Clinicians working in the McGill hospital network or, for that matter, any of the academic networks in the Province, will readily attest to the dramatic shortage in physician manpower that has increased enormously the burden on those who continue to work in the system. At the same time, while emergency procedures are provided and performed in an appropriate time frame, it is clear that those less urgent and elective have acquired long waiting lists of increasingly disgruntled patients. In certain instances, the shortages in specific specialties, such as anaesthesia, has a major impact on all other surgical and even medical specialties, in a not surprising domino effect. Nor is this shortage confined to Quebec: the Provinces of Alberta and Saskatchewan have been recruiting physician manpower from South Africa while Newfoundland is reportedly seeking to “import” family physicians from Cuba. While the Canadian population remains steadfastly in favour of the Canada Health Act and Medicare, which has obtained in the public imagination an iconic luster similar to that of the Constitution in the United States, nonetheless, a number of editorialists have begun to nip away at the margins with suggestions that the increasing visibility of a second tier of medical care in Canada will bring relief from the various ills that affect our... (please see Manpower, pg. 5)
Dear Editor:
I have been following McGill's news and the Department of Surgery. I enjoy reading the Square Knot. Just to update you, I have been appointed on January 1st, 1999 as the new Chief of Surgery at Dhahran Health Center (500 beds).

In addition, I am the regional Director of ATLS in the Eastern Province. I have a few of McGill's graduates working with me including: Drs. Alauddin, Maglouth, Zahrani, Rasim and Bin Siddiq.

I will keep you updated of my news. My special regard to the staff.

Sameh Barayan, M.D., FRCS
Dhahran, Eastern Saudi Arabia

Dear Editor:

I would like to compliment you on the recent number of the Square Knot (Fall '98). It has a varied choice of presentations enhanced by the photographs demanding memory researches. The coverage of topical subjects is particularly well done: no one could remain oblivious of what is going on around McGill and the RVH.

Congratulations again on the sustained quality of the Newsletter.

Martin A. Entin, M.D.
RVH, Montreal

Dear Editor:

Keep sending the news. I enjoy reading the latest events from the Vic and surgical environment. I did leave the Vic in 1974 and still doing orthopedic surgery in N.B. Thanks and regards,

Dr. Alphon Haché
Dieppe, New Brunswick

Dear Editor:

I have a suggestion for the Square Knot. It might be nice to have an alumni update section (similar to McGill News - I think it is called "Where are they now") so that we can keep up to date with the progress and placement of our surgical alumni.

Andrew Hill, M.D.
Ottawa, Ontario

Dear Editor:

You are doing a wonderful job with the Knot. I particularly enjoy the old? photos. A good idea. I stopped doing cardiac surgery last summer and was accepted into the BFA program at the Nova Scotia School of Art and Design as a freshman this fall. Quite a refreshing challenge in thought processes, thinking in terms of negative space, parataxis, chiaroscuro and so forth. I'm writing to get Stan Skoryna's address. He was a role model for me when I worked as a veterinarian for him at the Donner Building in 1958. I would like to drop him a note. Sincerely,

David A. Murphy
Halifax, Nova Scotia

Ed's Note:
Dr. Skoryna's address was sent to David.

Addendum

RE: HONORARY FELLOWSHIPS - ROYAL COLLEGE OF SURGEONS OF ENGLAND

In the last issue of The Square Knot (Fall 1998), there is on page 6, an article on those Montreal surgeons who have received an Honorary Fellowship from the Royal College of Surgeons of England. Dr. Donald R. Webster is featured and others mentioned who have received this prestigious high honor in the past are Drs. Thomas Roddick, Edward Archibald, Gavin Miller, Wilder Penfield, and F.J. Shepherd.

It has been brought to our attention that a recent honoree is Dr. Lloyd D. MacLean.

EDM
HE MILLENNIUM - Important Scientific Advances

As we approach the year 2000, everyone is preparing lists of the top personalities, discoveries and media events in the past year, century or millennium. Recently, the Editors of Science magazine chose the following as the most important scientific advances of the past year: the expanding universe; circadian rhythms; potassium channel structure; cancer treatment and prevention; combinatorial chemistry; genomics; neutrino mass; biochips; quantum physics; and molecular mimicry.

The section on cancer treatment and prevention dealt with the creation of a number of new powerful drugs such as Herceptin, Tamoxifen and Raloxifene.

The whole exercise makes us reflect on the tremendous achievements that have occurred in the care of the Surgical Patient. Which do you think are the most significant - say during our professional careers, since the year 1960? It is perhaps best to confine our study to this period and to Surgery in General. Otherwise, we have to consider that, in the past two millennia, the most important inventions have been the contraceptive pill, classical music, the atomic bomb, the Hindu-Arabic number system, the internet, anesthesia and even hay.

So, in no particular order, here are our nominations:

TRANSPLANTATION

Ever since the pioneering work of Sir Peter Medawar, solid organ transplantation has had a major impact on the care of patients with heart, lung, liver, kidney, pancreatic and more recently small intestine diseases. It is noteworthy that Doctors Josephus C. Luke and Kenneth MacKinnon performed the first kidney transplant in identical twins in Canada at the RVH in October 1958. In October 1963, the first kidney transplantations from cadavers in Canada began at McGill.

LAPAROSCOPY AND ENDOSCOPY

We remember doing an Upper GI X-ray series in a patient with hematemesis. The study would show oesophageal varices, a gastric ulcer and a duodenal deformity (ulcer or varix?), but where was the patient bleeding from? Today, the first diagnostic measure would be oesophago-gastroscopy. What a difference!

Minimal access surgery by laparoscopy as first developed by gynecologists has been a robust technical innovation very much due to the development of fiber optic flexible scopes.

OPEN HEART SURGERY

Ever since the work of Doctors F. John Lewis and C. Walton Lillehei, these have become among the most frequently done operations not only for heart defects, but also for ischemic heart disease. These operations became a reality because of the invention of the pump-oxygenator by the late Doctor John Gibbon of Philadelphia. Perhaps in this section we should add the arrival of synthetic (Dacron and Gore-Tex) vascular grafts which have revolutionized the practice of Vascular Surgery.

INTENSIVE CARE

Dr. Lloyd D. MacLean established the first SICU in Canada. With the concentration of highly skilled care by a multi-disciplinary team, patients with complicated shock, trauma, infections, multi-organ failures cannot only be studied but treated with beneficial outcomes in these Critical Care Units.

PROSPECTIVE TRIALS

The management of patients is no longer done in an empirical manner. The Ancient Greeks believed that we could understand the world rationally. But the scientific method requires that we ask questions of nature by experimentation. We have learned that the best way is by prospective

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"The doctor will see you now, Mrs. Perkins. Please try not to upset him."

— The New Yorker
Though invented in the 1940’s, (Thomas Watson, Chairman of IBM is reported to have said in 1943, “I think there is a world market for maybe five computers”). Computers have become part of our lives since the 1960’s. This new technology in the storage and monitoring of data has greatly facilitated the recovery of information to care for patients on the wards, in the OR, and in the Critical Care Units. Do you remember when we had to call the labs for results at the end of the day?

There are more but these certainly are, in our opinion, the most important. Just imagine what improvements will be recorded in the Winter Issue of The Square Knot in the year 2099!

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**Upcoming Events**

**April 14-15, 1999**  
E.J. Tabah Visiting Professor, RVH  
Dr. Michael Baum,  
University College of London Medical School, England

**April 15-17, 1999**  
Annual Meeting of American Surgical Association, San Diego, CA

**April 21, 1999**  
Urology Research Day  
Dr. Kevin McKenna,  
Visiting Professor,  
Department of Physiology and Urology, Northwest University, Chicago

**April 28-30, 1999**  
Annual McGill Orthopedic Visiting Professor  
Dr. James F. Kellam,  
Vice-Chairman,  
Department of Orthopedic Surgery, Carolinas Medical Centre, Charlotte, NC

**April 29, 1999**  
McGill General Surgery Joint Rounds  
Osler Amphitheatre, MGH

**May 22-23, 1999**  
Urology Royal College Exams - Ottawa

**May 25-26, 1999**  
General Surgery Royal College, Written Exams

**May 27, 1999**  
Fraser Gurd Day  
Dr. Alden Harken,  
Professor and Chair, Thoracic Surgery, Case Western Reserve, Denver

**June 3-4, 1999**  
Stikeman Visiting Professor  
Dr. Davis Drinkwater,  
Professor and Chair, Cardiac and Thoracic Surgery, Vanderbilt University, Nashville

**June 14-18, 1999**  
Orthopedic Royal College Exams - Ottawa

**June 19-23, 1999**  
Plastics Royal College Exams - Montreal

**June 21-23, 1999**  
General Surgery Royal College Oral Exams

**July 17-20, 1999**  
Fourth Biennial Conference  
International Association of Medical Science Educators “Advances in Medical Science Education, Learning Modes and Teaching Strategies”, Georgetown University Conference Center, Washington, DC
health care system. This is altogether regrettable, as the one silver lining in the physician manpower cloud is the fact that it is due in large part to concrete and specific government policies, both federal and trans-provincial therefore, what is imposed by governments is reversible but will require a united political effort if we are to succeed.

Manpower
(continued from pg. 1)

It is important to understand, as I will attempt to describe below, that the factors that have led to the current shortage in physician manpower will lead to an accelerating deficit, with a major manpower crisis in Quebec predicted for the year 2006 by none other than the Collège des médecins du Québec. Their voice is echoed by the Royal College of Physicians and Surgeons of Canada, in extensive presentations by the Association of Canadian Medical Colleges (in particular through the analytic work of Ms. Eva Ryten), the analyses and presentations of Professor Mamoru Watanabe of the University of Calgary, as well as other observers.

WHAT THEN ARE THESE FACTORS?
First a little history: In 1964, a Royal Commission on Health Services chaired by Justice E. M. Hall recommended a doubling of the number of places for the study of medicine in Canada in order to cope with the country's burgeoning population. To achieve this, four new faculties of medicine were established and the other twelve, including McGill, were funded for considerable expansion by the provincial governments. This expansion had the anticipated and hoped for result, such that Canadian medical schools produced 1,700 graduates in 1976, almost doubling the graduating class size of the early 1960s. Rather than being a source for satisfaction, this result led to a new series of concerns that Canada might be heading for a physician surplus and the same Justice Hall who chaired the Royal Commission recommended in 1980 that a new study be carried out. In 1984, provincial governments carried out such a physician workforce study and recommended enrollment reductions, rather than a stabilization of the output pool. This was the result, in part, of the Barer-Stoddart Report and all provincial governments accepted these recommendations. It should be noted that the ACMC issued statements, both in 1985 and 1991, pleading for a more conservative response to the perceived new threat. Nonetheless, the "visible hand" of provincial governments intervened, dramatically reducing the intake size of Canadian medical schools from a peak of over 1,800 in 1985 to an intake pool that will graduate fewer than 1,500 physicians from the year 2001 onwards. In fact, McGill, whose class size peaked in the mid-80s at 160, has been, over the last three years, admitting approximately 110 or 111 students. (I hasten to add that these cuts were imposed on all Quebec medical schools and not McGill uniquely.) It should be immediately obvious that the size of the input pool is a simplistic analysis of the problem. It is important to understand how many physicians are leaving in any given year and thus to understand the net change of the physician manpower workforce in the country. The first moderating factor is to note that of all the people who enter medical school, only a proportion end up in practice. The study by Eva Ryten and colleagues demonstrated the following: Of the 1,780 men and women who entered medical schools due to graduate as the Class of 1989, 1,722 received a medical degree. When the subset was examined in 1995-96, only 90% of the successful graduates were active in practice or residency training in Canada. Thus, the actual yield seven years after graduation was in the range of 85 to 90%. The loss to non-medical careers is less than 1%, underscored by what is now being supported from independent data from Statistics Canada, viz., that there is an increasing emigration of physicians from Canada.

Recall, however, that the loss from the physician manpower force is not of recently-graduated physicians so much as individuals who cease to practice in a term from 35 to 50 years after graduation. In fact, the decline begins rather quickly with a loss of 10%, i.e. 90 down to 80, in the first 20 years, with an increasing slope such that a further 10% loss is seen in the following decade and a further 10% down, to 40% by the year 40 post-graduation. Eva Ryten has made the clearly intelligent point that the manpower loss will be "tuned" to the size of the graduating class and other input sources 35 years in the past. Therefore, the current annual loss should approximately mirror the graduating class sizes of the '60s and so forth. Therefore, the departure rate is certain to double over the next two decades, reflecting the increasing output of Canadian medical schools from 1966 to 1985 as noted above. Thus, as Ms. Ryten points out, in 1960 there were 871 medical graduates but only 471 MDs thirty-five years earlier, for a net gain of almost 400 physicians. By 1974, there were 1,560 graduates with only an expected loss of just under 500 for a net difference of 1,000. In 1997, this differential had shrunk, with 1,581 new medical graduates, roughly the same number as '74, now, however, balanced by an anticipated departure of 854. Thus, based on simple actuarial projections of sizes of graduating classes and even ignoring the discounted yields, the pure class sizes alone predict with a high level of confidence a negative trend by the year 2009, with the number of departures exceeding the number of new practitioners.

However, a number of factors will clearly accelerate this trend;
IMMIGRANT POOLS

The number of landed immigrants to Canada who noted medicine as their intended occupation peaked at the same time as our class expansion was proceeding. Thus, approximately 1,000 landed immigrants in 1974 when added to the 1,560 Canadian graduates, meant a net input of 2,650. Hand in hand with the draconian cuts in entry class size, there was a dramatic and almost uniform restriction on immigration of physicians to Canada. This has had quite a substantial effect. Thus, between 1974 and 1994, the numbers dropped from 1,000 to approximately 500 and in 1997, the number of landed immigrants claiming medicine as their intended occupation, was 245. When added to the intake of new graduates of that year of 1,577, the net intake of 1,822 is more than 800 "units" of medical manpower lower than in 1974, and this is all in the face of a population increase.

