

\$1.4 Million Allocated to Cardiac Rehabilitation Services

Cardiac Rehabilitation in New Brunswick...A Province on the Move!

By Cleo Cyr

Background

The incidence of cardiovascular disease (CVD) in New Brunswick (NB) is above the national average with higher admission rates for both acute myocardial infarction (17%) and angina (42%).ⁱ In June 2006 the NB Heart Centre was given the mandate from the New Brunswick Cardiac Advisory Committee to conduct a province wide review of cardiac rehabilitation programming. This directive was based on the evidence that patients attending Cardiac Rehabilitation programs experience a 20 to 30% reduction in mortality and cardiac related hospitalizations.ⁱⁱ

The NB Heart Centre Provincial

Advisor for Cardiac Wellness and Rehabilitation facilitated the process. Cardiac rehabilitation professionals from the province's eight Regional Health Authorities (RHA's) formed a working group that provided information through surveys, focus groups, face-to-face group meetings, email and teleconferences over a 6 month period. As a result, a collaborative report and funding proposal identifying current perspectives and future opportunities for cardiac rehabilitation and secondary prevention in the province was developed.

The Canadian Association of Cardiac Rehabilitation defines cardiac rehabilitation as "the enhancement and maintenance of cardiovascular health

through individualized programs designed to optimize physical, psychological, social, vocational, and emotional status. This process includes the facilitation and delivery of secondary prevention through risk factor identification and modification in an effort to prevent disease progression and recurrence of cardiac events".ⁱⁱ Gaps in service were evident in New Brunswick. As part of the collaborative report, recommended opportunities for improvement were identified, special considerations highlighted and priority areas for funding proposed. Issues identified relating to gaps in cardiac rehabilitation care included access to programs, equipment and space

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*It's never too late to make a positive impact on somebody's life.
We are ready for the challenge!*



HeartBeat

Welcome to the fifth issue of the *New Brunswick Heart Centre HeartBeat*. The feature article "\$1.4 Million Allocated to Cardiac Rehabilitation Services" highlights the tremendous amount of work carried out by a dedicated group of health care professionals with a special interest in cardiac rehabilitation. This initiative born from a recommendation of the *External Review of New Brunswick Cardiac Services* (September 2004) has resulted in the allocation of funds by the Department of Health for the expansion and establishment of standardized cardiac rehabilitation programs in each of New Brunswick's health regions.

The personnel of the NB Heart Centre send their best wishes to Dr. James Parrott on his retirement after sixteen years of dedication to the program.

Dr. Marc Pelletier is welcomed in his new role of Clinical Department Head - Cardiac Surgery.

Dr. Satish Toal, Electrophysiologist, has taken on the mandate to establish electrophysiology services at the NB Heart Centre.

Finally, we share with our readers our latest wait time data for access to interventional cardiology services.

Happy reading to the readers of this newsletter and we welcome any comments and submissions for publication. You can contact us by e-mail: nbhc@reg2.health.nb.ca.

Visit our website: www.ahsc.health.nb.ca/Programs/NBHC.

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**New Brunswick
Heart Centre**



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To our readers:

In this newsletter the acronym "NBHC" refers to the "New Brunswick Heart Centre".

In French, the acronym "CCNB" refers to "Centre cardiaque du Nouveau-Brunswick", not to be mistaken for "Collège communautaire du Nouveau-Brunswick."

Cardiac Rehabilitation

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shortages, lack of trained interdisciplinary staff and lack of a provincial data registry.

Proposal Highlights Patient Eligibility Criteria

Data was obtained from the provincial 3M Health Data Management (HDM) reporting tool for Complexity Case Mixed Groupings (CMG's) in an effort to establish a baseline to understand the number of patients who required secondary prevention cardiac rehabilitation programs (Table 1). It was determined that for the 2005-2006 fiscal year 6,097 patients with cardiovascular disease by discharge diagnosis were eligible for cardiac rehabilitation programming. Unfortunately only 12% of those patients were admitted to programs during the same time period. Enrollment varied from 0% to 20% in various health regions with the majority occurring in urban versus rural areas.

