaller communities as necessary, once every month to conduct examinations and perform procedures.

7.2.7 Obstetrics and Gynecology

The Region has only approximately 100 obstetrical deliveries per year and the number is expected to decline due to aging of the population and continued out migration. There are currently two obstetrician gynecologists in St. Anthony and four midwives. Obstetrical activity has dropped dramatically and the small number of deliveries does not justify the current numbers of providers.

The majority of gynecological surgery is elective and patients can be sent to larger centres for more complex gynecological surgery. The gynecologists appear to have low volume clinic practices.

The gynecology and obstetrics specialty service in St. Anthony should be eliminated. Midwives should perform low risk, routine obstetrical deliveries with backup and support from family physicians. As family practice positions become vacant, GRHSB should recruit family physicians that have experience and interest in low risk obstetrics. As required, the

general surgeons can and should perform any unanticipated operative obstetrics such as Caesarean Sections. Higher risk deliveries should be transferred to either Corner Brook or St. John's[64]. Patients requiring elective gynecological surgery should have such procedures performed in other centres such as St. John's or Corner Brook.

7.2.8 Paediatrics

Paediatric care in the community is and should be delivered by primary care providers.

Paediatric care in the community is and should be delivered by primary care providers. Whereas the Charles S. Curtis Memorial Hospital used to have a very large paediatric in-patient population, improvements in public health and changes in disease patterns have resulted in much lower in-patient volumes. Population need and current and projected service volumes no longer warrant local presence of paediatricians. The paediatrics specialty service in GRHSB should be eliminated. Routine paediatrics can be managed by community-based and hospital-based family physicians. More complicated cases should be referred to the HCC in St. John's.

While paediatric emergencies may arise, in most cases, these can be managed by family physicians. Both anaesthetists and family physicians should be able to manage infant and child resuscitation if they are properly trained. To this end, family physicians and anaesthetists should be trained in Paediatric Advanced Life Support, including neonatal resuscitation[65]. And, formal consulting relationships and ideally audiovisual linkages must be established between paediatric services in St. Johns and St. Anthony in order to provide immediate and reliable consultation services.

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[64] Research and professional opinion are clear that high risk deliveries should not be provided in low volume centres. And, if feasible, even low risk deliveries should be provided in higher volume centres. One study found that the risk of neonatal death increased as the number of deliveries in an institution decreased below 2,000 a year. In institutions with less than 100 births/year the risk doubled. ("Relation between size of delivery unit and neontal death in low risk deliveries: population based study." Dag Moster, Rolv Terje Lie, Trond Markestad. Arch Dis Child Fetal Neontal Ed 1999;80:F221-F225) Another study found that for low-risk births, early-neonatal death is substantially higher in very small delivery units (<500 births/year) than in larger delivery units (>1500 births/year). ("Are we regionalized enough? Early-neonatal deaths in low-risk births by the size of delivery units in Hesse, Germany 1990-1999." Heller G, Richardson DK, Schnell R, Misselwitz B, Kunzel W, Schmidt S. Int J Epidemiol. 2002 Oct;31(5):1069-70.)

[65] However reducing the volume of obstetrical care will reduce the incidence of these urgent paediatric situations.

7.2.9 Anaesthesia

Future recruitment should focus on anaesthetists who have no limitations on their practice.

Anaesthesia is a vital medical resource in GRHSB. There are currently 2.5 anaesthetists. One of the anaesthetists is specialty trained. The others are family physician anaesthetists who have limited licensure with respect to the types of patients they can treat. The Region needs to ensure that this service is maintained at least at its current service and staffing level. In case of retirement or departure, future recruitment initiatives should be directed toward recruiting Royal College certified anaesthetists who have no limitations on their license to practice this specialty.

7.2.10 Dentistry

There are very high case rates of dental pathology in the community.

There are very high case rates of dental pathology in the community for a number of different reasons. Dental care for the young population is essential since it appears that there is a major demand for rescue of neglected dental hygiene that leads to nutritional and other health problems.