POPULATION GROWTH

In order to maintain self-sufficiency in M.D. manpower production, Canada would have to provide additional physicians to match the burgeoning population. The projected growth rate of some 371,000 individuals per year between 96 and 06 suggests a need for approximately 700 additional physicians per annum to meet the increased population size.

EMIGRATION

Statistics Canada has indicated that the net emigration rate of Canadian physicians has increased from about 378 in 96 to about 550 in 98.

Mamoru Watanabe has discovered an additional trend supporting the Stats Canada numbers, suggesting that physicians, within 20 years of graduation, are leaving the labour force at increasing numbers. Thus, he raised a concern that the actual slopes of loss were inordinately conservative and the deficit would be even greater than conservative projections indicate.

WOMEN IN MEDICINE

Dr. Watanabe has also suggested that the increasing number of women in the profession might in fact exacerbate these declining trends. He has noted, and I believe there are CMA task force data to support this contention, that women provide fewer total years of work in a career path, given the time to bear and rear children. This is an additional trend not easily parsed into the equation, but providing a further downward pressure on size of the pool.

There are two simple calculations to close this section of the review.

1. The current entry size is approximately 1,500 physicians per year based on 1997 numbers from the graduating class (re-

member this is not yet the low point of the decline). If this is the input side, what is the output flow? The CMA Physician Master File shows approximately 1,000 retirements and deaths as being the current rate. If we add to this the net emigration of approximately 500 physicians and the increased need of 700 per annum to look after the increased population size, we seem to have an outflow of 2,250 physicians per year. This is a very serious net negative balance.

More worrisome are the projections for the next decade. As noted previously, the loss rate will increase substantially and as I noted previously, has been projected as exceeding 1,500 by the year 2009. If we in fact maintain our current medical school production size at less than 1,500 effective output (noting only an 85-90% retention rate even at seven years) and the emigration noted above, then Canada will be producing, if current trends are not dramatically altered by active governmental intervention, no more than a half to two-thirds of the required physician output to maintain self-sufficiency. Just for comparison, Canada, with 31 million people, producing 1,500 doctors per year, should be compared to the United Kingdom, whose population of 58 million has led the government to recommend an increase of medical school intake to the U.K. to 5,000 per annum. That number should give us pause.

Several further points are worthy of note. First, the "incubation period" for the production of a physician from the beginning of medical school to the development of an independent specialist, is approximately 10 years, and a family physician, approximately 7 years. Therefore, in order to have any impact on our production rate of physician manpower in the year 2006-10, we must take action NOW! The ACME, together with the Royal College, the Collège des médecins, and other organizations, gathered together in the Canadian Medical Forum, have been attempting to bring this point to the attention of the provincial ministers of health as well as the federal minister, Mr. Allan Rock. Thus far, Quebec has initiated a manpower study and has stabilized the class size, i.e. halted the cuts. There is no indication yet of when an increase in the class size will be implemented. I should point out that although an increase in class size would lead to increased funding for the Faculty of Medicine, it would also necessitate the rapid expansion of infrastructure needed to teach additional medical students. You are all aware of the need of clinician manpower for teaching, in particular in the new curriculum, and the high demand of bedside and operating room education. This point has been made to the Government but thus far, with no concrete responses.

It is interesting to note that we pay increasing
attention to teaching our students, both at McGill and throughout Canadian medical schools, the appropriate attitudes, skills, values and behaviors appropriate to Canada's multicultural population. We are sensitive to the quality of the training and hence, the product. It is not clear that immigration, other than in exceptional circumstances from academic centres elsewhere, will permit us to maintain and increase the need for recruitment of academic clinicians. Therefore, for medical schools in particular, the need to be self-sufficient, i.e. train our own specialists, is critical.

It is also important to note that McGill, together with other medical schools, has used recruiting from outside Canada as an important source of academic talent. This cutback noted above by Government has been not only in medical school numbers but, as mentioned previously, in the ability to recruit foreign medical graduates. Unfortunately, our need to recruit chiefs of departments and outstanding clinical scientists with training in France, Switzerland, the United Kingdom, Australia and elsewhere has been dramatically hampered by the draconian if not Kafkaesque policies of the Government. It is all part and parcel of a misperception of the overabundance of medical manpower. As a result, the four medical schools in Quebec are permitted currently to recruit amongst them, only 8 foreign medical graduates per annum. This is clearly insufficient to meet our needs and we continue to make representations to the Government that I believe will be successful in lifting these restrictions.

Lastly, as you know, the number of residents in our programmes is linked directly to the number of graduates in the Quebec medical schools. Thus, the decreased number of medical students has led to a decreasing pool of residency numbers over the last number of years. It is only by receiving permission from the Government of Quebec to recruit foreign medical graduates as residents and trainees that we have been able to cope with the dramatic cutbacks. Thus, a change to one policy will improve all policies.

The silver lining in all these clouds is, I believe, that the policies are about to change but require a concerted show of force. I believe we will see the following over the next two years:

1. A recognition, both provincially and federally, of this dramatic pending shortage of physicians.
2. A call by governments to substantially increase the class sizes of medical schools.
3. A lifting of restrictions on academic recruitment of foreign medical graduates.
4. A loosening of restrictions to recruit foreign physicians to work in the community.

The reason it is important to act quickly is that, as all of you are aware but governments sometimes forget, the incubation period of a specialist from entry to medical school to entry into practice is in the order of 10 years and a family physician in the order of 7 years. Thus, in order to have an appropriate medical manpower pool for the year 2009, we must act today.

REFERENCES

2. E. Ryten. None is too many - it's time to discard this bankrupt physician supply policy for Canada. ACMC Forum 1998; 31(3):8-17.
This article reviews the 35th anniversary of the first Canadian-made artificial kidney recently placed in a medical history museum in Kingston, Ontario, and used for many years at the Royal Victoria Hospital.

**The Kingmed Artificial Kidney**

In 1965, I was privileged to spend a year with Dr. Andrew Bruce in the Queens Department of Urology. The year before, at McGill's Royal Victoria Hospital, I had the opportunity to see the revolutionary Kolff artificial kidney. This washing machine-sized 100 liter device was a new Dutch invention for dialysing patients with renal failure. It used a cellophane dialysis membrane. It was very large and I noted that it was not able to keep a constant diffusion gradient; to optimize the third space effect. It seemed more efficient to establish a smaller 10 liter perfusion bath with a constant level of solute, maintained by a simple overflow drip of perfusate. The level of gradient could easily be maintained or altered by changing the turnover rate in the bath. During my resident term, I discussed this idea with Dr. Peter Morrin, the Chief of Nephrology at K.G.H. About the same time, I met Mr. Fred Siemonsen, through my position as National Medical Director of the Canadian Ski Patrol. He was managing a machine shop started by his father. We got onto the subject of building a prototype of this dialysis machine and he agreed to help produce it. After several months, this remarkable person had fabricated what looked like a working model.

At exactly that time, I received a late evening call from Dr. Morrin to see if the machine could be made available on an emergency basis. We drove a pickup truck to the machine shop and washed down the newly fabricated artificial kidney. This was brought to the K.G.H. in the middle of the night and put into action. To our pleasant surprise it functioned without a hitch, and was run on a regular basis thereafter. Needless to say, clinical trials of the sort required today were not done.

After several weeks, we decided to attempt to manufacture the artificial kidney. A financial partner was found and Kingmed Limited was established. Machines were manufactured and sold in Canada and the USA, before passing into the hands of an American manufacturer. The machines were operated for many years at the KGH and Royal Victoria Hospital.

Dialysis was smoother on the patient's fluid shift and there were fewer blood-brain barrier symptoms. In addition, a cost saving feature was the re-use of previously disposable perfusion coils which were washed with chlorhexidine, rinsed and re-used many times. This was appreciated by the descendants of Scottish settlers, running the hospital. It is remarkable that one of these 1965 machines survives today, and is being preserved at the medical museum in Kingston.

**C.F. Douglas Ackman, M.D., F.R.C.S. (C), F.A.C.S.**
Clinical Associate Professor, McGill University

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Valerie Shannon Appointed MUHC Director of Nursing

The appointment of Valerie Shannon as the MUHC's first Director of Nursing was unanimously approved at the November 27 meeting of the Board of Directors.

In making the announcement, Executive Director Dr. Hugh Scott expressed his delight at the appointment, referring to Mrs. Shannon, and the recently appointed Director of Professional Services, Dr. Denis Roy, as two outstanding senior clinical leaders. He added that the membership of the MUHC's Central Administrative team was now complete.

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Dr. C.F. Douglas Ackman
On September 23, 1998, the Canadian Blood Services (CBS) took control of Canada's blood system except in Quebec where that role has been assigned to Héma-Québec. Restoring public confidence in the safety and security of Canada's blood supply system is the top priority for CBS, says its new Chief Executive Officer (CEO) Lynda Cranston. Mr. Kenneth J. Fyke is Chair of the Board. CBS is a national, non-profit organization that features six important elements designed to result in a safer and more accountable blood supply system for Canadians.

The first important feature is the structure and composition of the CBS Board, which has been designed to reflect and balance key blood system stakeholder interests. The Board includes consumer, medical, technical, scientific, public health, and business community representatives.

CBS is assuming responsibility for 15 blood and 2 plasma centres, as well as thousands of local blood donor clinics from the Red Cross. Each of them requires many people to donate their time or a unit or two of blood.

"Canadians must and will have access to safe and adequate supplies of blood, blood products and their alternatives, whenever and wherever they need them," says Cranston.

For more information on Canadian Blood Services, or to find out how you can get involved, please call toll-free at 1-888-462-4056, or visit the CBS Web site at: www.cbstb-btscs.com.

Ed's Note: This information was obtained from the Canadian Council on Health Services Accreditation.
News From The McGill Division of Surgical Research
— By Lawrence Rosenberg, M.D., Ph.D.

Well another MRC operating grant deadline has come and gone - good luck to all those hearty souls who have ventured out once more into the barren wilderness of Canadian research funding opportunities.

Closer to home, the creation of the MUHC will soon begin to affect the way research is organized and conducted. The new Associate Executive Director for Research (a.k.a. Scientific Director of the merged research institutes), Dr. Emile Skamene, is finalizing plans to orient research around defined axes. Researchers (and their clinical collaborators) are being asked to review the current draft version of the plan and to indicate in which axis(es) they would like to reside. The three axes that should be of interest to most of us in surgery are Molecular and Medical Oncology; Infection, Immunity, Injury and Repair; and Cell, Tissue and Organ Engineering. These are truly exciting times and everyone is encouraged to participate actively.

Within the Division, the pace of activity increases. A new Executive Committee will come into being this month to deal with issues that transcend the graduate program and that concern all of us in the Department. We need to establish a strong presence within the new MUHC (virtual) Research Institute, and this will mean growing stronger and becoming better integrated within the Division. I encourage everyone with an interest in research in the Department to send me their comments, suggestions, worries, or anything else that you feel we need to be dealing with at this time. The landscape is changing quickly and we must be prepared to stay at least one step ahead of the maddening rush.

These are truly interesting if not somewhat chaotic times, but the opportunities are there to be seized. I invite the surgical research community to come together with one voice to make certain that Research in Surgery will have a definitive and prominent place at the table of the MUHC.

One example of the exciting research being conducted in the Division is described by Dr. Steffen.

"Back" To The Future
ORTHOPAEDIC RESEARCH LABORATORY
DIVISION OF ORTHOPAEDIC SURGERY, MCGILL UNIVERSITY

The Orthopaedic Research Laboratory was founded in May 1993 within the Division of Orthopaedic Surgery, and has grown steadily since then. Today it has sixteen full-time employees from a variety of academic disciplines (surgeons, molecular biologists, engineers, etc.), forming a competitive interdisciplinary research team. The laboratory also has a large stake in academic education, with six Master's degrees (two jointly with other engineering disciplines) and three PhD degrees supervised and completed in the last three years. Traditionally the group has a core competence in spinal research. However, many of the basic science research topics are equally relevant for other orthopaedic subspecialties, and the laboratory plans to diversify its activities in the near future. Presently there exist three main research streams: (1) intervertebral disc degeneration and repair; (2) bone graft substitutes; and (3) minimally invasive surgical techniques.

In the industrialized world, life expectancy has increased considerably in the past fifty years. The percentage of senior citizens in the overall population is increasing. Accompanying this observed shift in age demographics is a drastic increase in the prevalence of medical ailments related to degenerative changes in the musculoskeletal system. The aged human body, due to wear and decreased physical activity levels, is more susceptible to such ailments. However, seniors seventy and even eighty years old still could have an excellent quality of life. The problem is so alarming that UNESCO has declared musculoskeletal diseases to be the primary health care concern of the next decade.

Spinal diseases, prevalent also in middle age, are the most costly reason for workman's compensation payments, and the second most common diagnosis for sick leave in the Western World. The lifetime probability of an individual requiring medical help for back pain is eighty percent. The total cost to society for primary medical treatment and secondary insurance payments for back pain is estimated in the United States alone at sixty billion dollars annually.

Today, spine surgery has a re-operation rate estimated...
to be as much as fifty percent. The Orthopaedic Research Laboratory has developed research activities to explore alternative treatment methods. Instead of the symptomatic treatment methods (e.g., spinal fusion to stiffen the joint between adjacent vertebrae, partial removal for a herniated disc) used today to alleviate back pain, innovative molecular biology methods which stop or even reverse the degenerative changes observed in the aging intervertebral disc are being investigated. Also, in-vitro engineered tissue and organ cultures to be used as a transplant to functionally replace the degenerated intervertebral disc are being studied. Such causative treatment methods would likely not only be cheaper, but also provide a long-term solution to the problem.

The Orthopaedic Research Laboratory is supported by the Medical Research Council of Canada, The Arthritis Foundation, the Orthopaedic Research and Education Foundation, the Canadian Arthritis Network (NCE-Program) and the AO International Foundation. Its academic and industrial collaborations include numerous institutions in North America and Europe. The group publishes and presents internationally.