The Canadian Cardiovascular Society Access to Care Working Group for Cardiac Rehabilitation in Canada has determined that all CVD patients require access to core aspects of Cardiac Rehabilitation as a standard of care within a preferable timeframe of 1 to 30 days and an acceptable time frame of 7 to 60 days.ⁱⁱⁱ Recognizing the enormity of expanding cardiac rehabilitation services in New Brunswick and the need to improve access to care within preferable timeframes, a staged approach was suggested to accommodate moderate

but consistent growth in regional service delivery over the next 5 to 7 years. Specific caveats for each region were identified with the expectation that regions would continue to increase services offered and expand services in both urban and rural areas without charging a fee to patients.

It was determined that core interdisciplinary program personnel should include physicians, nurses, physiotherapists and kinesiologists (or combination of both), dietitians, psychologists, and administrative assistants. Peripheral personnel whose services are needed and benefit provision of cardiac rehabilitation include pharmacists, occupational or vocational therapists, and social work professionals.

Priority Funding Areas

Based on combined data from each health region it was determined that the actual cost per patient for participation in a traditional 12 week cardiac rehabilitation program with case managed follow-up for one year is \$1745. A micro costing worksheet was collaboratively developed and based on data collected through multiple iterative processes eight priority areas were recommended for funding. A comprehensive document titled **Cardiac Rehabilitation in New Brunswick: A Collaborative Report Identifying Current Perspectives & Future Opportunities for Secondary Prevention** was submitted to the Department of Health through the NB Cardiac Advisory Committee.

Representatives of the Department of Health carefully reviewed the proposal and

Farewell to Dr. James Parrott

By Dr. Brian Corbett

I first met Jim Parrott at the Winnipeg General Hospital in the fall of 1969. I was doing a residency in coronary and intensive care and Jim was a surgical resident rotating through the ICU. Times were different then as both Intensive and Coronary care were new disciplines. There were lots of innovations made in monitoring, ventilating and treating these gravely ill patients. Sometimes shooting from the hip was the norm as we encountered new and changing scenarios. A 'cowboy' approach was frequently the best choice – a cowboy he was then and a cowboy he still is.

An event that occurred that fall led to a career choice for Jim as we



attempted to deal with a severe crushed chest injury in a young woman who had been run over by a wagon while on a hay ride. Dr. Dow Hill and his crew brought a newly developed membrane oxygenator to Winnipeg from San Francisco, in an effort to allow this young woman's lungs to heal by placing her on long-term bypass. For several days to weeks, Jim hovered around her day

and night tending to every need. This was the defining moment of his medical life as from that moment on a career in cardiac surgery became his goal.

The next few years were filled with antics – scantily clad midnight swims in the nurses' residence pool

to the pleasure of all those involved allocated a total of \$1.4 million provincially for cardiac rehabilitation services. Priority areas were either partially or fully supported, or recommended for review in future budgetary processes (Table 2). Each RHA received funding to increase provision of service by 5 to 10% following a provincially coordinated evidenced based approach. New Brunswick is the first province in Canada to do so and received recognition at the October 2007 Annual General Meeting of the Canadian Association of Cardiac Rehabilitation.

Future Directions

Members of the provincial cardiac rehabilitation working group have continued to hold knowledge sharing meetings following submission of the proposal and as a result have recently formalized their group process. In September 2007 Terms of Reference were developed and Cardiac Rehab New Brunswick (CRNB) was formed. CRNB is a professional body dedicated to the primary and secondary prevention of cardiovascular disease and reports to the NB Cardiac Advisory Committee. CRNB members will be leaders in the progressive advancement of cardiac rehabilitation in the province. Innovative case management practices, home exercise programs, telehealth, web based applications and self- management processes are strategies under development.

Cardiac rehabilitation has been recognized as a progressive Chronic Disease Management model as outlined in the 2004 Canadian Association of Cardiac Rehabilitation guidelinesⁱⁱ. Therefore, interdisciplinary professional education using case managed cardiac rehabilitation as a model that includes patient self-management for the purpose of

lifestyle change using behavioural and coaching processes is a priority.

