



# *Building a Healthy Tomorrow<sup>TM</sup>*



## ***MEDICAL EDUCATION EXPANSION PLANNING***

**January 3, 2008 Update for  
Strategic Resource Management Committee**

### **OVERVIEW**

#### **MEDICAL EDUCATION EXPANSION**

- (a) Introduction
- (b) MD Program – Medical Student Enrollment Increase
- (c) MD Program – Curriculum Renewal
- (d) Residency Training Program Increase
- (e) Faculty and Staff Increase
- (f) NL Medical Education Network
- (g) Medical Education Facility Expansion
- (h) Information Technology
- (i) Funding

#### **HEALTH RESEARCH EXPANSION**

## **OVERVIEW**

### **Interview snip with Dean James Rourke**

Memorial's Faculty of Medicine will experience tremendous growth in the next decade, both in education and research.

Premier Danny Williams' Blueprint 2007 commits to a \$15 million expansion for medical education faculty and \$11.75 million in new annual operational costs.

"This will allow us to have the faculty and staff consistent for modern education facilities," said Dr. James Rourke, dean of medicine. "We will admit more students from Newfoundland and Labrador this coming year and increase total enrolment from the current 60 to 78 over five years – a 30 per cent overall increase. Residency training program positions will also need to be increased."

The incoming class for 2008-09 will increase from 60 to 64 and 46 of those seats will be for students from Newfoundland and Labrador – an increase of six. The governments of New Brunswick and PEI purchase 12 seats and the remaining are open to other Canadian students.

Dr. Rourke said most Memorial medical school graduates do stay to practice in this province. Between 2002-06 about 144 MUN graduates went into practice here, according to data from the College of Physicians of Newfoundland and Labrador. This is an average of 29 new doctors in practice in the province per year or 72.5 per cent of the number of Newfoundland and Labrador students per class.

Dr. Rourke said while the province is facing a doctor shortage, that is a national problem related to a highly competitive market. That is why the medical school wants to expand the class size to educate more students from Newfoundland and Labrador who are more likely to stay in the province. An increase in research space is also being planned.

"The availability of adequate space is a critical issue for our faculty and also for the School of Nursing and School of Pharmacy," said Dr. Rourke. "Our faculty has doubled its research funding from \$7 million in 2000-01 to \$13.8 million in 2005-06. There is potential to double this again in the next five years, but this can only happen if new research space is built."

The Faculty of Medicine is preparing a business plan for a Newfoundland and Labrador Health Research Complex to operate as a centre of excellence for health research comprised of proven and innovative interdisciplinary research teams. "This new building will expand research activity and enable updating of research facilities within the Health Sciences Centre to be used for leading edge research," said Dr. Rourke.

The Faculty of Medicine is about to undergo an exciting medical education and research expansion. This has emerged directly from its focused inclusive strategic planning process, is aligned with Memorial University's strategic planning pillars, and responds the Province's identified needs, priorities and strategies.

Memorial University's Faculty of Medicine was established in 1967 with the first graduating MDs in 1973 and celebrated its 40<sup>th</sup> Anniversary in 2007. (Please visit the Archives virtual display – [www.med.mun.ca/earlydays](http://www.med.mun.ca/earlydays)). The main construction of the Health Science Centre was completed in 1978 and was designed for a medical student class size of about 60. Since that time, the major additions to the Health Science Centre site have included the School of Nursing and Telemedicine wing, the H. Bliss Cancer Treatment Centre, and most recently, the Janeway Children's and Women's Hospital. The medical education and research facilities, however, have not seen any significant expansion over this time period.

As a small community-based, regionally-focused medical school, Memorial's Faculty of Medicine has been remarkably successful in its contribution to the region. (Please see summary poster: "*How do medical schools contribute to their regions?*" [www.med.mun.ca/medicine/pdf/MedicalSchoolsContributeToRegions.pdf](http://www.med.mun.ca/medicine/pdf/MedicalSchoolsContributeToRegions.pdf)).