Thomas Steffen, M.D., Ph.D.
Director, Orthopaedic Research Laboratory

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**Were You There? 1971**

**GIFT FROM WOMEN'S AUXILIARY - RVH**

The LIFE ISLAND made by Mathews Inc. Alexandria Va., was a "room within a room" ventilated by special filters designed to produce a sterile air flow. It protected the infection prone leukemic, transplant or burn patient from the outside environment and allowed normal nursing function to be easily carried out without gowning and scrubbing required for old-fashioned isolation room care. It was made of clear plastic curtains with nursing sleeves on two sides for patient care. Food tray was autoclaved and placed by a sterile corridor on to the patient's bedside table. The Life Island was donated by the Women's Auxiliary of the Royal Victoria Hospital to the Transplant Service.
It may be that difficulties in the provision of Health Care in Quebec “bottomed out” in 1998. This austerity was the result of health care costs being slashed by more than 2 billion dollars by former Health Minister Jean Rochon. But he himself became a Health Care cut as a result of the Provincial Election on November 30th. Though elected in his county by a slim margin he was transferred to another portfolio. (Remember that 10 hospitals were closed in the Province since 1995, seven of them on the island of Montreal including the Lachine General, the Reddy Memorial and the Queen Elizabeth.)

Better Times Ahead?

By E.D. Monaghan, M.D.

When the National Assembly resumed its sessions in early March, the new Health Minister, Pauline Marois, announced that “the era of painful cuts in Quebec hospital funding is over.”

In his budget tabled in the National Assembly on March 9th, Quebec Finance Minister Bernard Landry allocated substantial amounts to Health Care – $1.7 billion. One billion dollars will be for patient care and services. This includes 300 million for hospitals which have kept within their budget (“they performed well”) and 700 million for salaries, home care and services for the elderly, and the mentally and physically handicapped. We do know that the $13 billion a year spent on health care (30% of the provincial budget) will be augmented by some of the $1.4 billion windfall in equalization payments from the Federal Government. In spending for Health Care, Canada is ranked 7th (tied with the Czech Republic) at 9.6% of Gross Domestic Product. The USA is first at 14.2% and China, Uganda, Trinidad and Tobago have the lowest health spending at 3.8 to 3.9%.

At a press conference given in Montreal on March 5th, Minister Marois announced the following policies;

1. The government will intervene in the planning of hospitals affiliated with Universities. She seems to support the McGill super hospital but not the one for Université de Montréal. The latter proposal may be dropped in favour of maintaining the 3 present pavilions at Notre-Dame, Hôtel-Dieu and St-Luc.

2. It is intended that more nurses will be recruited. The Quebec Federation of Nurses has 47,500 members but 5,000 have retired or left the profession.

3. The government will “accelerate” the establishment of Ambulatory Care Centers in Hospitals. This would decongest Emergency Rooms and by improving Day Surgery, would diminish the length of OR lists.

4. Increase the numbers of beds in Long Term Care Institutions by 600.

5. Provide the wherewithal so as to decrease waiting times for elective surgery. This will be done by hiring additional personnel and by adjusting hospital budgets so as to allow more operations to be done.

6. The government’s Info Health hotline will be expanded. This is the one that has been a success in answering all kinds of questions relating to Health, but in the future, it will also take distress calls from depressed or suicidal patients.

These measures were welcomed by the Quebec Federation of Specialists as well as by the Quebec Federation of General Practitioners. It is felt that these measures will correct overcrowded Emergency Rooms, decrease OR wait lists and improve the care of the elderly. The Quebec Hospital Association is also pleased with this infusion of funds into Quebec Hospitals with emphasis on care of the patients rather than on fiscal matters, structures and established dogmas. But Madame Marie-Claire Daingneault-Boudreau, president of the QHA cautioned that there is a lot of work to do. By March 31st, the accumulated deficit for Quebec Hospitals was $650 million. Finance Minister Landry has allocated $700 million to erase these shortfalls.

Dr. Hugh Scott, Head of the MUHC, is delighted with the news that a huge burden may be lifted. Since 1995, the RVH, MGH, MCH and MNH have accumulated a deficit of $75 million – a crippling 19% of their $400 million operating budgets. For 1998 alone, they were $29 million in the red. It is hoped that this $29 million deficit will be eliminated in 2 years. So it looks like the future is brighter.

EDM

REFERENCE


“The Square”
Dr. Alan Turnbull, Attending Surgeon at the Memorial Sloan-Kettering Cancer Center in New York has kept in shape by running marathon races and skiing in Mont-Tremblant. Alan who graduated from the McGill Post-Graduate Training Program in General Surgery in 1967 was one of 32,000 runners in the New York City Marathon last November 1st. They were cheered by 2 million spectators, serenaded by 40 bands, hydrated at 24 water stations and tinctured at two dozen medical stations. While New York is one of the world's greatest marathons, it is not one of the most exotic. In 1997, Alan ran in the Medoc Marathon in Bordeaux, France. The course winds through 53 vineyards and features wine stops at every mile. While the average marathon offers water and gatorade, the Medoc marathon tempts with Lafite-Rothschild, Pichon-Longueville, Latour and Mouton-Rothschild.

Last January, Alan ran in the Antarctic Marathon. The course stopped at the various research stations from Chile, Ecuador, Russia, Poland, Argentina etc. ending at the Chinese Base where they were welcomed with tea, rice and souvenirs. The snow and ice were on the first third of the course, on a glacier. Since this was their summer the course was largely mud and slush and the temperature above 0°C.

The purpose behind this was to become the first group of people to ever have run a marathon on all 7 continents. Obviously, Antarctica was the most difficult. They sailed from Ushuaia on Russian research vessels specially built for Antarctic waters. Last summer they ran the African race in the Kruger National Park and this year they race somewhere in South America. That will leave them their final race, the 7th continent, which is already scheduled for the break of dawn, January 1st 2000 on the north island of New Zealand. As the world turns, that is one of the earliest places where the sun will rise that day, and the race will be the first major athletic event in the new millennium, anywhere in the world.
Chairman’s Message
— By Johanthan L. Meakins, M.D., D.Sc., F.R.C.P.C., F.A.C.S.

The first annual general meeting at the MUHC took place on January 27, 1999. The following were Dr. Jonathan L. Meakins' remarks:

Ladies and Gentlemen,
It is an honour and pleasure to participate in the First Annual General Meeting of the MUHC. Key words are First and Annual as we are participating in the birth, growth and development of an extremely important process which will permit us to continue to deliver the quality of care to our community that it has come to expect. You would think that I would be the last to want to move to the Glen Yards. My family has been at McGill hospitals almost continuously since 1904 and since 1924 in positions of responsibility. I am at the tail end of my career. Why ask for the agony of implementing dramatic and radical change? So why do it?

The MUHC's First Annual General Meeting Takes Place

It is the premise of the Surgical Department that the creation of the MUHC and the move to the Glen Yards will allow us to provide MORE services not less, and those in keeping with the clinical, technological and pharmacological advances in our peer countries. Frankly, these institutions are accustomed to being in the forefront of clinical advances and in many areas. Within our present buildings, we have reached a limit of where surgical services can go. You should know that the life of an American hospital is 20-25 years when it is replaced as non-functional and ill-suited to the continual changes in the delivery of surgical care.

Vis-à-vis integration, we have started to see the benefits of developing a critical mass of experts on a single site providing leading edge clinical care. The MUHC Transplant Program is the largest in the Province having in 1998 transplanted the most livers, 43; kidneys, 48; pancreas, 9; and hearts, 13; and over a third of all donors in the Province. We are second to Toronto as a multi-organ centre. The Vascular Group has the most modern vascular lab and a critical mass of surgeons providing service across the 3 adult hospitals. They have started doing non-invasive aortic surgery, but to be state of the art need dramatic changes to the operating rooms to do this work.

The Trauma Program is unexcelled. New recruits in Orthopaedics and General Surgery have re-energized the entire program despite our desperate shortage of a crucial human resource, the anaesthetists. Advances in technology have allowed Ophthalmology to maintain and increase its volume of cataract surgery while becoming the centre for retinal surgery entirely in the same block of operating time.

Somehow, we have maintained the number of OR minutes with a small decrease in total number of cases.

How have we managed? The management module combines a collaborative approach at every level specifically Surgery and Nursing for all surgical services: Surgery, Nursing and Anaesthesia in the OR and all in the Intensive Care together with the intensive care specialists. All are required as we are totally interdependent. We call this “Co-Gestion” or partnered management.

Using this approach, involvement of all professionals, in developing preadmission clinics, day surgery, same day admission, has permitted bed closures but no decrease in services delivered. Indeed, we are doing per site, 15-20% more cases than in 1990. Over 45% of surgery is now Day Surgery and our target is 60%. However, I do not think we can do it in our present plants even with planned renovations. Today, a patient goes to preadmission, then to x-ray, often to cardiology, respirology, or endocrinology; back to preadmission all taking days to weeks, not counting the hours they spend wandering about lost. The day of surgery the patient goes to admitting office, ward and OR. Given our plant and considering the elevators - hardly patient friendly - we cannot do better.

The lifetime of a hospital is 20-25 years. The centre of a Surgical Service is the operating room - ours (RVH, MGH) were built in the 50's and are several cycles out of date. Indeed in one building, the floor plate was too small when built and if you can imagine the need for video equipment, TV screens, the surgeon, assistants, anaesthetists, technicians, nurses and instruments; there is hardly room for the patient. The explosion in new minimally invasive techniques has revolutionized care. These Star War activities will be centralized at the Montreal General but I can only visualize, perhaps, creating two operating theatre rooms to include the everyday support tools required whereas we need at least 10-12. Some specialties will do most of their work through small incisions using TV, scopes and x-rays to guide their tiny instruments.

The MUHC, as an entity, underwent an accredita-
tion visit by the CCHSA. To summarize, they were amazed at the high level of care delivery in what were considered a dysfunctional layout of the buildings. Particular comment was made concerning staff dedication. The CCHSA wondered how we could provide so much support to families and were seriously concerned about this aspect of total care, as the simple cases go to day surgery or short stay and the acuity of inpatient patients becomes more intense, will our ability to look after patients and their families become increasingly compromised? This trend is exacerbated by the influx of the complex cases from surrounding hospitals.

Can our respective adult hospitals do everything. Not anymore. Increased complexity of inpatient care and sub-specializations demands grouping of patients. The volume must be adequate to ensure the level of understanding of the particularities of complex patients for ALL staff. Specialized areas of surgery become more complex, a critical mass of all will provide the best care. The more of any problem one sees the better we do. Integration will give our community the quantity and quality of care it deserves and to which it is accustomed.

Uncertainty is frightening, so is change, but for the surgical services, if we do not change and adapt, mediocrity is likely and that is an untenable. We have been reacting for too long and as an institution with its community, we need to drive the agenda, to maintain our level of caring and clinical excellence. That is what integration and the Glen Yards are about.

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**Were You There?**
**Royal College Exam 1965**

**THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA**

Fellowship written examination in GENERAL SURGERY

**PAPER NO. 1**
Monday, September 20, 1965, 9:00 a.m.

**SUBJECT**
The Principles and Practice of GENERAL SURGERY

**Three Hour Paper**
Answer any four questions. All of equal value.

Each question to be answered in separate book.

1. Discuss non-penetrating wounds of the chest under the following headings:
   a) classification
   b) clinical features
   c) treatment

2. Describe the aetiology, clinical features and treatment of non-malignant diseases of the colon which may produce obstruction.

3. Discuss reflux oesophagitis under the following headings:
   a) altered physiology
   b) clinical features
   c) treatment

4. Discuss the aetiology, diagnosis and management of post-operative pulmonary complications.

5. A 75-year-old male presents with an ulcerating lesion on the left side of the tongue. Describe the management of such a case.

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**Dr. J.L. Meakins announces New Appointments**

Dr. M.E. Elhilali
Vice-Chair, Department of Surgery
McGill University and MUHC

Dr. D. Evans
Director, Trauma Program

Dr. P. Guy
Clinical Coordinator, Trauma

Dr. G. Fried
Director, Minimally Invasive Surgery
Chair, Committee on Standards of Present and Future Video-scopy Equipment Across Sites

Dr. J. Hinchey
Director, Surgical Scientist Program

Dr. Phil Gordon
Chair, Promotions and Tenure Committee

Dr. M. Tanzer
Member, Promotions and Tenure Committee

Dr. S. Chevalier
Member, Promotions and Tenure Committee
The McGill University Breast Center is a comprehensive academic center where breast surgeons, radiologists, pathologists, geneticists and other health professionals work together in providing diagnosis, treatment and support for women with breast pathology. Research, teaching and patient care are an integral part of the center. At the present, it is located at two sites, the Royal Victoria Hospital (RVH) and the Montreal General Hospital (MGH). 13,000 women were seen in 1998. Since October 1998, the Breast Center has been designated one of five referral centers for the new provincial breast screening program. Once a mammographic abnormality has been identified in any of the provincial screening centers, patients are then referred here for further investigations. As our two sites (RVH and MGH) are electronically linked and with the Régie Régionale Coordinating Center for the Screening Program, transfer of patient information is done promptly. Furthermore decisions about treatment is also made without unnecessary delay, thus decreasing patient's anxiety. In addition to research into teaching modalities for professionals and patients, evaluation of new diagnostic and therapeutic modalities are an important part of the mission of the center. The development and initial evaluation of the new Advanced Breast Biopsy Instrumentation (ABBI) was done at the MGH. Positron Emission Mammography (PEM), a new technology adapting the Positron Emission Tomography Technology to the assessment of breast lesions is being done at the RVH with the help of a prototype instrument. In collaboration with Dr. Chris Thompson from the Montreal Neurological Institute as principal investigator, a new grant has been submitted to the Breast Cancer Research Initiative to develop and utilize a new version of the PEM instrument which will help better assessment of deep seated breast lesions closer to the chest wall and also to assess the status of regional lymph nodes.

One of our goals is to continue to develop and evaluate the role of new technology in women with breast pathology in the hope that smaller and earlier cancers can be found and better treated.

A proposal and impact analysis for a McGill Breast Center to be located at the RVH site has been developed. Several meetings of involved individuals, the latest in February 1999 have helped clarify and solve some of the logistics of the merger. In the meantime our two sites (MGH and RVH) are proceeding functionally as one, the McGill Breast Center.