Summary

In today's environment of shorter hospital lengths of stay the needs of patients with cardiovascular disease are

not fully addressed by acute care alone. In order to reduce mortality, morbidity and readmission rates as well as improve the quality of life for those living with cardiovascular disease in New Brunswick,

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Table 1: Health Data Management Case Mix Groupings (CMG)

| | Grand Total | Case Mixed Grouping |
|------------------------------------|-------------|---|
| Cardiac Medical | 7530 | 185- 186, 205-213, 222, 225, 226, 235 and 237 |
| Cardiac Surgery | 686 | 175-179, 181-184, 194 |
| Percutaneous Coronary Intervention | 1116 | 188 and 189 |
| Cardiac cath-Inpatient | 726 | |
| Cardiac cath-clinic | 1021 | 200-204, 215-218 and DPG 21, 22 |
| Diabetic with CVD (other CMGs) | 1271 | E10- E14 with a cardiac diagnosis of I20-I52 and not grouped into one of the above CMGs |
| Total Visits | 12350 | |
| Total Patients | 8351 | |
| Less Expired | 584 | |
| Less 20% due to risk and interest | 1670 | |
| Total Eligible Patients | 6097 | |

Total patient numbers were determined by sorting the total visits for the above categories by the Medicare number.

Source: Provincial 3M Health Data Management 2005/06 - Acute Inpatient, Day surgery and Cardiac clinics

and weekly parties at Jim's 'Bar and Grill' were highlights. There still exist excellent photos of Jim perched on the throne of a two seat wooden privy, hoisted up surreptitiously onto the parking lot kiosk as he protested an increase in the parking rates charged to the interns and residents. Remember, this was 1970 - we worked hard long hours, call was arduous, but the play was equally strenuous. We partied long and hard most Friday afternoons and evenings in the call room above intensive care. To my knowledge, there is still a bottle of premium spirits tucked away in our cache above the suspended ceiling in the intensive care call room.

There followed a hiatus as Jim and I went our separate ways to finish our training. He went to San Francisco, I to Houston. Jim then began his career in CVT Surgery in Halifax, and I returned to Winnipeg to try to establish an interventional cardiology program at

the Winnipeg General, a center without a cardiac surgery program. It was not too long before I received the good news that Jim had decided to return to Winnipeg. We resumed our relationship and the 'good times' rolled once more. There were wild rides in the countryside in his Corvette with a box of 'cold ones' riding shotgun, canoe trips through snow banks, hunting trips and more. Highlights included forcing him to be the rear end of 'Horace', the plywood silhouette of a horse that we carried when pretending to stalk Canada geese, as well as crashing his XKE Jaguar as we searched for a late night party in the hinterland of Manitoba. Despite the hijinks, we never lost sight of our patients or the program. He single-handedly developed a thriving cardiac surgical program at the General, despite lack of cooperation from surgeons at the neighboring Saint Boniface Hospital.

In 1990 and early 1991, we had long discussions in his office about the new

cardiac program being considered in Saint John, New Brunswick. Winnipeg was starting to close in on both of us - University politics were unbearable and a new challenge was beckoning. I remember being asked in an interview with Gerry Stiles if Jim Parrott was the right guy for the job in Saint John. I replied that if anyone could single-handedly start a surgical program, Jim could. The rest is history. The program started up, and flourished under his stewardship, and has continued to thrive under his guidance. It has grown from that first surgical case to take its place with the best in the country.

It is now time to say goodbye, grow grapes, make wine and tend to the horses. New horizons await and new bridges remain to cross. A salute to you Jim, for a job well done!

AIM-HIGH Clinical Trial Program Marks First Enrollment Milestone

New Brunswick Heart Centre Research Initiative, Atlantic Health Sciences Corporation (AHSC) Helps Fight Heart Disease across Canada

By Sohrab Lutchmedial & Fabia Fitzgerald

The New Brunswick Heart Centre Research Initiative, AHSC announced that it has enrolled its first participants in the AIM-HIGH research trial to guide medical professionals on how to further reduce heart attacks and strokes in New Brunswick. In this program, participants are receiving cholesterol medications at no cost with regular access to local heart disease specialists and nurses. The New Brunswick Heart Centre Research Initiative was selected to receive funding along with 75 other North American centers to study how two approved cholesterol medications balance both good and bad cholesterol levels.