There must continue to be local, publicly funded dental services accessible in the community. Primary prevention will continue to be an important requirement for dentists in the Region. Although, given the high unemployment rates in the community most patients do not have private third-party insurance coverage, wherever possible, private insurance should be used to pay for dental services, whether these services are offered in clinic or in the operating room. Dental services should be maintained at current numbers in the GRHSB.

7.2.11 Psychiatry

Community-based mental health services should be augmented.

GRHSB has two budgeted staff psychiatrist positions, but only one position is currently staffed. Although it was reported that there are significant mental health problems in the region, none of the interviews identified a current gap in psychiatry services. It appears that mental health services are effectively organized, managed and staffed within the Region to respond to the needs of the population. However, it does not appear that there is a strong need for a full-time, resident psychiatrist in the region. Community mental health services, if actively supported by a non-resident psychiatrist should be sufficient to continue to address and meet the mental health needs of the population. However, for this model to be successful, there must be formal relationships with psychiatry services in St. Johns to facilitate immediate consultation for purposes of managing psychiatric emergencies and to provide support for

the community mental health services of the Board. Arrangements will need to be made to establish psychiatry clinics in St. Anthony once every four to eight weeks, or more often if necessary. Community-based mental health services should be augmented to enhance the delivery of community-based mental health services. With these arrangements, there should be no need to have a psychiatrist located in the region.

7.2.12 Pathology

GRHSB has a full service laboratory and anatomical pathology service at the present time. The hospital has a dedicated pathologist who also functions as the medical director. It is reported that the Pathologist also interprets the majority of surgical specimens for the Health Labrador Board (approximately 800 specimens in 2003/04).

It is understood that the number of quick sections performed in the Hospital is relatively low. Furthermore, assuming proper specimen collection and preparation, there are technologies that can be used to facilitate remote interpretation of pathological specimens. Properly trained technical staff can provide biochemistry, hematology and microbiology and blood banking services. The continued need for a pathologist in a small community should be reviewed periodically. However, based on our current review of medical services and laboratory services and the proposed rationalization of services, we recommend that for the medium term the Region should continue to employ a Pathologist to provide both clinical and administrative services.

7.2.13 Radiology

There is a General Radiology, CAT Scanner, mammogram, ultrasound and invasive radiography in St. Anthony. However, there has been no resident radiologist in St. Anthony for approximately two years. Digital images are transmitted to St. John's for interpretation, so a radiologist is not required for this purpose. Special tests such as Barium enema, upper GI and follow through, myelograms etc are currently performed by a locum radiologist from HCCSJ who visits St. Anthony every 6 weeks. GRHS physicians are

administering contrast media[66]. Technical staff may perform various other modalities with images digitized and transmitted to St. John's for interpretations. Although there may be some delays in the interpretation of images in St. John's, these issues can be addressed and resolved. Family physicians should be confident in reviewing and interpreting plain x-rays. Primary care physicians working in an acute care setting should be skilled at reading chest and skeletal x-rays, for example. But, even so, all images should be digitized and sent to radiologists in other centres for interpretation.

If there is insufficient capacity for this service in Newfoundland, relationships may be struck with privately based or hospital based radiologists in other centres such as Halifax or Toronto. As a result, we do not feel that the vacant radiology position in GRHSB needs to be filled.

7.2.14 Medical Students

The problem of recruitment of physicians to a rural area like St Anthony is a chronic problem. Part of the problem is that most medical students are not exposed to this type of practice early enough in their career. These individuals are typically very keen to learn and have been exposed to best practices at the teaching units of their medical school. Therefore, it would seem that offering a rotation to 3rd year medical students to come to places like St Anthony would be synergistic. The new knowledge gained by the medical students at medical school would be brought to St. Anthony and the students would be exposed to the opportunities of a rural practice.

Recommendation:

It is recommended that:

(93) The Chief of Staff and the Executive Director should work with Memorial University to provide St Anthony as an elective rotation for 3rd year medical students.

[66] It is reported that GRHSB "physicians have very reluctantly agreed to administer the injections, in order to save the patient from having to travel to another centre. The reasons for their reluctance are financial and relating to scope of practice." The region or the province should address any financial issues. Scope of practice issues should be discussed and addressed as part of the annual review of privileges for the medical staff practicing at Curtis Hospital.