Given the designation of the MUHC Breast Center as a referral investigation center, there is a real need to ensure that all elements are in place for successful operation. Functioning at two sites has been possible. However, a single site operation seems more practical, more efficient and better for patients and staff. The Departments of Surgery, Radiology and Administration are committed to a successful single site operation. None of this would be possible without our generous benefactors such as the Cedars Cancer Institute and the Montreal Breast Cancer Foundation, the Girls for the Cure (Montreal Girl’s Private High Schools) and the Annual Carl Andersen run.

In summary, the emphasis of our center has been on the delivery of comprehensive care to the patients. It is time now to be more efficient by providing a “one-stop approach” at a single new location thereby substantially reducing the waiting time from the discovery of a problem to the time of diagnosis and treatment.

Royal College
To Change The Format of Its Meetings

The Royal College of Physicians and Surgeons of Canada have changed the format of the Royal College Annual Meeting which will be effective by the year 2000. In summary, the Royal College Meeting will be directed toward a single theme which will be in the field of education. The meetings will be held annually in Ottawa and continue to be held during the month of September. At the Annual CAGS Meeting in Toronto in 1998, the Board and Advisory Council ratified a decision to hold a separate CAGS Annual Meeting as of the year 2000. The proposal was to meet as a single organization initially, but to encourage affiliation with other surgical societies with relevant interests in CAGS. The time, site, and nature of the proposed autonomous meeting are still under discussion.
THE COLLEGE OF PHYSICIANS AND SURGEONS of Ontario like our own Collège des Médecins du Québec is very sensitive to patients’ complaints and professional misconduct. A seminar was held at the University of Ottawa in October 1998. Two speakers, Dr. Gary Johnson, anesthetist and John Carlisle, registrar of the O.P.S.O. discussed the most frequent complaints and how they investigate these.

Here is a list of the most frequent:

### About Clinical Examination
- Rough - Shoved, Squeezed, Pushed
- Excessive Force - Rapid uncomfortable movements
- Painful - Insensitive to Discomfort
- Abrupt, Brusque - Cursory, Superficial
- Mean Attitude to Exam
- Used Unsterile Pin
- Took Phone Calls - Interrupted Exam
- Left Me Unattended - No Explanation
- Didn’t Explain the Examination
- Did Exam With His Young Child Present
- Provided No Feed Back During Exam
- Wouldn’t Answer Questions

### Personal Aspects Of Exam
- No One Else Present
- Remained in Room While Dressing/Undressing
- No Privacy
- Made to Undress Unnecessarily
- Not Told Why the Need to be Nearly Naked
- Refused to Provide Gown
- Felt Ogled

### Complaintant’s Feelings After Consultation
- Belittled
- Put Down
- Humiliated
- Embarrassed
- Scorned
- Mocked
- Demeaned
- Interrogated
- Disparaged
- Dismissed
- Rejected
- Abused
- Degraded
- Berated

### About Interview
- Didn’t Listen To Me
- Wouldn’t Let Me Finish
- Annoyed I Couldn’t Remember Details
- Didn’t Believe Me
- Berated My Views and Personal Life
- Dismissed My Questions or Comments
- Used Mocking Questions and Sarcastic Tone
- Asked Irrelevant Financial/Personal Questions
- Confused Me With Other Patient
- Deceitful About Relationship With Insurance Company

### Judgemental Comments by Consultant
- Accused Me of “Faking”
- Felt I Was “Cheating”
- Said I was a “Malingering”
- Commented I Was “Lazy”
- Said I had a “Manufactured Gait”
- Told Me to “Get a Life”
- Told Me to “Go Eat Painkillers”
- Said I Had Created a “Retrograde Disaster”
- Critical of Other Health Care Provider

### PATIENTS’ COMMENTS ABOUT CONSULTANT’S ATTITUDE, SENSITIVITY, PROFESSIONALISM

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Dr. Max Aebi is proud to announce that Dr. J. Dennis Bobyn, Director of the Jo Miller Orthopaedic Research Laboratory, along with his research team has won for the fourth time the Otto Aufrance Award of the Hip Society. This is one of the important awards in orthopaedic surgery in North America and it is quite a unique situation that this research group has won this award four times over the last 10 to 12 years. Dr. Aebi emphasizes that this demonstrates the acceptance of this work both in the orthopaedic as well as in the scientific world. The MUHC Division of Orthopaedics is very proud of the work of Dr. Bobyn and his colleagues as this puts them truly amongst the top leaders in arthroplasty research in the world.

In January of 1999, a Search Committee chaired by Dr. Martin Black, selected the new Head of the Division of General Surgery MUHC and McGill University to be Dr. Nicolas V. Christou. The Square Knot congratulates Dr. Christou in this appointment.

Dr. Francesco Carli, Chief of the MUHC Department of Anesthesia, is pleased to announce the appointment of Dr. Anneli Vainio, as Director of Chronic Pain Care at the McGill University Health Centre as of January 1, 1999. Dr. Vainio joined the McGill Department of Anesthesia in 1996 having graduated from the School of Medicine, University of Turku, Finland in 1973. She obtained a doctoral degree at the University of Helsinki in 1990 with her thesis being on the management of pain due to cancer. Dr. Carli urges us to take advantage of this first class service.

Dr. Ray Chiu was invited to Taipei in November 1998 as a member of the Advisory Council for the National Heart Research Institute of Taiwan, which is equivalent to the MRC in that country. He then spent a week as a Visiting Professor at the National Cheng-Gung University Medical College in Taichung, Taiwan. Dr. Chiu has been invited as a member of the External Scientific Advisory Board of the Ottawa Heart Institute and participated in its inauguration meeting on Feb. 11-12. He has also been invited to serve as Editor-in-Chief for a new international journal entitled Cardiac and Vascular Regeneration: Angiogenesis and Myogenesis, Basic to Therapeutic. The first issue of the Journal is expected early in the year 2000.

Two MUHC surgeons, Dr. Loretta Marcon, gynecologist and Dr. William D. Fisher, orthopedist were wed in a splendid ceremony in Westmount last September 12. The groom and best man were clad in full Highland dress.

In the October 1, 1998 issue of The New England. Journal of Medicine, there appears a landmark contribution in the treatment of a dreadful condition: osteogenesis imperfecta. It is entitled Cyclic Administration of Pamidronate in Children with Severe Osteogenesis Imperfecta. The authors are: Francis H. Glorieux, MD, PhD; Nicholas J. Bishop, MD; Horacio Plotkin, MD; Gilles Chabot, MD; Ginette Lanoue, RN; and Rose Travers, RT.

It is noteworthy that Dr. Philip H. Gordon has brought honor to McGill by his textbook entitled Principles and Practice of Surgery for the Colon, Rectum, and Anus. The second edition was published in December and has become a standard reference text for general and colorectal surgeons. It has been seven years since the publication of the first edition by Phil Gordon and Santhat Nivatvongs, Professor of Surgery at the Mayo Clinic. The first edition was hailed as a classic and is considered by many to be the leading source of colorectal surgery information worldwide. No other book in colon and rectal surgery delivers this much information. It is published by the Quality Medical Publishing Company, Inc. in St. Louis, Missouri.

Dr. Karen M. Johnston of the Division of Neurosurgery at the MGH has been awarded two grants from two sources as independent funding for certain aspects of research projects in her Neurosurgical Sports Medicine Clinic at McGill. The first is from the FRSO REPAR funding project and the second is from the SAAQ. This funding will be used for graduate student support and for further investigations in the management of sports related head injuries. Her sports clinic has made a name for itself by making a significant amount of progress in the field of sports related head injuries with particular attention paid to diagnosis, investigation and the management of this epidemiologically important injury.

Dr. Jean-Martin Laberge was Visiting Professor at Hartford’s Children’s Hospital on November 24th, 1998. He gave Grand Rounds on Fetal Surgery: Considering the Fetus as a Patient, and Neonatal Rounds on The Effects of Fetal Tracheal Occlusion on Lung Growth.

We are proud to announce that Dr. Carroll Laurin has been made Emeritus Professor of Surgery at McGill.

Dr. David T.W. Lin has generously endowed a fellowship in the Research Department of the Faculty of Medicine for a student at the post-doctoral, Ph.D. or Master’s level conducting medical research (The Dr. David T.W. Lin Fellowship).

At the end of March, Dr. L.D.
MacLean went to Naples in Italy to present a paper at the First International Meeting to Treat Obesity by Laparoscopic Techniques. His main message was Do not use any technique that doesn’t work by Open Methods!. In May in Orlando at the meeting of the Society for Surgery of the Alimentary Tract, Dr. MacLean will give another address on the management of obesity.

Dr. Jonathan L. Meakins is accumulating a lot of air miles. On November 11, he was made an Honorary Member of the Spanish Surgical Association. On November 13, he was appointed as Fellow Ad Eundem of the Royal College of Physicians and Surgeons of Glasgow. Between December 13 and 18, he was the invited speaker at the Philippine College of Surgeons and Philippine Society of Laparoscopic Surgeons. At the end of the year, he was the Henry Swan Visiting Professor to the Department of Surgery of the University of Colorado and to the Denver Academy of Surgery. The Square Knot is proud to announce that Dr. Meakins has been invited to deliver the Gallaie Lecture at the meeting of the Royal College of Physicians and Surgeons of Canada at its meeting in the year 2000.

Dr. David S. Mulder was made President-Elect of the Central Surgical Association at its meeting in St. Louis, Missouri, March 4-6, 1999.

Dr. Bernard J.F. Perey of Dalhousie University organized last fall the reunion in Halifax and Digby of the McGill class of Medicine 1956. There were 16 classmates along with spouses or girlfriends present. It was a real success.

Dr. Henry R. Shibata, as has become his custom, visited the Orient in November. He was invited to give two talks in Japanese in Hiroshima, the first of these on November 10th was entitled Changing Concepts in the Management of Breast Cancer 1998. This was given at the 60th Annual Meeting of the Japan Surgical Society. At the same meeting on November 11th, he gave another paper entitled Day Surgery and Same Day Admission. Henry then went to Taiwan in November 17th to address the staff of the National Cheng Kung University with a paper entitled Management of Breast Cancer: Changing Paradigms. He was Visiting Professor at this university from November 16th to the 19th. On the way back, he stopped at the University of British Columbia at St. Paul's Hospital and gave the John K. MacFarlane Oncology Lecture as a Royal College Visiting Professor entitled Changing Perspectives in Breast Cancer Management.

Dr. Judith L. Trudel has been appointed as Associate Editor of the Journal of Diseases of the Colon and Rectum effective January 1st, 1999. Starting in September of 1999, she will also be an Associate Examiner for the American Board of Colon and Rectal Surgery. Further, she has been appointed as Chair for the Self-Assessment Committee of the American Society of Colon and Rectal Surgeons for the term 1998-2001. She has been a member of that committee since 1993. This committee publishes CARSEP (Colon and Rectal Self-Evaluation Program), the colorectal equivalent of SESAP, every 4 years.

Dr. Carol-Ann Vasilevsky has been appointed as Chair of the Colorectal Surgery Subcommittee of CAGS and as a CAGS representative to the National Committee on Colorectal Cancer Screening.

Achievements Residents and Fellows

On February 10th, 1999, Dr. Vinay Badhwar was granted the degree of Master of Science from McGill for work done with Dr. Ray Chiu on The Use of Muscle as a Power Source for Implantable Cardiac Assist Device Design. He co-authored two chapters with Dr. David S. Mulder on Video-Assisted Thoracic Surgery. These were recently published in a textbook called "Minimal Access Thoracic Surgery" by Chapman & Hall Publishers. One chapter was co-authored with Dr. Chiu on Dynamic Cardiomyoplasty in the textbook called "Surgical Options in the Treatment of Heart Failure" by Kluwer Academic Publishers, which is due out in the spring. Vinay is currently completing his Cardiac Surgery Fellowship at the University of Ottawa Heart Institute and he hopes to practice in Canada upon completion.

Congratulations to Dr. Ioana Bratu for obtaining a fellowship from the Montreal Children's Hospital Research Institute. This will allow her to spend a second year in the laboratory of Drs. Flageole and Laberge, working on the Antenatal Treatment of Congenital Diaphragmatic Hernia. She will be presenting a video entitled Ultrasound-Guided Percutaneous Needle Deflation of Fetal Intra-Tracheal Balloon Occlusion at the upcoming meeting of the American Pediatric Surgery Association.

Dr. Talat Chughtai has been accepted into the Cardiac Surgery Residency Training Program here at McGill, starting July 1st, 1999 for 3 years. He recently presented a paper at the 2nd Biennial International Congress of Cardiovascular and Thoracic Surgery in Karachi, Pakistan entitled The Role of Cardiopulmonary Bypass in Trauma. Talat will be presenting a paper at the upcoming 79th Annual American Association for Thoracic Surgery meeting in New Orleans entitled Long-term Effects of Cricopharyngeal Myotomy for Muscular Disease of the Esophagus.

Congratulations to Dr. Stephen Korkola and his wife Emma on the birth of their son Samuel Stephen born at the RVH on March 26, 1999, weighing 7 pounds, 7 ounces; baby brother for Benjamin...
The Adjudicatory Committee of the Board of Associated Medical Services has recommended Dr. Martin Entin be awarded a William B. Spaulding certificate for 1998.

**Special Award to Dr. Martin A. Entin**

This award was created to recognize the contributions made by Practising Physicians to the development to the History of Medicine in Canada. The award is named in honour of Dr. Bill Spaulding, an avid Physician-Historian himself.

Throughout his association with the hospital as Surgeon-in-Chief of Plastic Surgery, Dr. Entin had a sustained interest in developing the Surgery of the Hand, especially the correction of congenital deformities of upper limbs in children. He developed a number of innovations through research which enabled more efficient reconstruction of the malformed limbs and hands.

In 1973, Dr. Entin was elected President of the American Society for the Surgery of the Hand and took part in the first exchange of surgical information on Replantation during his visit to China. He invited the Chinese Replantation team to visit McGill University and to present their work at the Congress in Dallas, Texas in early 1974.