"Heart disease remains the leading cause of death and disability. We know that there is more to heart disease prevention than lowering the bad cholesterol. It's time to act on our knowledge from decades of epidemiologic research," said Dr. Geoffrey Douglas, local Principal Investigator. "AIM-HIGH represents an opportunity for patients to improve their health and help advance knowledge about heart disease and stroke."

The US National Heart, Lung and Blood Institute fund AIM-HIGH, with support from Abbott Laboratories. The program is designed to see if two Health Canada approved medications, (prescription extended-release niacin and simvastatin) taken together is better for delaying heart disease than just using

simvastatin alone. There is no cost to participate in this program whose goal is to assess how these two drugs may reduce the risk of heart attacks, stroke and other heart-related complications over a three to five year follow up period.

New Brunswick residents, who have a history of heart disease or stroke and are taking medication to lower their cholesterol, can find out how they can qualify and participate in this important research study by visiting the AIM-HIGH website www.aimhigh-heart.com.

About Cholesterol and Heart Disease

There are three main components to the blood-lipid profile; LDL and HDL levels, (referred to as "bad" and "good" cholesterol, respectively), and a third factor – triglycerides.

LDL or low-density lipoprotein cholesterol carries fuel throughout the body, but in high concentrations, can become sticky and obstruct the arteries. When this happens, atherosclerosis develops, which is the hardening or narrowing of arteries through the accumulation of plaque. Plaque build-up can lead to heart attack, stroke and other clotting risks when either the arteries become too narrow or pieces of the plaque break loose in the bloodstream.

HDL or high-density lipoprotein cholesterol clears cholesterol out of damaged arteries and sweeps it away to the liver where it can be eliminated from the body. Research indicates that HDL

cholesterol can even help prevent plaque from forming in artery walls. Studies show patients with higher HDL cholesterol have a lower risk of heart disease. It is becoming more evident that raising HDL levels can be just as important for heart health as lowering LDL levels.

Triglycerides (TGs) are another type of naturally occurring fat in the blood stream that, in excessive amounts, can contribute to obesity, diabetes and cardiovascular disease. TGs are routinely screened as a marker of blood lipids and general health.

In combination with a healthy diet, exercise and weight maintenance, drug therapies can help regulate the various fats in the blood. Most notably, statins, fibrates and niacin are often prescribed to lower LDL and TGs and raise HDL. Statins, however, have been shown to be less effective in raising HDL when compared to niacin. Fibrates have only a weak HDL-raising effect with little, if any, benefit on decreasing cardiac events.

Long experience with niacin has confirmed that it raises the HDL-cholesterol in a way that protects the heart by preventing heart attacks; its mechanisms differ entirely from those of other drugs. In combination with statin drugs, it has been shown to substantially reduce heart disease risk in 5 small trials. AIM-HIGH is a larger trial designed to confirm this benefit.

About AIM-HIGH and Eligibility Background

AIM-HIGH is a multi-center,

New Brunswick Heart Centre welcomes new cardiac surgeon

A native of Edmundston, Dr. Marc Pelletier returns to New Brunswick as the new Clinical Department Head of Cardiac Surgery. Pelletier joins the centre after living and working at Stanford University in California for the past four years as the Medical Director of Cardiac Surgery at El Camino Hospital and as a heart and lung transplant surgeon at Stanford Medical Center. After obtaining his



Dr. Marc Pelletier
Clinical Department
Head Cardiac Surgery

medical degree from Dalhousie University in 1994, he completed a Cardiac Surgery Residency and a Masters of Science in 2000 at McGill University. He then traveled to Stanford University for a Fellowship in Cardiothoracic Transplantation, which was followed by a faculty position as Assistant Professor at the University of Toronto and Sunnybrook Health Sciences Center. In 2004, Dr. Pelletier returned to Stanford, this time as Assistant Professor.