7.2.15 Proposed Physician Complement

The following table presents our proposals for the future complement of physicians that should be maintained by the GRHSB to respond to the medical needs of the local population[67]. The Board will need to make arrangements with a secondary centre and a tertiary centre to accept patient transfers for both elective and emergent care; and arrangement with individual or groups of specialists and sub-specialists to provide visiting clinical services and telemedicine consultation support to GRHSB physicians.

Changing the mix of physician human resources in GRHSB will not be without considerable challenges for patients and physicians. Transition plans will need to be developed that ensure that primary care physicians are skilled in managing paediatric, obstetrical and orthopaedic conditions that they are now able to refer to specialists. The community is also used to having a wide range of specialty services available locally and can be expected to resist a change to the current mix of specialties and primary care[68]. However, in our opinion, best practice suggests that low volume specialty services should be consolidated to reduce risk, achieve higher quality outcomes and to take advantage of economies of scale.

[67] If arrangements are not made to access services from the hospital in Quebec, then the region will need to provide an additional 2 Family Practice physicians in Forteau.

[68] Finlayson, Samuel R. G., et. al., Patient Preferences for Location of Care: Implications for Regionalization

Exhibit 7.2
Proposed Physician Staffing

Specialty Type	Location	Proposed Number of Physicians	Current Staffing	Change from Current	Budgeted Staffing	Change from Budget
Anaesthesia	St. Anthony	3.0	2.5	0.5	3	0.0
Family Practice (FFS)	St. Anthony	1.0	1.0	0.0	1	0.0
Family Practice Salary	St. Anthony	8.0	6.0	2.0	8	0.0
	Flower's Cove	2.0	2.0	0.0	3	-1.0
	Forteau	0.0	2.0	-2.0	2	-2.0
	Roddickton	2.0	2.0	0.0	3	-1.0
Internal Medicine	St. Anthony	3.0	2.0	1.0	3	0.0
Obstetrics and Gynecology	St. Anthony	0.0	2.0	-2.0	2	-2.0
Ophthalmology	St. Anthony	0.0	0.0	0.0	1	-1.0
Paediatrics	St. Anthony	0.0	2.0	-2.0	2	-2.0
Pathology	St. Anthony	1.0	1.0	0.0	1	0.0
Public Health	St. Anthony	1.0	0.5	0.5	0	1.0
Psychiatry	St. Anthony	0.0	1.0	-1.0	2	-2.0
Radiology	St. Anthony	0.0	0.0	0.0	1	-1.0
General Surgery	St. Anthony	3.0	2.5	0.5	3	0.0
Orthopaedic Surgery	St. Anthony	0.0	1.0	-1.0	1	-1.0
Total GRHSB		**24.0**	**27.5**	**-3.5**	**36**	**-12.0**

Recommendations:

It is recommended that:

(94) The GRHSB should develop a role statement for medical services that provides for Family Practice and specialty care in Internal Medicine, General Surgery, Anaesthesia, Pathology and Public Health.

(95) The Chief of Staff should ensure that surgical services requiring an anaesthetic be confined to general surgery, dentistry and minor gynecological procedures.

7.3 Cost Savings in Physician Payments Associated with Realignment of Services

We propose a net reduction of 3.5 physicians from the in current number physicians practicing in GRHSB. This is made up of an increase of 0.5 Public Health, 0.5 Anaesthetists, 0.5 General Surgeons and 1 Internist and a decrease of 1 Psychiatrist, 2 Paediatricians, 2 Obstetrician/Gynaecologists and 1 Orthopaedic Surgeon. We estimate that this will provide a direct cost savings of approximately $700,000 from the current spending for physician services in Grenfell based on the salary grid for salaried physicians in Newfoundland. Any

saving associated with such changes in physician human resources will not accrue directly to the region, but will accrue to the Newfoundland health system as a whole.

There are additional payments to specialists for on call and other services that increase the total amount paid to each specialist. These costs and potential savings are not included in this savings estimate.

It should be noted, that although savings will accrue to the province and the GRHSB by reducing the number of physicians in St. Anthony, patients will need to absorb more costs in seeking and receiving care away from their home community.