In 1986, Dr. Entin was honoured for his contribution to Surgery of the Hand by the Third Congress of International Federation of Societies for Surgery of the Hand in Tokyo, Japan as a Pioneer in Hand Surgery.

More recently, as Chairman of the RVH Centennial Volume Subcommittee, Dr. Entin worked closely with the author, Neville Terry, achieving the publication of the New History of the RVH in time for the Centennial Celebration in 1993.

In 1994, the Board of Directors of the Royal Victoria Hospital honoured Dr. Entin with the RVH Distinguished Service Award for his continuous dedication to patient care and teaching of students.

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Dr. Victor Chu, a 4th year Cardiac Surgery resident, is the recipient of the TSDA (Thoracic Surgery Directors Association) Resident Research Award for 1999. This is the second consecutive year that a McGill cardiac surgery resident wins this award, Dr. Marc Pelletier receiving this award in 1998. Victor's research work which was presented at the Society of Thoracic Surgeons Annual Meeting in San Antonio, Texas was judged as the best paper by a resident from those submitted by residents all over North America.

His prize winning paper was entitled "Angiogenic Response to Transmyocardial Revascularization (TMR): Laser versus Mechanical Punctures." This work was carried out in Dr. Ray Chiu's laboratory during Victor's academic year as a third year resident. The presentation of this award was first announced at the TSDA meeting held prior to the STS meeting; and the second presentation was before the membership of the Society of Thoracic Surgeons. Winning this award two years in a row is a tribute to Dr. Chiu's strong research program, and Victor Chu is to be congratulated for his superb work, and bringing honor to the McGill Cardiac Surgery Residency Program. We are very proud of Victor's accomplishment.

Dr. Victor Chu and his wife Jennifer are the proud parents of a daughter Emily Jia born on March 26, 1999.
As Washington stood on the brink of impeachment in December and President Clinton ordered missile strikes against Iraq, another event across town went unnoticed. It was one that could turn out to be even bigger than the other two.

The Y2K Iceberg

A two-day conference called Y2K Scenarios and Strategies: Coping with Disruptions and Managing Long-term Consequences was hosted by the Washington-area-based World Futures Society (WFS). It was an event that still leaves me feeling shaken and afraid - yet paradoxically with a growing sense of hope.

HOW BIG IS IT?

Dr. Harrison Fox, senior staff person with the US Congressional Subcommittee on Government Management, Information and Technology, summed it up this way: "Members of Congress and staff are just beginning to recognize that this may be the third largest national emergency of this century, behind World Wars I and II."

Yet Fox, who prepares a Congressional report card on US Government Y2K "mission critical" readiness (the last grade was a "D" overall), maintains a sense of calm and humour, even while talking about his "Top 10 list of disasters waiting to happen" - from oil and gas shortages to worldwide recession. He uses a big red Year 2000 tool box, complete with an 11 foot pole (to help national leaders touch this "untouchable" issue) and a child's "Ernie cup," to remind us that "We have to keep things simple and very understandable." Fox brought a refreshing candour and clarity to a complex and politically-explosive issue.

THE SIZE OF THE PROBLEM

Major presenters described the Y2K 'berg as having four key levels. The tip of the iceberg is the well-known, two-digit-date computer software problem. Affecting governments, industries and institutions worldwide, it's generally accepted that the problem is too big, the cost of fixing it too much (estimated at $600 billion), and the time available too little for key operations in all sectors to be fixed. US officials report that many federal programs - such as Medicare payments - will have failures, and that cost estimates have grown by two to three times. Once thought to affect only the largest companies, it's now also known that "the date problem" affects everyone with a computer.

The next level, what's called "the OTHER Year 2000 problem" by research scientist Dr. Mark Frautschi, is the issue of embedded chips and systems. Computer chips regulate and control a large part of our society. From the guidance of missiles to electric power and distribution systems, gas pipelines, water supply and sewage treatment systems, to office security systems and home electronic equipment, these chips are everywhere.

It's estimated that there are about 50 billion in use worldwide. Some of these are date sensitive and not-year 2000 compliant. That means these chips will begin failing around January 1st, 2000 and for the first few years of the new century. The question is, how many? No one knows.
According to Dr. Frautschi, studies he’s seen range from .001 per cent to .33 per cent of chips. Michael P. Harden, whose Virginia-based Century Technology Services, Inc. helps clients find and replace chip-based systems, says there will be far more. He predicts over 2 per cent will fail, based on his company’s own research. But what does that mean to us?

“Our information from manufacturers,” says Harden, “is that an average of 5 per cent of devices using computer chips will have Y2K problems.

The chip problem can pop up anywhere. In its own Y2K testing, the Baton Rouge, Louisiana Fire Department found that ladders on some fire trucks would not extend. Other tests reported at the conference showed failures ranging from water pumps to cell doors in prisons (some sprang open, some locked shut).

Implications of the embedded chip problem could be severe. Dr. Fox said that one major gas company expects pipeline explosions as a result of chip malfunctions. He also said there are strong concerns over potential chip failures in marine vessels, since 95% of US imports and exports (and 50% of its oil supply) come via ships, which are often poorly maintained.

Retired naval officer and Y2K writer Jim Lord says that the environmental implications of the problem are “nothing short of staggering.” Because of the countless industrial processes (using these chips) that produce or use pollutants, poisons, or toxic substances, the crisis “poses what is likely the greatest environmental threat in history.”

THE BUSINESS DILEMMA
The third level of the iceberg was described as our “Interconnectedness.” As a society, we have become heavily dependent on a thin, vast web of essential services – particularly telecommunications, electricity and water supply – to run our lives. As the Asian market crisis demonstrated, our stock markets and economies are now highly interdependent. So too are our individual businesses which depend on each other for their goods and services.

In business terms, it’s called the supply-chain effect. “The one thing that has the capacity to bring [society] to a screeching halt,” says Michael Harden, “is the failure of our supply chains.” Harden cited last year’s United Parcel Service (UPS) and General Motors shutdowns as examples.

In the case of UPS, hundreds of thousands of businesses closed temporarily or went out of business because they couldn’t ship or receive goods – all because this one major supplier was down for a couple of weeks. GM, on the other hand, had to shut down operations when two of its parts suppliers went on strike for about a month. The shutdown put 180,000 out of work and cost the company $1.6 billion.

Today, our “just-in-time” delivery systems – where parts are installed on manufacturing assembly lines in as little as 15 minutes after being delivered to the plant - leave industries very vulnerable to short term disruption.

What happens, asked Harden, when January 1, 2000 hits? “Some people say they’re pretty optimistic that no more than 5 per cent of businesses may fail due to Year 2000 problems. If 5 per cent of your key suppliers weren’t available for you, would you be able to stay in business?”

Harden and others believe we will need a major effort in the next year to ensure that our suppliers and those organizations we depend on are there for us when the year 2000 hits.”

THE PEOPLE FACTOR
The deepest and perhaps most important part of the iceberg is the people factor. How we individually react and respond during 1999 is expected to make the difference between a manageable crisis and an all-out disaster.

Many participants spoke of the “Y2K panic factor” – where some people respond with fear, whereas others help one another as happened during last year’s ice storm in Eastern Canada and the Northeast US. The need for personal calm, focus and action was stressed to minimize fear and maximize readiness.

Concern seems to be growing among those who know most about the problem. Harden, one of the top consultants in the field, says he’s personally swung from being an optimist to a pessimist on Y2K. “It’s going to be more severe than we think. The more we work on it, the bigger it gets.” Paula Gordon, a research professor who’s worked on emergency planning at the Federal Emergency Management Agency and the Federal Energy Office (during the energy crisis of 1974), is another who’s clearly worried. She believes that Y2K will result in the crippling of infrastructure and the collapse of markets.

Stephen Davis, a former firefighter who’s now budget chief of Montgomery County, Maryland, is surprised at how slowly people have responded to the issue. He’s been working on Y2K issues almost full time since 1996. “I never thought it would take so long. We still lack national program, and the local levels are waiting for direction.”

State and local governments are 15 to 18 months be-
hind the Federal government in their preparedness, and over 50% of counties have still taken no action on Y2K. This is especially important since 'much of the impact of the Y2K crisis will have to be dealt with at the local community and regional level'; according to Kenneth Hunter, co-chair of the conference.

One former NASA engineer sees a more immediate problem. "I'm here to learn how I can talk to my family about this. They all think I'm crazy," he said. It was a concern shared by many at the conference. While research shows that general Y2K awareness has grown, most conference participants believe that government, industry and the public still do not grasp the potential size and importance of the problem. And since no one knows for sure what will happen, it's a hard subject to talk about.

Many would rather not talk about it at all, to avoid creating panic. However, "it's important to give people good information," said Dr. Douglass Carmichael, psychologist and president of Shakespeare and Tao Consulting. "And we can't just say 'it's going to be okay.' It might not be fixed." He suggested the best option is to give clear information on what's been found and what is likely to happen, what the repercussions could be, and what we have to do to deal with it.

WHERE'S THE HOPE?

All this may sound extreme, even paranoid. It's an issue conference organizers struggled with in preparing the agenda: how to cut through participants' awareness or denial of the problem without seeming like alarmists.

"Creating panic serves no end," says co-chair Robert Chartrand. "But companies and agencies need to treat this situation as a complex emergency, starting now, and deal with it accordingly."

The real work of the conference, said co-chair Hunter, was to create "tangible actions that participants can take now to successfully cope with the crisis." Or as Jan Nickerson, a Massachusetts woman who's designed a card game to educate people about Y2K, said "to build community not crises."

Nickerson was not alone. Other participants felt this global crisis can also be a global opportunity.

John Peterson, a twice-decorated, former naval flight officer-turned-futurist, described it this way: "In each stage of history, [we] must learn to adapt. Y2K is a learning event for humanity to get to the next stage. It's an opportunity and a test. It will require a whole new way of thinking and responding... If you sit around and wait for leaders, you're going to miss this one. It's not a technical problem. It's about people."

Jonathan Spalter, a senior official of the US Information Agency, said "Unlike a natural disaster, we can prepare for and act on this one. "A Y2K solution requires not merely a technological response," he said, "but a global diplomatic response" plus creative social and economic action, such as the worldwide effort that successfully limited CFC use in the mid-90s.

Progress was reported in many fields. Financial institutions seem to be the most advanced towards Y2K compliance. Several local government officials described advances in their Y2K prevention efforts and emergency preparedness. US Federal departments such as Social Security, Environment, and Commerce have their critical systems nearly ready. Energy companies such as Atlanta Gas Light Company have well developed contingency plans. And Harden's Century Technology Services has compiled a database of over 1 million embedded chips, helping clients identify those which may breakdown.

The number of organizations and networks set up to communicate information and encourage action is also spiralling. The World Futures Society has created an excellent database of these resources on its website (www.wfs.org/y2kcfrrc.htm).

ALMOST TOO MUCH TO TAKE

Despite these signs of progress, the spectre of exploding pipelines, nuclear missiles going haywire, and the potential for economic breakdown and environmental disasters seemed to far outweigh any sense of optimism and opportunity. Then something switched.

At the end of day one, several participants asked organizers for a change: from more information on the problem, to action on solutions.

Turning on a dime, the organizers switched the next afternoon into a brainstorming and action planning session led by participants themselves. Group-designed topics included how to communicate Y2K simply; community planning and emergency preparedness; and identifying "national and global" leaders. Participants identified 11 key actions such as:

1. Become a Y2K community facilitator/trainer yourself. Don't wait to be appointed or for someone else to act, it may not happen.
2. Connect with responsible and reliable sources of information and assistance.
Shape and deliver your message carefully. Promote understanding, common-sense, and prudent, responsible actions by households and neighbourhoods to avoid over-reaction.

Engage your community associations, schools and media. Assist them to prepare, and to provide clear information and assistance to others. Make sure the special needs of the elderly, disabled or vulnerable citizens are looked after.

Engage small business and large corporations. Internal Y2K readiness is essential. Business continuity also depends on the well being of employees, the community and other businesses locally and worldwide.

Call the local utility, water and sewage authority, and mayor/city manager and ask about their programs for Y2K.

A "crash training program" is also seen as needed to help people "get up to speed fast" in community emergency management and for training others.

The final two and a half hours were a focused frenzy of informed action. Organizers could barely contain participants' energy and ideas. It was the most intense time I've ever experienced at a conference, with a passion and commitment that were inspiring.

Having spent most of two days feeling the onslaught of an issue almost too large to fathom, it was a welcome change of direction.

If it's indicative of what is possible when larger numbers of people become informed and encouraged to act, we may yet see the turning of this Titanic -- and its arrival into a safer port than expected.

"We can't wait for leaders. We are all on the Y2K leadership team."

- Margaret Anderson, World Futures Society Conference organizer

For a full conference summary, see: www.wfs.org/y2kconf0.htm

Eric Hellman is a writer, speaker and consultant. He is the commissioned writer of the bestselling book, Leadership from Within (for Peter Urs Bender), the co-founder of the first "blue box" recycling program, and the author of Signs of Progress, Signs of Caution, a guide for monitoring healthy communities.

He can be reached at 416 656 0166 or at: erich@interlog.com

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The Seigniory Club

Years ago, the Departments of Surgery of McGill and Toronto would meet in mid-winter at the Seigniory Club in Montebello, Quebec for Scientific Papers, curling, sleigh rides and much comradeship. It is now a C.P. Hotel - Chateau Montebello.

It is interesting to note that three McGill surgeons were elected as Presidents of the very exclusive Seigniory Curling Club:

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<thead>
<tr>
<th>Year</th>
<th>President</th>
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<tbody>
<tr>
<td>1944-1945</td>
<td>Dr. G. Gavin Miller</td>
</tr>
<tr>
<td>1960-1961</td>
<td>Dr. A.B. Hawthorne</td>
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<td>1970-1971</td>
<td>Dr. J.C. Dickison</td>
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EDM
ESTABLISHMENT OF A NEW CANADIAN ARTHRITIS NETWORK (CAN) - A NATIONAL CENTER OF EXCELLENCE

This is a new National Center of Excellence (one of 14) funded by the Social Sciences Humanities Research Council and the Medical Research Council of Canada. Of 74 applications in 1998, only 3 were funded.