Memorial MD graduates comprise over 50% of the fully licensed physicians in Newfoundland and Labrador. They are among the top in the Country in objective national exam measures. The MD Education Program, the Residency Training Programs, the Professional Development/Continuing Medical Education Program are all fully accredited.

Medical research ranges from biomedical science to clinical and applied health research with particular strengths in genetics and genomics relating to Newfoundland and Labrador's unique founder population. External funding for medical research has doubled over the past five years to a total of \$13.8 million dollars in 2005-6. The number of graduate students in Masters and PhD research programs has increased to approximately 200 students.

The Faculty of Medicine has undertaken a detailed and inclusive strategic planning process. The highlight of that was the retreat held November 23<sup>rd</sup> and 24<sup>th</sup>, 2006 that

engaged 147 faculty and senior staff. Through the strategic planning process, the Faculty of Medicine has identified key program plan objectives which include: MD program curriculum renewal and increased medical student and resident enrolment to best meet the needs of the Province; and expansion of leading medical/health research especially in areas related to NL's unique population characteristics/needs in collaboration with our research partners. Core strategies include expanding facilities and infrastructure to support the planned education and research growth. (Please see Strategic Planning Executive Summary.

[www.med.mun.ca/medicine/retreat2006/ExecutiveSummary-StrategicPlan-v2.pdf](http://www.med.mun.ca/medicine/retreat2006/ExecutiveSummary-StrategicPlan-v2.pdf)).

Concurrently, Memorial University has completed its broader strategic plan. The five pillars of the University's strategic plan are: 1. Students; 2. Research, Creative Activity and Scholarship; 3. Needs of the Province; 4. Conditions for Success; and 5. Institutional Responsibility. (Please see: *Summary 2007-2012 – Five Pillars Memorial University Strategic Plan* at pages 29-35 of the President's Report 2007 -

[www.mun.ca/2007report/pdf/highlights.pdf](http://www.mun.ca/2007report/pdf/highlights.pdf)). The Faculty of Medicine's focused strategic plan and expansion planning fits hand in hand with Memorial University's five pillars.

Provincial physician resources' planning has identified the need for an expanded, stable physician resource to meet the unique needs of the Province. Challenges include a very distributed and aging Newfoundland and Labrador population, a shortage of qualified medical graduates across Canada and a highly competitive marketplace for physicians. Physicians who have graduated from the Memorial MD program or residency training program who establish practice in Newfoundland, not only have a very appropriate context-based and high-quality medical education, they have been shown to have very high retention rates. Increasing the number of these physicians in Newfoundland and Labrador is a vital component of the physician resource planning for the Province.

The Progressive Conservative Government in its Blueprint indicated a priority commitment to “- through a \$15-million expansion and \$11.75 million in new annual operational costs, expand the number of **spaces for Newfoundland and Labrador medical students** at the Memorial University Medical School by 10% in the coming year and 30% within the next five years, bringing enrolment from the current 60 up to 66 next year and to 78 within five years.” ([www.pcparty.nf.net/blueprint2007.pdf](http://www.pcparty.nf.net/blueprint2007.pdf) page 33.)

In order to meet the needs of the Province for more physicians and to build a stronger medical/health research to contribute to both the health and the economy of the Province, the Faculty of Medicine will need to expand its medical education and health research facilities, faculty and staff. The following provides the current update on the planning progress.

## **MEDICAL EDUCATION EXPANSION**

### **(a) Introduction**

In 2007, Memorial graduates made up 478 of 873 (54.8% of fully licensed Newfoundland and Labrador MDs. From 2002 to 2006, 144 MUN MD graduates established practice in Newfoundland. This represented an average of 29 per year (72.5% of the approximately 40 medical students from Newfoundland and Labrador who graduate each year). Over 80% of Memorial MD graduates who become licensed to practice in Medicine in Newfoundland remain after five years. Of MD graduates of all Canadian medical schools, Memorial has the highest percent who go into rural practice and the second lowest percent of graduates who have moved to the United States to practice. (Please see: *How do medical schools contribute to their regions?*

[www.med.mun.ca/medicine/pdf/MedicalSchoolsContributeToRegions.pdf](http://www.med.mun.ca/medicine/pdf/MedicalSchoolsContributeToRegions.pdf)).