8.0 Summary of Savings

This review has identified $3.66 million in savings opportunities.

This review has identified many opportunities to improve the quality and effectiveness of services and to achieve savings through changes to operating practice. The identified savings opportunities amount to $3.66 million in total.

Reduction in the number of physicians will provide savings to the Department of $700,000.

Some of the savings accrue to the Newfoundland health system as a whole. Specifically, reduction in the number of salaried physicians will result in approximately $700,000 in annual savings.

Savings opportunities have been identified that would reduce the operating cost of GRHSB by $2.82 million.

Reducing acute care admissions will save $850,000

- Implementation of recommendations relating to reduction in acute care admissions would generate direct cost savings of approximately $850,000[69].

Improving efficiency will save $1,268,000

- Implementation of recommendations relating to achievement of improved clinical and operational efficiency could lead to annual savings of $1,268,785:
  - Improve Clinical Efficiency $435,785
  - Improve Operating Efficiency $572,000
  - Reduce Overtime & Call-back $261,000

Consolidation of clinics will save $700,000

- Consolidation of Southeast Labrador clinics into a single facility will provide approximately $700,000 in annual savings.

All of these savings can be realized within 3 years of implementation of the recommended changes in the configuration and operating characteristics of the services offered by the Board[70].

Reducing 'Avoidable Hospitalizations' will save $147,000 in longer term

Implementation of the Primary Healthcare Project should lead to reduction in use of acute care hospitals for 'avoidable hospitalization conditions'. Reduction in Avoidable Hospitalizations to 30% above provincial average, in the longer term, should provide an additional $147,000 in savings.

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[69] Implementation of the Primary Healthcare Project should lead to reduction in use of acute care hospitals for 'avoidable hospitalization conditions'. Reduction in Avoidable Hospitalizations to 30% above provincial average should provide an additional $147,000 in savings.

[70] Some of these improvements may require one-time implementation costs that have not been estimated in this review.

If GRHSB were to achieve these savings it would be able to resolve its fiscal problems, renew its facilities and enhance its services.

If GRHSB were to achieve these $2.82 million in operating savings it would be able to resolve its long-standing fiscal problems and begin to focus on renewing its facilities and enhancing the services that it provides to the population of the Grenfell region:

- The annual operating deficit would be converted to an annual operating surplus of about $2,038,785 (based on the reported operating deficit of $780,000 in 2003/04)
- The accumulated operating deficit of $3.3 million could be repaid easily within ten years as required by the DOHCS
- There would be internally generated funds available for reinvestment to both:
  - improve services to the community and
  - support achievement of even greater efficiencies.

Several areas for reinvestment have been suggested in this report, including:

- development of an enhanced Community Clinic in Southeast Labrador.
- replacement/updating of lighting, anesthetic machines and ventilation to support basic general surgery
- pharmacy information system to improve efficiency and automate manual tasks
- implementation of an electronic endorsement system
- implementing the Meditech Patient Results Inquiry (PCI) module
- combining the admitting and switchboard functions so as to incorporate all necessary 24 hour administrative functions
- ensuring that network infrastructure and security is maintained through a dedicated network resource.

GRHSB should focus its initial cost reduction efforts on those initiatives that do not require significant prerequisite equipment acquisition or facility development. Once it has eliminated its operating deficit, the Board should be able to accumulate sufficient surplus funds to allow it proceed with these additional, more capital intensive, cost-saving initiatives.

Appendix:

Listing of Recommendations

Recommendations

1.0 Background & Objectives

No Recommendations

2.0 Financial Position

No Recommendations

3.0 Governance and Management

3.3 Governance Structures and Processes

(1) The Minister of Health and Community Services should ensure that appointees to the GRHSB are aware that they are appointed to reflect the interests of, not represent or advocate for their home communities.

(2) The Board of GRHSB should modify the orientation process for new Board members so that they are clearly made aware of their responsibilities to the Board.

(3) The Board should develop and implement a formal, comprehensive program for the orientation of Board members.

(4) The Board should make participation in the Board orientation program mandatory for all Board members.