The award is for $14.5 million over an initial period of 4 years. The first term is 7 years that can be renewed for a further 7 years (total 14).

New Canadian Arthritis Network

By Robin Poole

The research themes include Genetics and Inflammation, Cellular and Molecular Biology of Joint Tissues, Bioengineering for Joint Reconstruction, Diagnostics and Therapeutics, and Methodologies and Outcomes. There are 16 participating centres in an integrated clinical trials network. Registries for osteoarthritis, rheumatoid arthritis and joint replacement are being established.

CAN also represents a funding and working partnership with Industry, both nationally and internationally, and with national institutions such as the Medical Research Council of Canada and the Arthritis Society of Canada. Part of its mandate is a requirement to establish new companies and to create new jobs. It has been heralded by NSERC as the best proposal for a National Center for Excellence ever received. It also represents a potential blueprint for the future of Health Care Research and Treatment in Canada. This is the first National Health Care program of its kind in the world.

Other members of the Network in the Division of Surgical Research, Department of Surgery, include Drs. J.S. Mort, A.D. Recklies (Joint Diseases Laboratory, Shriners Hospitals), P.J. Roughley (Genetics Unit, Shriners Hospitals for Children), and John Sampalis, M.D.; from Orthopedics, Drs. Max Aebi, Mauro Alini, and Thomas Steffen.

For further information about CAN you can contact Robin Poole (rpoole@shriners.mcgill.ca; Fax: 514-849-9684; Tel.: 514-849-6208) or Tony Cruz (tcruz@mtsinaLon.ca; Fax: 416-586-8628; Tel.: 416-586-8537), or contact the web site of the Arthritis Society (www.arthritis.ca).

Were You There ? - 1970

Lt. to Rt.: Drs. D.J. Kinnear, I.T. Beck and R.D. McKenna are congratulated by the President of the AGA (American Gastroenterology Association), Dr. Charles F. Code of Rochester, and the President of the CAG (Canadian Gastroenterology Association), Dr. Eric Nanson, Saskatoon on an excellent programme for the joint annual meetings.
Visiting Professors

Dr. Joseph J. Tepas, III, Professor and Chairman of the Department of Surgery at the University of Florida Health Science Center in Jacksonville visited the MUHC on January 21st, 1999. Dr. Tepas is well recognized both nationally and internationally for his contributions to the field of Pediatric Trauma and he has served as Chief, Division of Surgical Critical Care at his University since 1990. We were honored to have him visit McGill University as the Fourth H. Rocke Robertson Visiting Professor in Trauma.

The program started with Surgical Grand Rounds at the Montreal Children's Hospital when Dr. Tepas gave an excellent lecture on Resuscitation of the Injured Child: Who, When, How, and Where. An excellent attendance was present and this was augmented by the pediatricians at the Children's who changed their Grand Rounds from Wednesday to be present at our Grand Rounds on Thursday morning in order to hear Dr. Tepas. In addition, a large number from the MUHC attending staff were present as well as a large attendance from Hôpital Ste-Justine who received a separate invitation.

Grand Rounds were followed by resident presentations from 9:00 - 1:00 P.M. and an excellent series of presentations were made by residents, both from the Children's and the adult components of the MUHC, and also from Hôpital Ste-Justine and the CHEO in Ottawa. A total of 11 presentations were made and the panel of judges (Drs. Tepas, Owen and Shaw), after much deliberation, awarded the prizes as follows:

**GENERAL SURGERY**

<table>
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<tr>
<th>Prize</th>
<th>Recipients</th>
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<tr>
<td>First Prize</td>
<td>Drs. S. Gupta and Z. Panthanki from Plastic Surgery who presented a paper on Electrical Injury - A Surgical Tour de Force</td>
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<tr>
<td>Second Prize</td>
<td>Dr. P. Chopra, Pediatric Surgery from CHEO with a paper on Traumatic Evulsion</td>
</tr>
<tr>
<td>Third Prize</td>
<td>Dr. T. Chughtai, General Surgery from MGH on the topic Adult Respiratory Distress Syndrome: Two Cases Treated by ECMO</td>
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Following lunch at the Children's, Dr. Tepas was given a tour of the Osler Library which was an obvious highlight of his visit and this was followed at 5:00 P.M. with the second Surgical Grand Rounds at the Montreal Children's Hospital when Dr. Tepas presented his topic Performance Improvement in Trauma Care. This was an excellent talk on total quality management and how the team at the University of Florida, Jacksonville, were able to improve this important aspect of surgical treatment.
To conclude the day, the Senior Pediatric Surgical Residents from the Montreal Children's Hospital and Hôpital Ste-Justine along with the Pediatric General Surgeons entertained Dr. Tepas at dinner at the Mount Stephen Club.

In summary, Dr. Tepas was an excellent Visiting Professor and maintained the standard of previous H. Rocke Robertson Visiting Professors, Drs. Maull, Gennarelli, and Gruss.

H.B. Williams, M.D.

IVAN SAYKALY VISITING PROFESSOR IN ONCOLOGY

Dr. Gabriel Hortobágyi visited the MUHC in November of 1998 as the guest of the Cedars Cancer Institute of the RVH. Dr. Hortobágyi is the Chief in the Department of Breast Medical Oncology Section and holds the Connally Chair in Breast Cancer at the University of Texas, M.D. Anderson Cancer Center in Houston, Texas. His lectures were as follows:

RVH - Pre-Operative Chemotherapy - The Developing Role
MGH - Breast Cancer Therapy - Truths and Questions
Strathcona Anatomy and Dentistry Building
- The Advances in Oncology Lecture - Hypothesis Based Development of Therapy for Breast Cancer
Westin Mont-Royal Hotel
- Milestones in Breast Cancer Research and Management - From the Past to the Future

On November 19th, after giving a conference at the Pavillon Notre-Dame of the CHUM, Dr. Hortobágyi addressed the staff of the JGH with a lecture entitled Controversies in Breast Cancer Management.

Dr. Gabriel Hortobágyi is an excellent example of the true clinician/scientist and Cedars was very proud to welcome him.

Dr. Michel Gagner, Chief of Laparoscopic Surgery at the Mount Sinai Medical Center in New York, on February 25th, was the Visiting Professor in General Surgery and Videoendoscopic Surgery. This visit was sponsored by Sherwood Davis&Geck and the hosts were Dr. Nicolas V. Christou, Head of the Division of General Surgery at McGill and Dr. Gerald M. Fried, Head of the Section of Videoendoscopic Surgery at McGill.

Dr. Michel Gagner is a native of Montreal, Quebec. His undergraduate education was at the Séminaire de Sherbrooke and he obtained his medical degree at the Université de Sherbrooke in 1982. He completed his General Surgery training at McGill in 1988 where he also earned a Ph.D. in Experimental Surgery with a thesis entitled Human Lipolysis in Sepsis.

Dr. Gagner went to the Université Paris-Sud for a year of postgraduate training, followed by a fellowship in hepatopancreatobiliary surgery at the Lahey Clinic. In 1990, he was appointed Assistant Professor of Surgery at the Université de Montréal and staff surgeon at the Hôtel Dieu de Montréal.

In 1995, Dr. Gagner joined the staff of the Cleveland Clinic Foundation as Head of the Section of Laparoscopic Surgery, Department of General Surgery. In 1998, he moved to New York where he is Chief of the Division of Laparoscopic Surgery at the Mount Sinai Medical Center.

Dr. Gagner has gained an international reputation in the field of laparoscopic surgery. He is recognized as an innovator in laparoscopic techniques, both by direct manipulation of instruments and robotic assistance. Currently, his attention is focused on endoscopic endocrine surgery and laparoscopic surgery for morbid obesity.

He gave Grand Rounds at the JGH. The title was Laparoscopic Endocrine Surgery.

A delightful reception was held at the Mount Stephen Club for General Surgery staff and residents. There was a good spirit of comraderie and after dinner, excellent speeches were made by Drs. N. Christou, G. Fried, and M. Gagner who recalled the fond memories that he had of McGill.

ERIC FLANDERS VISITING PROFESSOR

Dr. Ronald Feld, Professor of the University of Toronto and Senior Oncologist at the Princess Margaret Hospital, was this year's Flanders Visiting Professor at the MGH. The title of his talk was Management of Lung Cancer: Progress into the Millennium.

Dr. Michel Gagner
DR. J.A.S. WILSON

On December 10th, 1998, we lost an unusual member of McGill’s CVT Surgical Division, when Dr. James Alfred Scott Wilson passed away due to a rare pulmonary affliction. For those of you who didn’t know him very well, and even to those who did, Jim Wilson was a very private man, a self-effacing surgeon and a challenging study in complexity.

He was born in 1923, in the Annapolis Valley, Berwick, Nova Scotia, where he received his primary education and earned his B.Sc. From Acadia University and his M.D. from Dalhousie University in 1947. He interned at the St. John General Hospital in New Brunswick and from 1948-51 he continued his training at Hamersmith Hospital, London, and the Old Church Hospital, Romford, England. In his return to Canada, he spent a year 1952-53, rotating in general surgery at the RVH where his initial interest in Chest Surgery had its beginnings. From 1953-55 he was at the University Hospital, Ann Arbor, Michigan under the legendary Dr. John Alexander, and his associates, Dr. Cameron Haight and Dr. Herbert Sloan.

I was privileged to share 30 years of our professional lives together, when in 1955 he was recruited by the late Dr. C.A. (Sandy) MacInnis at the Royal Edward Laurentian Hospital, Montreal Surgical Division (now known as the Montreal Chest Hospital — come Institute) to join the staff and participate in the surgical treatment of tuberculosis. Along the way he obtained his FRCS Edinburgh and his FRCS Canada.

He was also an active thoracic and general surgeon on the staff of the Queen Elizabeth and Reddy Memorial Hospitals as well as a Consultant in Thoracic Surgery at the St. Ann’s Veterans Hospital and the Santa Cabrini Hospital. He was appointed to the staff of the MGH in 1984 when surgery at the Chest was transferred to the MGH by Gouvernment decree.

In common with the fast disappearing remnant of the so-called Chest Surgeons trained in the decade following World War 2, he was not primarily trained in cardiac surgery and was obliged to rely on additional general surgery to supplement his income.

Jim Wilson was a highly experienced, reliable, productive and committed thoracic surgeon who made an invaluable input into the general thoracic surgical training of some 30 chief CVT Surgical Residents in the McGill Training Programme, all of whom now occupy important posts throughout North America and beyond. He authored many publications relating to general thoracic surgery, and was highly regarded by the resident staff for his patience and detailed teaching.

“JAZZ”, as the resident staff dubbed him, will always be remembered for his quiet dry humor, his labor of love, and his unshakeable devotion to his specialty, and will be sorely missed by his grateful patients and hospital staff.

D.D. Munro, M.D.

DR. GERARD ROSS BURNS

Gerry Burns died peacefully at home in Dartmouth, Nova Scotia on December 8th, 1998 at the age of 60 after a courageous battle with cancer since it was diagnosed last September. He was surrounded by his wife Diane, children Saral, Amy and Mathew and other members of the family.

After a B.A. at St. Mary’s University, he graduated from the Faculty of Medicine at Dalhousie University in 1965 and completed his residency in General Surgery at McGill following two years here 1967-1968 and 1968-1969. He remembered being here during the Expo years. He began his appointment at the Victoria General Hospital and Dalhousie in 1970.

He was the founding Chief of Surgery at Dartmouth General Hospital and he was well known to visitors at the Dartmouth Medical Center on Portland Street. He was Chief of Surgery from 1976 until 1990.

He was a member of the Oakfield Golf and Country Club being an avid golfer. He was also a lifetime scuba diver. We join his family and colleagues in Nova Scotia and mourn his death.

DR. HERBERT JASPER Q.C.

Died in March at the age of 92. Dr. Jasper was a well known neuro-electrophysiologist at the MNH.

MR. CAMPBELL MERRETT

Died recently at the age of 89. Mr. Merrett, a leading Canadian architect was involved with many building projects at the RVH.
Lloyd D. MacLean Day Retreat
December 3, 1998
“Vision for the Future”
INTRODUCTION BY DR. J.L. MEAKINS

With the exception of two retreats, the McGill Department of Surgery has not had a meeting of any sort and this seemed an excellent opportunity to do so. One of our objectives is to craft a single clinical and academic department of the McGill hospital departments and coalesce with the departments across all McGill University hospitals.

As we integrate into a single clinical and academic structure, our goal for the next five years is to prepare to move to the new site, the Glen Yards. The clinical and academic implications are of enormous importance. Indeed, the clinical integration at the MUHC has already extended to the point that neither adult general hospital can provide a full range of services independently of the other. In fact, we are in many respects already functioning as a single clinical entity. As I now travel between the two hospitals, I see many aspects in one hospital that I would like transferred to the other and vice versa; that there are systems and facilities in place that can be to the benefit of both institutions.

We must recognize that the University of Toronto Department of Surgery is now the premier department of surgery in the country. One of our major objectives is to change that. If we can group all the positive aspects of both the RVH and MGH, I think we can achieve that. If we don’t succeed, we will continue to be second best in this country.

The Departmental Executive has reached consensus in some elements of direction. The agenda is how to move to a new site. In essence, we are working for the future of those staff in their 30s and 40s and for our new recruits. Personally, I may never operate on this new site nor benefit from organizing the clinical and academic services other than as a patient. Those of us who are 55 and over will not see much of the benefit of this work. However, our legacy to the institution will be a function of how well we carry out the task at hand.

As I said in the message from the Chair in the Fall 1998 issue of the Square Knot:

“Our future as a first-class Department of Surgery is in our young faculty. Recruitment of new surgeons and retention of our present cadre is crucial. The new building is for them, not for today’s senior surgeons. Working conditions, clinics, academic time and access to the O.R. must be equitably distributed. Resources are for the community of surgeons (and indeed for our clinical community) not for individuals. This is not socialism but common sense democracy. We need the next generation in order to move to a single site.”