From detailed analysis of MUN MD graduates from 1973 to 1998, the highest percent of practice in Newfoundland were those students who were from rural Newfoundland who did their MD at Memorial and postgraduate training at Memorial. 55.5% of those were still active in practice in Newfoundland.

Newfoundland and Labrador has relied on a small number of graduates of other Canadian medical schools and a large number of International graduates. It will become even more difficult for Newfoundland and Labrador to recruit and retain other Canadian medical graduates and appropriately trained and qualified International medical graduates given the current and future market supply and demand forces in Canada. (For more details, see *July, August 2007 Overview: The need to support the expansion of Memorial University's Faculty of Medicine*)

All other faculties of medicine in Canada have expanded or are about to expand to meet their provincial needs. Canada's total medical school enrolment has increased from a low of 1563 in 1997 to 2458 in year 2006 to a projected 3000 in 2010. Memorial's medical school current enrolment of 60 has not really increased from the 58 admitted in 1976. There is a clear need to increase enrolment to meet the current and future provincial needs.

While recognizing that there will always be the need and benefit of having physician graduates from other Canadian and International medical schools to practice in Newfoundland and Labrador, the goal is to work towards a stable physician supply with an emphasis on self-sufficiency. Considerable work and calculations were done to attempt to establish the optimal size and makeup of the medical school enrollment expansion to best meet the Province's needs while also considering medical education capacity factors. An increase of 20 students from Newfoundland and Labrador to be admitted to the Faculty of Medicine was found to be optimal [calculations and assumptions can be found in the *Overview of the need to support the expansion of Memorial University's Faculty of Medicine*]

A significant increase in enrolment cannot take place until the medical educational facilities are expanded and additional faculty and staff is hired.

**(b) MD Program – Medical Student Enrolment Increase**

The current medical school enrolment is 60 students per year; 40 of those are reserved for students from Newfoundland and Labrador, while 12 are under contract (New Brunswick: 10 and PEI: 2) with 8 students from the rest of Canada/International. It is important that a few places remain for students from the rest of Canada as some students from Newfoundland and Labrador are accepted each year into medical schools in other parts of Canada. In 2009, the 10 contract positions funded by New Brunswick will be reduced to six whereas the two funded contract positions from PEI will increase to four in 2009 and six in 2011 thus maintaining the total contract positions for New Brunswick and PEI at 12.

For the admission September, 2008, the total projected enrolment will be increased to sixty-four. This is the absolute maximum increase that can be accommodated within the existing facilities. It will consist of 46 students from Newfoundland and Labrador, 10 for contract positions for New Brunswick students, 2 for contract positions for PEI students and 6 other students. The other students may include one or two from the Northwest Territories.

Total projected enrolment for 2009 and 2010 is 64 students; 46 from Newfoundland and Labrador, 6 contract positions from New Brunswick, 4 contract positions from PEI, and 8 others which may include one or two Northwest Territories students. If construction, curriculum renewal, and information technology infrastructure proceeds extremely quickly, it may be possible to have a class size in 2010 larger than 64.

Total projected enrolment for 2011 is 78 to 80 students including 60 from Newfoundland and Labrador, 6 from New Brunswick contract positions, 6 from PEI contract positions and 6 to 8 others including possibly one to two contract positions of the Northwest Territories.

**(c) MD Program - Curriculum Renewal**

The Faculty of Medicine's strategic planning process, including the retreat, highlighted MD program curriculum renewal as a top priority for the Faculty of Medicine. This process has already begun in a significant way particularly in the third and fourth year clerkship part of the MD program as part of and in response to the MD program accreditation process including the site visits in 2005 and 2007. The curriculum structure and content linkages can be viewed on the web. (Please see [www.med.mun.ca/curriculum/](http://www.med.mun.ca/curriculum/)).