(5) The Board should extend the Board evaluation process to include input from stakeholders as well as Board Members.

(6) The Board should establish a policy that opens meetings of the Board of GRHSB and of its committees to the public.

(7) The Board should establish a clear policy that articulates a narrowly defined set of subject matters that will be discussed in camera by the Board and its committees.

(8) The Board Chair should direct management to enhance the information supplied to the Board

related to the Board's critical governance responsibilities.

(9) The Board should draw upon its Strategic and Operational plans to formally articulate annual objectives for the organization.

(10) The Board should formally articulate parameters for the annual operating plan and budget.

(11) The Board should take responsibility for the financial health of the Region by insisting that management aggressively pursue opportunities to minimize costs and maximize non-government revenues.

(12) The Board should take more responsibility for the financial health of the Region by implementing reasonable service restructuring to achieve necessary cost savings.

(13) The AED, Finance and Administration should further expand and enhance financial and statistical reporting to the Board to include more comprehensive analyses of variances from plan that provide not only the cause of the variance but also potential corrective actions.

(14) The AED, Finance and Administration should expand financial reporting to the Board to include reporting of the clinical and operational performance underlying the region's financial performance.

(15) The AED, Finance and Administration should further expand and enhance statistical performance reporting to the Board to provide comparisons with similar organizations in Canada.

(16) The Board should direct that management propose, develop and implement a Board quality monitoring system incorporating a set of critical indicators of quality of care for the Region.

(17) The Board should instruct Management to develop a set of sentinel or summary indicators related to the hospitals mission, vision, values and strategic goals.

(18) The Board should set annual performance expectations and objectives for the Executive

Director that incorporate the objectives for the organization.

3.4 Management Structures and Processes

(19) The Executive Director should restructure management to eliminate the AED, Nursing Service position and create positions of AED, Acute Care Nursing and AED, District and Continuing Care Nursing.

(20) The Board should revise the bylaws to provide for the appointment of Assistant Executive Directors independently by the Executive Director.

(21) The Chair of the Board should establish a process for setting annual objectives for the organization.

(22) The Executive Director and AED Finance should modify the operational planning and budgeting process to more formally and explicitly include consideration of patient volume, content of care, departmental workload and productivity targets.

(23) The Executive Director and AED, Finance and Administration should introduce a Quarterly Review Process to provide for better performance management and expenditure control.

(24) The AED Finance & Administration should extend management reporting to include measures that will better support identification and explanation of variance from plans.

(25) The AED Finance & Administration should ensure that all analysis of variance includes consideration of corrective action and/or the implications of the variance for year-end departmental, program and regional results.

(26) The AED, Human Resources should advocate for and seek changes to the collective agreement provisions governing sick leave and personal paid leave provisions for union employees.

(27) The AED, Human Resources should develop and implement an Early Intervention Management program to reduce employee absence due to illness and/or accident.

3.5 Medical Staff Involvement in Governance & Management

(28) The AED Medical Services should make arrangements to facilitate attendance of Medical Staff Committee meetings by each member of the medical staff.

(29) The Medical Advisory Committee should develop and deploy a process for reviewing and addressing quality of care issues in all sites, including the Community Health Centres.

(30) The Board should ensure that community-based nursing, including midwives have representation on the MAC.

(31) The AED, Medical Services should ensure that medical staff leaders attend educational programs to enhance their leadership skills.

(32) The AED, Medical Services should ensure that utilization data are collected, disseminated to and used by the medical staff for performance monitoring and improvement.

(33) The AED, Medical services should develop a physician human resources plan.

(34) The AED, Medical Services should modify the physician orientation program to ensure that it meets the particular needs of new, less experienced medical staff being recruited to the region.

(35) The AED, Medical Services and the MAC should ensure that all medical staff working in direct patient care in the region achieve certification in Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support (ATLS).

4.0 Populations, Programs and Services

(36) The Board should establish, in the GRHSB Strategic and Operational Plan, a target for the utilization of acute care services by Grenfell residents to no more than 30% above the provincial average by 2006.

(37) The GRHSB MAC should coordinate a review of appropriateness of acute care gynaecology services.