Pelletier is pleased to join a centre with exceptional results since its inception 16 years ago and looks forward to working with his new colleagues, Drs. Brown and Forgie, along with a dedicated team in the NB Heart Centre. He brings with him a variety of experiences and techniques acquired during his residency at McGill and Stanford, and while working at both the University of Toronto and Stanford University. He hopes to increase our center's use of minimally invasive procedures for vein harvesting during coronary bypass surgery, and for both aortic and mitral valve surgery. Dr.

Cardiac Rehabilitation

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randomized, controlled clinical-trial assessing whether the combination of Niaspan® (niacin extended-release tablets) plus simvastatin is more effective than simvastatin alone. Niaspan has multiple effects: it raises “good” cholesterol (HDL), lowers levels of “bad” cholesterol (LDL) and also lowers triglycerides. The goal of this five-year study is to confirm whether the statin-niacin combination therapy, which targets several cholesterol factors at once, reduces heart-disease events to a greater extent than simvastatin alone.

AIM- HIGH will enroll 3,300 men and women who are 45 years or older and at high risk of having another CV event. Participants in this program must have a history of heart or vascular disease as well as low HDL-cholesterol (HDL-C) (less than or equal to 40 mg/dl in men; less than or equal to 50 mg/dl in women) and abnormal triglycerides (TG) (greater than or equal to 100 mg/dl). The AIM-HIGH program will examine outcomes such as CHD death, nonfatal MI, ischemic stroke, or hospitalization for high-risk acute coronary syndrome.

Pelletier also has interest in beating heart surgeries (off-pump) and surgery for atrial fibrillation.

Pelletier and his wife have four sons ranging from six months to eight years old. They are thrilled to have the opportunity to return to New Brunswick, home province for both. The close proximity to family and the strong family values present in the Maritimes were very important factors in their decision to come home after 17 years away from New Brunswick.

a coordinated interdisciplinary approach is essential. Cardiac rehabilitation services are effective and efficient channels for the delivery of care designed to stabilize and minimize the progression of the atherosclerotic disease processes. In New Brunswick the need for cardiac rehabilitation to be expanded as a chronic care model is recognized by the fact that only 12% of eligible patients were able to access programs in 2006.

Although health regions vary in their capacity to provide outpatient cardiac rehabilitation services, it is important that recognition be given to cardiac rehabilitation as a standard of care in New Brunswick. Although gaps remain, strategies under development by Regional Health Authorities in collaboration with Cardiac Rehab New Brunswick, the NB Cardiac Advisory Committee and the Department of Health will result in the provision of more accessible care for

patients living with heart disease. Stay tuned for future updates. New Brunswick is indeed a province on the move!

References

- i Provincial & Health Region Data Table: Survey of findings in the Canadian Cardiology Atlas (2006). Retrieved December 18, 2006 from www.ccort.ca.
- ii Stone JA, Arthur HM. Canadian Association of Cardiac Rehabilitation (2004) Canadian Guidelines for Cardiac Rehabilitation and Cardiovascular Disease Prevention: Enhancing the Science, Refining the Art. Second Edition.
- iii Dafoe, W., Arthur, H., Stokes, H., Morrin, L., & Beaton, L. (2006). Universal Access: But When? Treating the right patient at the right time: Access to cardiac rehabilitation. Canadian Journal of Cardiology, 22(11). For the Canadian Cardiology Society Access to Care Working Group.

Table 2: Priority Funding Areas

| Recommended Priority Areas for Funding | Funding Support Provided (Total received \$1.4 million) |
|---|---|
| 1. Regional Coordinator for each RHA (with materials support) | Supported |
| 2. Funding for multidisciplinary health care professionals to initiate and expand programs | Supported to provide increases in programming of 5% in regions with current programs and 10% in regions without programs. |
| 3. Large equipment costs to support new programs and assist with expansion of current programs | Partially supported |
| 4. Yearly professional education funds | Partially supported and recurring |
| 5. Telemetry systems for four specific sites | Funded over several years |
| 6. Resource material costs to the NB Heart Centre to develop a health care professional modular education program | Supported |
| 7. Funding to establish a provincial cardiac rehabilitation database | Further evaluation required |
| 8. Data entry support for provincial database | Further evaluation required |
| Other areas addressed: | |
| 1. That a funding fee structure specific to cardiac rehabilitation programming be explored for physicians | Referred to appropriate process |
| 2. That kinesiologists be considered for provincial employee contract designations | To be reviewed by Health Human resources. There is no barrier to hiring as non-bargaining employees |