Inter-professional collaborative learning with School of Nursing, Pharmacy and Social Work has been developed and integrated as compulsory components of the first two years of the medical education, funded by the Health Canada Research and Development Grant. In response to the Provincial White Paper on Education, a proposal is being put forward by the University including the Faculty of Medicine

to not only sustain, but expand this inter-professional education by adding inter-professional clinical placements.

A Medical Education Leadership Team has been established to lead the further work of curriculum renewal (Dr. Sharon Peters, Dr. Penny Hanson, Dr. Mary Wells). This very active process will be informed by Needs Analysis, Best Practices, and input from students, graduates, staff, faculty, healthcare partners and experts. Consistent with our regional needs, there will be a focus on integrating regional content and context including increasing emphasis in areas such as genetics and geriatrics. The Faculty of Medicine is part of an International consortium of medical schools working to develop interactive medical education technology to optimize student learning. To tie all this together, an enhanced patient case-based learning approach is being explored.

**(d) Residency Training Program Increase**

The residency training program will need to be increased to accommodate the immediate class expansion of four students in 2008 who will graduate in 2012 working up to the total of twenty more students admitted in 2011 who will graduate in 2015.

It is recommended, however, that in order to more quickly meet the needs of the Province, the Faculty of Medicine expand the residency training program by twenty physicians in 2010 or 2011 to coincide with the major increase in facilities, faculty and staff for medical school enrolment at that time. This will allow an increased enrolment of International medical graduates on a return-of-service basis. These International medical graduates will receive appropriate training for Newfoundland within the Newfoundland context as part of return-of-service agreements. They will be able to contribute to the Province's workforce ahead of the timeline for the increased number of students from Newfoundland and Labrador who will graduate and complete their training here.

**(e) Faculty and Staff Increase**

Currently, the Faculty of Medicine has approximately 200 full-time faculty including PhDs and MDs. Even for its current student load, based on Canadian standards of

number of fulltime faculty per medical student, the Faculty of Medicine should have approximately 300 faculty. The Faculty of Medicine does have a large number of part-time faculty in St. John's and throughout the Province and also in New Brunswick who play an important role in distributed medical education. It is clear however, that an increase in faculty will be required in order to accommodate an increased medical school and resident enrolment expansion.

The Medical Education Expansion plan is for an increase of 70 new fulltime faculty. An estimated thirty additional support staff will be required. This represents approximately a one-third faculty increase in parallel with the one-third increase in the medical school enrolment and residency training program. It is anticipated that twenty to twenty-five will be PhD faculty with the remainder being MD faculty. Some of the new full-time MD faculty will be located outside of St. John's in Central, Western and Labrador-Grenfell Health Regions as part of the Newfoundland and Labrador Medical Education Network (see (f)). The addition of a number of full-time MD faculty positions will be used in the strategic recruitment of clinicians particularly for Eastern Health within their physician resource planning needs for clinical care.

**(f) Newfoundland and Labrador Medical Education Network**

It is essential that students and residents receive a significant portion of their education outside of St. John's so that they may best understand the healthcare needs and application in rural and regional healthcare needs. The Faculty of Medicine has from the outset had a core of strong rural learning experiences for students and residents throughout Newfoundland and Labrador and also New Brunswick. The Faculty of Medicine currently has approximately five hundred part-time faculty spread throughout. The Faculty of Medicine expansion of medical, student and resident education will continue to build on this strength. Efficient and effective medical education network support will be required to provide optimal rural and regional medical education throughout Newfoundland and Labrador. That will require building a stronger Newfoundland and Labrador Medical Education Network. This will include a medical education leader in each of the four regional integrated health authorities and a medical education network leader in each of the major disciplines - family medicine, internal medicine, general surgery,

pediatrics, obstetrics and psychiatry. These positions are expected to be mainly outside of St. John's and may be a combination of major part-time and full-time faculty positions.