5.0 Clinical Efficiency Analysis

(38) The Board of the Grenfell Regional Health Services Board should establish a target for reduction of use of inpatient days at St. Anthony Hospital based on the clinical efficiency analyses conducted during the Best Practices Review.

6.0 Operational Analyses

6.1 Charles S. Curtis Memorial Hospital

(39) The Executive Director should provide for replacement/updating of lighting, anesthetic machines and ventilation to support basic general surgery.

(40) The AED Nursing Acute Care should establish an unregulated support staff position to support nursing in the ORs.

(41) The AED Nursing Acute Care should reduce staffing to achieve a targeted productivity for the OR/PARR of 6.54 worked hours per case.

(42) The AED Nursing Acute Care should reduce staffing of the ICU to minimum staffing levels of 2 nurses per shift.

(43) The AED Nursing Acute Care should adjust staffing for the ICU in response to fluctuating census and workload to ensure that its staffing is never less than 18.15 worked hours per patient day.

(44) The Executive Director should negotiate preferred rates with local facilities for the housing of patients that no longer require in-patient hospital care but cannot return to their home community.

(45) The AED Nursing Acute Care should reduce staffing of the birthing program to minimum staffing levels of 2 nurses per shift.

(46) The AED Nursing Acute Care should adjust staffing for the birthing program in response to fluctuating census and workload to ensure that its staffing is never less than 8.2 worked hours per patient day.

(47) The AED of Medical Services and the Manager of Pharmacy should establish a formal drug review system to improve control over drug usage.

(48) The Manager of Pharmacy should implement a single unit-dose distribution system across the organization.

(49) The Manager of Pharmacy should implement a pharmacy information system to improve efficiency and automate manual tasks.

(50) The AED of Medical Services and the Manager of Pharmacy should develop and implement a policy regarding patients use of own drugs while admitted to the hospital.

(51) The Manager of Pharmacy should ensure that hospital charge retail prices when selling drugs to the general public.

(52) The AED Medical Service should undertake a review of all laboratory operations to determine the test mix that continues to be required to be done within the region.

(53) The GRHSB should develop a core laboratory service at the Curtis Memorial Hospital site.

(54) The AED Medical Service should proceed with the implementation of the electronic endorsement system.

(55) The AED Medical Service should establish a relationship with a remote Radiologist group to provide sufficient service to obviate the need for a Radiologist position in St. Anthony.

(56) The AED Finance and Administration should establish a Health Records net operating cost performance target equivalent to 2.25% of the total direct care net operating costs.

(57) The AED Medical Services, in collaboration with the Health Records Manager should implement the Meditech Patient Results Inquiry (PCI) module.

(58) The AED Finance and Administration should establish a combined admitting and switchboard

function appropriately planned to incorporate all necessary 24 hour administrative functions.

(59) The AED Finance and Administration should review the business case associated with modernizing kitchen facilities to more efficient current standards, such as a cook-chill operations.

(60) The AED Finance and Administration should establish a target of $33.00 per patient day for the net cost per patient day for food services.

6.2 John M. Gray Centre and Complex

No recommendations

6.3 Health Centres

No recommendations

6.4 Nursing Stations/Clinics

(61) The Executive Director, working with the Department of Health, should consolidate the clinic activity of Southeast Labrador on one site.

6.5 Ambulance Operations

(62) The Executive Director should work with the Director of Emergency Health Services, Department of Health and Community Services to amalgamate and consolidate all land ambulance dispatch activities in the Grenfell Region

(63) The Executive Director should work with the Director of Emergency Health Services, Department of Health and Community Services to consolidate the land ambulance dispatch activities with the air ambulance dispatch operation in the Grenfell Region.

(64) The Executive Director should work with the Director of Emergency Health Services, Department of Health and Community Services to establish a '911' service in the Grenfell Region.

(65) The GRHSB should collaborate with the Department of Health and Community Services and the Provincial Department of Works, Services and Transportation to consolidate all air dispatch operations in the province at a single site.

(66) The Director of Air Operations / Chief Pilot should implement a system of categorizing and establishing priorities for Medevac requests.