Today each division in the department will speak to their own issues, their recruiting plans, their activities in research and teaching, and what they see as critical to their future. There is a lot of activity in other divisions of which we are astonishingly unaware. To manage this enterprise is going to be a very complex and difficult tax, but if we can function cohesively and collectively it is likely to be a success.

Dr. Harvey Brown
HEAD, DIVISION OF PLASTIC SURGERY

The purpose of this Day – named after one of our most respected and revered McGill surgeons - this year – is to congregate and allow each surgical division director an opportunity to outline their vision for the next 5-7 years. As I become more mature, I find my VISION is frequently defined in terms like “myopia” or “presbyopia”, but not yet “hemianopsia” - at least not to my face. The significance of choosing a time frame – “next 5-7 years” should not escape us. The planned “theme park” or “boutique site” will now appear in 2004 or 2005 or 2006 - thus our vision for 5-7 years is very appropriate - what will happen from Dec. 1998 to Dec. 2006.

Lloyd and I arrived at McGill almost together in about 1963. Dr. Maclean of course was slightly senior to me in rank (he was surgeon-in-chief at RVH, and I was junior assistant resident at MGH) and age by approximately 10 or 15 years, I think. However, he would be the first academician to acknowledge that any look into the future - vision, we’re calling it - requires an examination of the past.

Patient care, research and teaching are the pillars on which McGill builds and advertises its excellence. Plastic Surgery at this university stands out as one of the premier surgical specialties from all of those standpoints. To my knowledge, Plastic Surgery was the first surgical sub-specialty to be truly integrated on a university-wide basis. This occurred in July 1967, and I am proud to count myself as being among the first 6 graduates of the integrated program in 1969. Since then, 90 graduates of plastic surgery have been produced.
from this university. At present, 51% practice in Canada, 37% practice in USA, 8% practice outside of North America, and 4% are either retired or deceased. Of the Canadian practitioners, 55% work in the Province of Quebec. More importantly, 28% are in the academic practice of plastic surgery.

The faculty of the Division is fully committed to maintaining the role of McGill as a universal source of international expertise in supplying and encouraging the development of the specialty and its products beyond any domestic or international boundaries. Development of the MUHC should not alter this, and we remain committed to an International presence. This is emphasized in the structure of our postgraduate program in that all graduates qualify for the specialty certificate of the Province of Quebec (CSPQ), specialty certificate of the Royal College of Canada (RCPS), and specialty examination of the American Board of Plastic Surgery (ABPS).

In terms of clinical activities, the Division remains very productive with 19-20,000 patient visits annually across three sites. Up until the recent manpower crisis in Anesthesia, Plastic Surgery ranked 4th in overall number of cases, as well as 4th in operating room time utilization. This does not include combined procedures with sister services which is obviously a large part of our surgical practice. The volume and variety of clinical material is perfectly adequate for complete resident training.

There is some confusion about the future role of the MUHC once single-site status is attained. Some leaders have suggested that the new site will be primarily aimed at tertiary or quaternary levels of care. On the other hand, members of our non-medical but consumer community envisage the MUHC as a one stop shopping facility - all things to all people.

The increasing shift to ambulatory surgery has had and will have major ramifications in teaching programs. If the MUHC of 2004 is truly a tertiary care facility, then major modifications in program structures will be required in terms of resident rotations, accreditations and faculty make-up. We have already seen a noticeable shift in the volume of isolated single system injuries especially involving the hand and face. They are increasingly cared for in the community, and by and large, cared for very well.

Our specialty has traditionally been involved with difficult problems of wound coverage and closure and this has not changed. The complexities of some of the problems have increased. Modern vascular and orthopedic techniques salvage many extremities, which not too many years ago would have resulted in amputation. Coverage of these extremities frequently require transfer of tissue, utilizing microscopic techniques which are time consuming in the O.R. and can be labour intensive in the post-op period. The same can be said for combined efforts of Head and Neck Surgery and Skull Base Surgery at the Montreal Neurological Hospital. Innovative pediatric procedures are carried on at the Montreal Children's Hospital. Utilization of modern techniques of vascular diversion allows resection of massive vascular malformations of the head and neck. Cranio-facial procedures are common, and distraction osteogenesis is just now being introduced. This is a major innovation which may preclude future complex surgical procedures. Increased demand for autogenous breast reconstruction post-mastectomy, and combined retrieval of patients with mediastinitis, all are labour and resource intense procedures. Clinically, we expect Plastic Surgery to be a major part of the MUHC, playing a large role in the ambulatory facility, which we trust will be part of the plan, and a major role in difficult coverage and reconstructive problems, as in the past.

Finally, research activities remain strong in the Division across the three sites. Dr. Williams at the M.C.H. continues a project combined with industry on the electro-stimulation of denervated skeletal muscle in an attempt to preserve function until re-innervation occurs following nerve injury and repair. The research is now well into Phase II with a multi-centered trial and this follows 12 years of intense activity. Dr. Lucie Lessard at the RVH continues her project on the ultrasound assessment of bone thickness. This is of major interest in cranio-maxillofacial reconstruction, and has important clinical implications. Ongoing as well is her project in laryngeal transplantation and presently ten animals have been completed. The next step involves microneuroanastomosis or animation, and commencement of immunosuppression. Dr. Lessard's clinical project utilizing osteo-integrated implants primarily for attachment of facial and auricular prostheses continues at the Shriners Hospital. Finally, a project will start in the spring of 1999, examining Vascular Endothelial Growth Factor, and she will be supervising an M.Sc. student in Experimental Surgery for two years.

Plastic surgical research at the M.G.H. is under the direction of Dr. Anie Philip as you have seen in the latest edition of the Square Knot. Anie is also Associate Director of the Division of Surgical Research of the Department of Surgery. Her main interest is at the level of molecular biology and specifically Transforming Growth Factor Beta and its role in normal and abnormal wound healing. This, she will extend in the future to the examination of the same substance's role in tumor geneses at a more practical clinical level. She has presently working in our laboratory 2 Ph.D. students, 1 M.Sc. student, 1 medical student, and 1 plastic surgical resident.
Across the MUHC, plastic surgery research is modestly funded in the area of $200,000.00 and active search for funding is an ongoing process.

In the past five years, the Division has been extremely productive - with 23 peer reviewed articles published, 7 book chapters, 1 book, 28 abstract posters, and 12 scholarly presentations delivered at peer reviewed meetings.

With the introduction of the Clinical Investigator Program here at McGill, we, in the Division of Plastic Surgery, feel that opportunities exist for enriching both the Division and individual candidates in a stimulus towards academic surgery. I would modestly point out that the first successful recipient of the certificate as graduate of the Clinical Investigator Program at McGill will be Dr. Kayvan Khiabani - R4 in Plastic Surgery.

Plastic Surgery is alive and well at McGill, and I fully believe it will continue alive and well in the MUHC.

Now! Will somebody find us some anaesthetists!

Dr. R.C.-J. Chiu
HEAD, DIVISION OF CARDIOTHORACIC SURGERY

I was asked by the Chairman to talk about the vision for the Division of Cardiothoracic Surgery. My predecessor and the founding chairman of this Division, Dr. Dobell, perhaps would be too humble to say so but as far as I am concerned, our vision should be to achieve world class excellence in service, teaching and research. We try to realize this with two major efforts; one by pooling our energy and resources, and two by encouraging an identity of excellence for each of our faculty members. This Division in the MUHC consists of only 10 faculty members, too few to create many Sections for the highly specialized areas within the Division. Therefore, we must ask each faculty member to develop an area of unique expertise. We then try to sustain and support each member to achieve national and international recognition which in turn will bring acclaim for our Division.

Briefly I will comment on a couple of issues: The development and future of Cardiac Surgery and Thoracic Surgery at McGill; and some short-term organizational matters.

CARDIAC SURGERY

About five of our staff of ten focus their efforts in adult cardiac surgery, with others participating part-time, and together they carry out more than 1,000 open heart surgical procedures each year, ranging from heart transplantation to minimally invasive cardiac surgery; as well as a number of new surgical procedures which were developed in our own research laboratories. In pediatric cardiac surgery cases, two surgeons do nearly 150 open heart surgery, successfully accomplishing most complex procedures in some of the youngest patients, thus establishing a reputation which has made the Montreal Children's Hospital a national referral centre, receiving patients from as far away as Western Canada and foreign countries.

In Cardiac Surgery, we have a fully approved residency program, and I am proud to say that at a recent internal review we got not only full approval, but also a comment stating that there is “an impressive morale of residents in spite of very heavy duties”.

In research, there were more than 50 papers, chapters and books published last year, as well as MRC grant and industrial funding. The members of this Division are on the executives of provincial, national and international professional societies. We are also represented on a dozen or so national and international journal editorial boards. Our residents “habitually” receive prestigious research prizes.

The challenge to Cardiac Surgery in general terms is, as for everyone else, the danger of being downsized in spite of long waiting lists because of the financial constraints. My other major concern is that in our effort and obsession to deal with this critical clinical environment, we may lose the ability to sustain and to nourish the academic and research involvements by our staff, particularly since this Division has historically depended heavily on surgical scientists for its academic productivity, rather than on basic scientists.

GENERAL THORACIC SURGERY

This discipline has evolved. As many of you know, before 1960 all “thoracic surgeons” were general thoracic surgeons. With the development of Cardiac Surgery, it became part of Cardiothoracic Surgery. But lately, with the tremendous developments in general thoracic surgery, it is again becoming an independent branch of our discipline. The Royal College, reflecting this change, has established a new separate thoracic surgery training program. At McGill, a few senior surgeons are focusing their practice on Thoracic Surgery and together they operate on over 700 major cases. But we are still evolving in this area. We need to recruit new young faculty members and expand our clinical and research base in Thoracic Surgery, to which our sister hospital JGH has been very helpful. We are also trying to establish a new thoracic surgical residency program at McGill.

The other item I want to touch upon is the issue of cardiac surgery integration in the MUHC. Many of you
know this has been quite controversial, at least you
hear a lot about it lately. We have no problem with the long-
term organizational vision. We are all looking for a new sin-
gle facility where we can pool our resources and work
together. Our concerns focus on the transitional phase; it is
supposed to be somewhere between three to five years be-
fore this single site can be realized. I would, however, like to
put this time line a bit more clearly. The transfer of Cardiol-
ogy/Cardiac Surgery to one site will take something like ei-
teen months. Therefore, in fact, we are talking about a
transitional phase of only two to three years before moving
again to a single permanent site.

I want to report to you that recently a committee, to be
chaired by Dr. John Burgess, has been struck to look into this
matter and address all the pros and cons of various options.
Therefore, I would suggest that anyone who has interest in this
matter to approach this committee, and make your opinion
known. The reason for saying so is, as I have spoken to every-
body who cared to listen to me, based on my experience when
I was in New York as a resident at the end of the Vietnam war.
At that time I was amazed how a super-power like the United
States could be defeated by a very undeveloped country like
Vietnam. I did not see any administrative or tactical errors
made by the Pentagon, but apparently the US lost the morale
and support of its own people and the war was lost. In my
view, if we have dedicated and committed troops, we can
overcome any difficulties. Thus, we need an opportunity for
input from everybody. Our challenge is to remain open
minded and remain united. I would like to close my remarks
by again sharing with you my “Indian story,” emphasizing my
plea for solidarity and cooperation.

An old (North American) Indian chief was dying, and he called
his three sons to his deathbed and wanted to give them some
advice. He told the first son to take out an arrow and break it.
He did it easily. Then the old man told the second son to take
out two arrows, put them together and break them. He did it
with a lot more effort. The chief then told the third son to take
three arrows together and break them. He tried very hard, but
was unable to do so. I think it is very important to remember
that together we will remain strong. If not, we will be lost.

Dr. Mostafa Elhilali
HEAD, DIVISION OF UROLOGY

I think it is very appropriate that we dedicate the Lloyd
MacLean Day to discussing the state of the Department of
Surgery and where we are headed as I think the McGill De-
partment of Surgery reached maximum recognition under
Lloyd MacLean. It is a real pleasure for me to present the state
of the union for the Division of Urology and our plans for the
next few years.

The Division of Urology is composed of 16 full-time urologists,
6 full-time scientists, 18 residents and 23 postgraduate stu-
dents. All the postgraduate students have peer-reviewed
funding. Not all of our 18 residents are from the McGill pro-
gram; we are affiliated with Sherbrooke University and there-
fore we do get residents through the Sherbrooke core number
of residents. On the other hand some residents are clinical fel-
lows, funded through their governments.

Where is Urology headed in the next millennium? It is going
to be an increasingly high tech field and the question is how
well can we keep up with the high tech. Can we afford it? Can
we afford not to jump on the high tech that is developing? As
it happens, since the last few years we see less and less patients
requiring open surgery. Turnover is much more rapid and our
beds have decreased to about one third of what they were. We
are operating on much more complex cases and we are doing
much more ambulatory high tech procedures.

The urologic mix has undergone a major change in the last
few decades. Between 1970 and 1980 the mix was 20% off-
ce practice, 40% operating room time and 40% in-patients.
From our billings we see that in the following two decades
our group's sources of income have changed to be almost
60% from office practice and the other 40% coming mostly
from activities in the operating room. The development of
new medication that may render surgery unnecessary and
less activity in the operating room have transformed the na-
ture of the specialty. In-patients are less in number, the cases
more complex and turnover much faster. We must follow
very strict care maps and protocols as patients are really
moving along much faster. Out-patients we are seeing in
large numbers; their care is more complex and has a higher
technical component as they leave the hospital sooner and
present to the out-patient facility shortly after surgery. They
are followed by our nurses who must be more knowledge-
able and shouldered more responsibility.