Wait Time for Interventional Cardiology at the NB Heart Centre - Update

Since October 2005, the NB Heart Centre's Access Coordination personnel have been collecting and reporting wait time data relating to interventional cardiology services. You will note that the data tabulated continues to display impressive and timely access to services

to all patients across the province. We are still achieving 100% success rate in providing efficient access to inpatients and outpatients and this, in all categories of urgency.

While there are occasional peaks in demand for transfer, for instance after

a long weekend, this does not result in any patients exceeding Recommended Maximal Wait Time (RMWT). The NB Heart Centre's performance in this regard remains superior to other Canadian heart centers. Our goal has been and will continue to be the provision of timely



New Brunswick Heart Centre Centre cardiaque du Nouveau-Brunswick

Wait Time for Interventional Cardiology October 2005 to September 2007

| 1 Time Frame | 2 Cases Completed Monthly Average | 3 Recommended Maximal Wait Time (RMWT) | | | | | | | |
|-----------------|---|---|----------------------------------|-----------------------|----------------------------|-----------------------------------|------------------------|--------------------------|-------------|
| | | 4 Emergency + Urgent 0-7 days | | | 5 Semi-Urgent 8-28 days | | | 6 Elective | |
| | | 7 Median Wait (days) | 8 90th Percentile Wait (days) | 9 Cath Within RMWT | 10 Median Wait (days) | 11 90th Percentile Wait (days) | 12 Cath Within RMWT | 13 Median Wait (days) | 14 Pe Wa |
| Oct-Dec 2005 | 249.3 | 1 | 6 | 90.6% | 7 | 27 | 77.8% | 50 | |
| Jan-Mar 2006 | 292.6 | 2 | 8 | 86.6% | 13 | 27 | 89.6% | 59 | |
| Apr-June 2006* | 343.6 | 1 | 5 | 95.7% | 8 | 23 | 97.8% | 36 | |
| July-Sept 2006 | 276 | 1 | 4 | 99.2% | 5 | 13 | 100% | 12 | |
| Oct-Dec 2006 | 295.3 | 1 | 5 | 97.6% | 5 | 10 | 100% | 10 | |
| Jan-Mar 2007 | 307 | 1 | 4 | 98.3% | 5 | 14 | 100% | 10 | |
| Apr-June 2007 | 308 | 1 | 4 | 100% | 4 | 11 | 100% | 10 | |
| July-Sept 2007 | 290.9 | 1 | 3 | 100% | 7 | 14 | 100% | 12 | |

*3rd Cardiac Cath Lab opened on April 21, 2006

The data provided reflects both the inpatient and outpatient referred for cardiac catheterization at the New Brunswick Heart Centre.

Column 1:

Represents the 3-month timeframe during which the data in the following columns was collected.

Column 2:

Represents the average number of patients who had a cardiac catheterization at the NB Heart Centre each month over a three-month period.

Columns 3 -11:

Analysis of Patient Cases Completed - Displays wait time data for those patients who underwent a cardiac catheterization in the specified three-month period. Waiting times are measured from the reception of the completed referral at the NB Heart Centre. A **Recommended Maximal Wait Time (RMWT)** is calculated based on the patient's clinical information. Using uniform scoring systems, patients are grouped according to the seriousness of their medical condition (urgent, semi-urgent, or elective).

Columns 3, 6 & 9:

Median Wait (days) - Represents the wait time (in days) in which 50% of patients waited less than the time indicated, and 50% waited longer than the time indicated for access to Interventional Cardiology services.

Columns 4, 7 & 10:

90th Percentile (days) - Represents the wait time (in days) in which 90% of patients waited less than the time indicated, and 10% of patients waited longer than the time indicated for access to Interventional Cardiology services.