(67) The Director of Air Operations / Chief Pilot should seek approval from the Department of Health and Community services to increase the patient share cost of air transportation from $40 to $50.

(68) The Director of Air Operations / Chief Pilot should seek approval from the Department of Health and Community services to implement a $25 charge for personal escorts of patients using air transportation.

6.6 Community Services

No recommendations

6.7 Overarching Operational Issues for Nursing Services

(69) AED Nursing should develop and implement a new model of nursing care delivery for LTC that includes RN and LPN providers working to their full scope of practice and that introduces the role of PCA in appropriate settings.

(70) AED Nursing should incorporate a 60:40 ratio of regulated:unregulated nursing staff within the new model for LTC nursing..

(71) The Department of Health should ensure a process to review transport/escort guidelines such that patient need will determine who accompanies the patient.

(72) The Chief of Staff and the AED Acute Care Nursing should establish a process to develop guidelines for transport and escort for patients by need and acuity.

(73) The Executive Director should establish a target for call-back expense of no more than 0.9% of total labour costs.

(74) The Executive Director should establish a target for overtime expense of no more than 1.85% of total labour costs.

6.8 Materials Management

No recommendations

6.9 Facilities Management

(75) The Facilities Manager should investigate the potential for group purchasing of preventative maintenance contracts for specialized equipment (Diagnostic Imaging, Laboratories).

(76) The Facilities Manager should investigate the potential to cost-share or otherwise partner in the provision of all facilities services between Forteau and Blanc Sablon.

(77) The Facilities Manager should investigate avenues to improve economies of scale in the laundry operation.

(78) The Facilities Manager should establish a performance target for the cost of laundry services at $2.23/kg of laundry.

6.10 Information Technology

(79) The Information System Manager and the IT Steering Committee work together to develop an Information Technology Strategic Plan for GRHSB.

(80) The Information System Manager should ensure that network infrastructure and security is upgraded and maintained through a dedicated network resource.

6.11 Financial Services

(81) The AED Finance and Administration should establish a Financial Services performance target of 2.0% of the total direct care net operating costs for the net operating cost of the department.

7.0 Opportunities for Service Rationalization and Realignment

(82) The Executive Director should investigate the feasibility of directing emergent and urgent patients from Forteau to the hospital in Blanc Sablon.

(83) The Executive Director should seek to restructure the services of the Labrador South Health Centre in Forteau to focus on Nurse Practitioner services supported by clinics offered by visiting medical staff.

(84) The AED, Medical Services and the MAC should develop and implement and/or utilize criteria for

appropriate patient transfer from CHCs and Clinics to St. Anthony.

(85) The AED, Medical Services should ensure that telephone assistance is readily available and provided by medical and surgical specialists to primary care physicians at Community Health Centres.

(86) The AED, Medical Services should ensure that telephone assistance is readily available and provided by primary care physicians to the Nurse Practitioners at the Clinics.

(87) The AED, Medical Services should ensure that technologies that facilitate local decision-making are available at Community Health Centres and Community Clinics.

(88) The Chief of Staff and the MAC should develop a list of the procedures that each surgeon has been granted the privilege to perform at the hospital.

(89) The Chief of Staff should ensure that the surgical procedures performed are within the scope of training and the privileges granted to the surgeon performing the surgery.

(90) The Chief of Staff should ensure a surgical quality assurance program is established to measure and monitor operating times, complication rates and lengths of stay.

(91) The Chief of Staff should ensure an annual report of the surgical activity at the Curtis Hospital is presented to the MAC.

(92) The AED, Medicine and The Chief of Staff should develop arrangements for orthopaedic surgery to be referred to the HCC in St John's and/or WMRH in Corner Brook.

(93) The Chief of Staff and the Executive Director should work with Memorial University to provide St Anthony as an elective rotation for 3rd year medical students.

(94) The GRHSB should develop a role statement for medical services that provides for Family Practice

and specialty care in Internal Medicine, General Surgery, Anaesthesia, Pathology and Public Health.

(95) The Chief of Staff should ensure that surgical services requiring an anaesthetic be confined to general surgery, dentistry and minor gynecological procedures.

8.0 Summary of Savings

No Recommendations