**(g) Medical Education Facility Expansion**

The medical education facilities of the Health Sciences Centre are completely at capacity and facility expansion for even the current enrolment was recognized as a vital need by both the MD program accreditation and the Residency program accreditation. Larger capacity lecture halls, many more small group learning rooms, and faculty and staff office space is urgently required and expanded medical education facility construction is an core essential capacity building component of the medical education expansion planning. In the interim, off site rental accommodation will be used as needed recognizing that it is less optimal.

A planning oversight committee is being established to consist of Darrell Miles and James Rourke (co-chairs), Doreen Neville (University representative), Sharon Peters (Space Committee and Medical Education Leadership Committee Representative), Keith Bowden (Eastern Health Representative) and John Abbott (Coordinator/Facilitator). Ambitious target time lines are:

**Step One: Functional Space Analysis Planning and Preliminary Drawings.**

This will outline the space needs and cohabitation requirements, potentially including a sketch form. Goal is for an RFP to go out in January/February. Work time-line – February to April or May.

**Step Two: Detailed architectural and engineering detailed design including site analysis.** Work time-line – May to August or September.

**Step Three: Tender Process:** Work timeline - August to December

**Step Four: Construction:** Work timeline - begin early 2009 and finish by end of 2009.

**Step Five: Equip and occupy** – Work Timeline Start of 2010.

**(h) Information Technology**

Leading edge information technology will be vital to the success of this medical education expansion. An advanced electronically interactive curriculum will need to be available and accessible throughout Newfoundland and Labrador, New

Brunswick and PEI. Students, staff and faculty within and well beyond St. John's will require an unprecedented level of robust connectivity and support that is compatible with our Healthcare partners as well as the University computing and communications.

**(i) Funding**

The Faculty of Medicine in its fall 2007 budget submission has outlined a phased-in request for \$15 million capital funds for the medical education facility expansion and a phased-in operating grant increase phased-in to \$11.5 million. These figures are consistent with those in the Provincial Conservative Government 2007 Blueprint. This proposal of course is undergoing review during the budget processes leading up to the 2008-9 Government budget anticipated to be announced in April, 2008. A \$500,000 adjustment has been requested for the current year (2007-2008 Budget) that is now being considered to enable us to proceed quickly with the initial architectural hiring.

**HEALTH RESEARCH EXPANSION**

Medical education and health research are closely interwoven components of Faculties of Medicine. The Faculty of Medicine Health Research has doubled over the past five years to \$13.8 million dollars, with research extending from biomedical sciences to clinical and applied health research.

Research strengths include: collaborative research projects especially in areas such as genetics and genomics that relates to Newfoundland and Labrador's unique founder population and also includes a variety of key areas where our clusters of researchers have the ability to make significant discoveries of International significance. Faculty of Medicine research contributes directly to the health and economic well-being of Newfoundland and Labrador and has significant International importance. It extends throughout the Province including Northern and Aboriginal health research and is very closely intertwined with Eastern Health, our major academic teaching and research hospital partner. All available research space is being used and space has now become our major limiting factor in any further expansion of our research.

New, expanded and updated research space and additional key faculty will enable the Faculty of Medicine to double its research in the upcoming years. The President of Memorial University and CEO of Eastern Health commit to develop a business plan for a new Health of Research Complex to enable the successful expansion of health research in Newfoundland and Labrador. The key components of the Health Research Complex would include collaborative genetics and genomics as the lead research project (a current major CFI-LSIE funding competition proposal), medical research space, nursing and pharmacy research space, other MUN health research partner space, Eastern Health research related space, and private public partnership incubator research space. Business plan development has been lead by Dr. Doreen Neville, Associate VP Academic, Memorial, and PHC Consultants. The initial report has recommended funding for more detailed planning to take place over the course of the upcoming fiscal year with potential to submit a major capital building budget approval request for fiscal year 2009-2010.