Columns 5, 8 & 11:

Represents the % of patients who underwent a cardiac catheterization

The New Brunswick Heart Centre Access Coordinators are responsible for the collection and reporting of the wait time data.

access to tertiary cardiac services to all New Brunswickers, and this within Recommended Maximal Wait Time. Wait time statistics are also available on the NB Heart Centre website at: www.ahsc.health.nb.ca/Programs/NBHC/stats.shtml

| 10 | 11 | 12 |
|-----------------------------|------------------|------------------|
| 29 - 120 days | | Patients Waiting |
| 90th percentile wait (days) | Cath Within RMWT | Monthly Average |
| 187 | 52.8% | 428.7 |
| 452 | 39% | 320 |
| 244 | 68.7% | 155 |
| 48 | 97.3% | 64.3 |
| 22 | 99.3% | 85.4 |
| 28 | 100% | 64.3 |
| 21 | 100% | 65.7 |
| 26 | 100% | 52.3 |

wick (NB) Heart Centre.

within the RMWT.

Column 12:

Represents the average number of patients waiting in the queue for a cardiac catheterization at the end of each month, over a 3-month period.

NB Heart Centre Welcomes New Electrophysiologist



**Dr. Satish C. Toal
Electrophysiologist**

Hospital, Mumbai, India. His dissertation was on the use of adenosine in sinus rhythm to differentiate atrioventricular nodal reentrant tachycardia from atrioventricular reentrant tachycardia, which was published in "Heart" in January 2002 and led to the award of his

Dr. Satish C. Toal obtained his MBBS (1992) and MD (1996) from the Government Medical College, Nagpur, India. In 2000, he completed his cardiology training at the King Edward VII Memorial

cardiology degree. He is also a certified specialist in cardiology by the Post Graduate Medical Education and Training Board, United Kingdom. He completed a three year clinical fellowship in Cardiac Electrophysiology from the Toronto General Hospital, University Health Network in 2007. Dr. Toal has presented original papers at the Heart Rhythm Society, American Heart Association and Canadian Cardiovascular Society conferences. He has publications in Circulation, Lancet, Heart Rhythm, Journal of Cardiovascular Electrophysiology and PACE amongst others.

He and his wife Meghana along with their daughter Ananya are happy to be settling in Saint John, NB. The NB Heart Centre personnel welcome Dr. Toal and his family to our beautiful province.

Questions (Q) and Answers (A) with Dr. Satish Toal

Q. What procedures, devices and treatments are we now able to offer patients in need of electrophysiology services at the NB Heart Centre?

A. We are now able to implant resynchronization devices, such as implantable cardioverter defibrillators (ICD) and can perform ablations for arrhythmias. While these procedures have been available in Halifax for some time, we can now offer them in a timely fashion to our New Brunswick patients.

Q. Do we actually need to have more ICD's implanted in the province?

A. Absolutely! A recent review of utilization across Canada puts New Brunswick below the national standard for ICD implantation.

Q. What new developments in arrhythmia therapy can we expect in the future from the NB Heart Centre?

A. Currently we can perform straightforward ablation therapy for arrhythmias with the equipment we have at our disposal. We are presently in the process of purchasing a 3D mapping system that will soon enable us to tackle more complex cases like atrial fibrillation.

Q. Part of the problem with underutilization of EP therapies has been the difficulty in gaining access to consultation with arrhythmia specialists (electrophysiologist). How can referring physicians contact you if in need of your expertise?

A. Referrals of all levels of urgency can be forwarded to me via the Access Coordination office (also known as the Cardiac Triage office) of the NB Heart Centre. Appropriate clinical and demographic information regarding the patient can be faxed to this office at **506 648-7523** or send by mail at:

**Dr. Satish Toal, New Brunswick Heart Centre
Saint John Regional Hospital, PO Box 2100, Saint John, NB E2L 4L2**

If the referral is of an urgent nature and it is necessary to speak to me directly, I can be reached via my office at **506 649-2713** or through the Saint John Regional Hospital locating at **506 648-6111**. Urgent referrals will be transferred to the NB Heart Centre for evaluation and therapy as appropriate.