We are increasingly multi-disciplinary in that we are dealing
with oncology cases in a multi-disciplinary fashion. The oper-
atting room is increasingly oncology-oriented. We do more en-
doscopy cases, mostly on a day surgery or very short stay basis.
There are more same-day admissions. Instrumentation is
evolving very rapidly. By the time we buy an instrument it's
almost obsolete or broken within six months, as they are more
fragile and their life expectancy is limited.
Presently, the Division of Urology is fully integrated and has been for many years. This is based on a McGill-wide practice plan involving all our full-time faculty who cover four teaching hospitals. This has been in place in one form or another for over twelve years. It has allowed us to develop concentrated areas of excellence in different hospitals because the economic impact does not pose a problem. There is no financial impact resulting from the transfer of patients from one hospital to another to allow the development of expertise and centres of excellence. Each hospital site developed its own strengths and deals with certain types of patients. We are quite sensitive to the perception that this would not lower the value of the hospital nor the patient. The residents know what kind of patient and exposure to expect at a given site and are not going to complain that they don’t see a certain pathology in this hospital or another. There is enough pathology to go around.

At the MGH, we do most of our urologic oncology. At the RVH, we do most of our stone management, all our infertility patients and all our laser applications. At the JGH, we do neuro- urology, urinary incontinence and erectile dysfunction. General urology is done at all hospitals, but the expertise is mostly localized and focused at one or another of the sites. When we say urologic oncology is done at the MGH, the research component of urologic oncology is also based there. When we say infertility at the RVH, that’s where the infertility research is based. At the JGH, that is where the erectile dysfunction and the urophysiology is based.

Where would we like to be until we are on one site? We propose the following. However, the plans are under study at the moment and we don’t know when, or if they will happen before we move into one site. We would like to move all our inpatients from the RVH to the MGH and therefore have two services: one covering general urology and the other urologic oncology. In this manner, we would have at least one unit where the nurses are familiar with urology patients. At the moment, because of the small number of beds we cannot have one nursing unit on either site. The nurses cover multiple other services and therefore are not specialized. Also grouping the residents on fewer services will provide a better teaching experience. The residents will be able to see what is significant in both services and have a much wider range of surgical opportunity. Moreover, this would probably allow us to become much more efficient. At the RVH, we will concentrate more on ambulatory care and short stay patients. Two or three beds will probably cover the needs of this short stay unit. These will be very high turnover beds as patients with endoscopy and laser prostatectomies have to stay in hospital for about a day. Stone management is mostly done on an out-patient basis and endoscopic surgery will fit within the short stay. All infertility cases are done as out-patients. The JGH will remain as is.

PATIENT CARE
We have to continue our efforts to recruit attending staff in areas where we are vulnerable. For instance, we now have only one pediatric urologist left. In the department as a whole, we have only one fully qualified andrologist and only one neurourologist. We have just one individual in endourology; she was sick in the last few months and we realized how vulnerable we are in that area. We have strong presence in all these four areas but we need to reinforce them by additional recruitment. Presently, two residents are training for pediatrics which should provide very good reinforcement. We have one resident going next year to New York to train in andrology. For endourology we are looking for the right individual and we are recruiting as well for a neurourologist. We are looking into the possibility of developing a male health centre to address the needs of the aging male as far as erectile dysfunction, prostate disease and screening for prostate cancer. We are reorganizing our out-patient services.

RESIDENT EDUCATION
Since June, Armen Aprikian is our new program director and he has injected new and exciting ideas into the teaching program. We had excellent applicants in the past and we continue to have excellent applicants for the coming years. Our residents in the last four years have always had a 100% pass rate at the Royal College and Quebec exams, and we have in this department enough excellent role models to motivate residents and that is why we are successful in recruiting residents. We are looking into the development of a resident scientist program to provide a year or two of additional research exposure.

BASIC RESEARCH
One of the objectives of today is to inform the department as a whole of our activities. In infertility, we have Claude Gagnon who is a full professor and director of our research laboratories. Teruko Taketo is a tenured associate professor and works on sex differentiation. Orest Blaschuk, also a tenured associate professor, works on cell adhesion molecules. Simone Chevalier, associate professor with tenure, works in cellular biology and biochemistry, particularly in the area of the prostate. Mario Chevrette who is working in molecular genetics, a very new field, was very instrumental in raising several grants this year. Pascal Vachon, who joined our department in July and is based at the JGH, is working with Serge Carrier on central pathways of erection.
CLINICAL RESEARCH

We participate in 90% of trials across Canada. Many of these trials actually originated from ideas we provided to the industry or we participated in the elaboration of the research protocol for the trial. Two years ago, we were instrumental in starting the Canadian Urology Association Clinical Trials Group, the model of which perhaps can be followed by other associations. The national association is now sort of in charge of evaluating and providing grant support for new researchers in the area of clinical trials. It also provides a Central Review Board for trials done in private offices. I happen to chair this committee which is becoming a permanent committee of the Canadian Urology Association. We think that in the next few years most of the clinical trials will be done through that group. It provides central review and infrastructure support for trials to be started in private offices. Studies can be approved within two weeks and can be very competitive for trials in the U.S.

Our future concern is to recruit in the areas of nephrolithiasis, uropharmacology and neurourology and to maintain a close link between researchers and their clinical departments. At one time we were concerned that with the newer ideas of development of research the MUHC might be abolishing the clinical research links. I now think that is not the case and that the clinical departments will continue to have their research infrastructure.

CONCLUSION

The challenge is to remain competitive. We have to be able to recruit young urologists and to keep them or our future will not be very bright. In conclusion, Urology is becoming more and more out-patient care, less invasive surgery, more medical treatment. In fact, we are becoming more medical than surgical. However, our surgical component is increasingly complex and more high tech and I think we are giving better patient care. The future is exciting but we have to be prepared for it to make the maximum of its potential.

Dr. Jonathan L. Meakins

DIVISION OF GENERAL SURGERY

General Surgery is at the present time undergoing a search for my replacement as head of the division. In order not to compromise the particular vision of my successor, I must limit my presentation to the achievements of the division rather than embark on a visionary program that I would not be involved in implementing. Therefore, I will outline some of the highlights of the Division of General Surgery without dealing with the visionary aspects.

PROGRAMS

A number of programs have been developed over the last few years:

- Gerry Fried has established at the MGH an education centre for the development and establishment of new laparoscopic procedures.
- The Pancreas Clinic at the MGH functions as a referral centre for pancreatic disease.
- The Section of Colorectal Surgery under Phil Gordon is running extremely strong. They are publishing collective material from across the adult hospitals and Dr. Gordon's textbook is in its second edition.
- Transplantation has been focused at one centre. There is now a liver program, a kidney program, a pancreas and soon a pancreas-kidney program which function extremely well. The liver program is the largest in the province and the combined multi-organ program in general surgery is the largest multi-organ program in this province. It is also competitive in the country.
- The MUHC Breast Centre is evolving. There will soon be two new mammogram machines. Dr. Fleischer has acquired a state of the art ABBI breast biopsy machine using stereotactic radiological approaches.
- The Trauma Program was re-accredited last June. There is another visit at the end of January, but it looks as if we will maintain that accreditation.
- Surgical Oncology is functioning extremely well across the division. There is collaboration with the NSABP and other oncological trials and very large programs both in clinical investigation and basic science.
- The Hepatobiliary Group has started to challenge St-Luc competitively in terms of volume of liver resections and bile duct reconstruction and other related procedures.
- Bariatric Surgery, initiated academically by Lloyd MacLean, continues to be both productive clinically and from an academic point of view.

The volume of surgery is stable across the hospitals. There has been some mild diminution of cases, but the number of minutes in the operating room is up. The total number of clinicians in the division is about fifty with twelve working in peripheral hospitals including Gatineau, Ormstown, Mont-Laurier and Val d'Or.

RESEARCH ACTIVITIES

We are as well off from the MRC point of view as we have ever been. Lorrie Rosenberg has an MRC grant as well as other funding from diabetes groups. Nick Christou has an MRC grant. Phina Brodt and Gitit Jensen each have MRC grants and each have one with Sarkis Merriann. Hélène Flageole and Jean-Martin Laberge have a new
MRC grant looking at the issues of tracheomalacia and lung malformation and diaphragm hernia.

Industry is a major supporter of activities in the department, either through clinical trials or technology transfer. Major players in the division are Drs. Rosenberg, Fried, Tchervenkov, Christou and, to a lesser extent, David Fleiszer. In terms of private funding, Dr. Fried has been far and away the most successful, developing the Burnstein Foundation for Laparoscopic Surgery which is now funded at $1.9 million and supports the development and future of videoscopic surgery.

SURGICAL SCIENTIST PROGRAM
The Surgical Scientist Program has already cut its teeth. Residents in the program spend a minimum of two years in the lab during which they get a Masters or Ph.D. They are expected to produce or return to the standard clinical program that consists of 4.5 clinical years and six months of epidemiology or similar type training.

NEW HIGHLIGHTS
Dr. Rosenberg has developed the molecule which has to do with the management of diabetes. Dr. Tchervenkov has an unmatched record in liver transplantation relating to the management of hepatitis-B patients; it has been published and is becoming increasingly accepted.

CLINICAL ACTIVITIES
Operating time is limited in part because of budget, but primarily because of a shortage of anesthetists. We are not at the moment in a position to change that. Nevertheless, clinical productivity remains stable as it has in large part over the last four to five years.

The number of residents varies between 65 and 80 depending on the year. They are scattered widely throughout the McGill teaching hospitals as well as the four community hospitals.

Judith Trudel is director of the residency program and is in the process of getting a Masters in Education from the University of Chicago. Paul Belliveau has taken part in the Dean's Teaching Scholars Program, as will Sarkis Meterissian this year. This has contributed to the quality of our teaching and the development of both the undergraduate and the postgraduate programs.

This summary is retrospective and generally that is regressive. However, given that a new Division Head is in the offering it would not be appropriate to project plans.

Dr. Ron Lewis
HEAD, DIVISION OF VASCULAR SURGERY

On July 1 1996 Vascular Surgery at McGill was integrated into a single Division that now comprises
- Vascular Surgery MUHC
- Vascular Surgery JGH

The main reason for integration was to provide a CRITICAL MASS of certified, academically inclined vascular Surgeons who could focus on and realize the development of Vascular Surgery at McGill, unencumbered by competing cardiac and thoracic surgery. We started as four surgeons at the RVH serving the populations of the RVH, MGH and the prior QEH; and two surgeons at the JGH. For reasons not directly related to the Division, we have had problems maintaining that critical mass; three surgeons have left: one for Ottawa, one for the US and one retired. One has been hired; we have struggled with the arduous process of hiring another willing and extremely able surgeon for the last year; and we are looking to recruit another young and talented surgeon in July of 2001.

With integration underway, we envision 3 additional major goals for the next few years:
- Accreditation of the Vascular Lab
- Pursuit of five major academic areas of Vascular Surgery
- Development of a high quality cost-efficient Clinical Program

Accreditation of the Vascular Lab is an urgent objective and is already in progress. A critical prerequisite was adequate computerization, to permit development of a Vascular Registry.

- The lab is the centre of physiology based modern Vascular surgery.
- More important it is the hub of clinical epidemiologic studies of vascular disease. To date, studies have been retrospective. A world class lab with an established vascular Registry makes possible prospective study of Vascular disease, as well as the successes and failures of vascular surgical treatment
- Finally, an accredited lab is now a RCS designated prerequisite for our 2 year Vascular Fellowship Program. We have two fellows at present. Next year, we will skip one year of recruitment to ensure that we provide enough facilities for vascular training of our general surgeons. We plan to continue to cycle this recruitment to meet the needs of both Vascular Surgery and General Surgery

The 5 major academic pursuits of the Division will be:
- Endovascular aortic and main branch artery
surgery: This progress is already underway, led by Danny Obrad and Oren Steinmetz at the MUHC. Our hopes for high profile vascular radiolog input have unfortunately fizzled for the present; but this is essential to the program. Other avenues are being explored.

Endoscopic bypass surgery is one of my interests. With my prior 5-6 years of experience in this field, it should be simple to realize this objective for the program. The problem at present is cost. Hopefully we will be able to balance the savings from reduced stay and complications with the costs of the technology. Certainly there is as much justification for endoscopic vascular surgery as there is for laparoscopic abdominal and thoracic surgery.

Complex aortic surgery, including suprarenal and descending aortic surgery is presently an area of weakness. That can become an area of strength by designating a surgeon to acquire additional expertise in this area from a major centre in the US, and bring that back to us. The plans for this are rudimentary.

Duplex intraoperative carotid and graft evaluation and postoperative surveillance is already an area of activity. It is our hope that next year's recruit will take this area to new heights and make it a fertile field for investigation.

Evaluation of venous disease is a longstanding interest of mine. We are along the way to introducing quantitative evaluation that will be the basis of pathophysiologic study and treatment.

Finally, laparoscopic aortic surgery has already been explored in the lab. It will be extended to patients and its role and best techniques will be developed.

The fourth and final goal for the near future is development of QUALITY CLINICAL CARE at reduced cost. The efficiency and effectiveness of this programme will be reflected in dramatic reductions in ALOS, while maintaining or reducing readmission rates. The underpinnings of these developments will be five programmes:

1. Effective Preadmission/SDA that will depend predominantly on:
   - A streamlined preadmission process
   - Clear and workable access to cardiology, endocrinology, and hematologic workup and preparation. For example in Cardiology we need:
     - Cardiology assessment that balances cardiac risk with operative risk in a grid system
     - Investigation based on where the patient lies in the grid
     - Access to workup that includes reliable outside services
     - Protocols and surveillance for f/u in hospital
   - Similarly, initiatives in Hematology should include
     - An effective in-hospital anticoagulation program
     - A blood conservation program that includes pre-

   deposit, and publicly funded use of erythropoetin preparations - Eprex for cardiac protection in aortic surgery based on reduced ICU stay and cardiac complications from improved oxygen delivery
   - Available streamlined workup of hypercoagulable syndromes that are more frequent in our vascular population than we realize and are a source of repeated admission and surgery for graft failure
   - Prioritized ICU admission based on Physiologic and Operative Severity Score

2. Development of protocols that will be the foundation of Clinical pathways. These will include in the first instance:
   - An anticoagulation protocol/ including protocols for LMW Heparin substitution. Both will save days of hospitalisation.
   - IV antibiotic outpatient program that ties in with the CLSC more effectively than is available
   - Amputation protocol that dovetails with physio and rehab
   - Admission and Postop order protocols
   - Protocols for ABF and femidistal bypass- both for invasive and endo-surgery

3. Effective discharge planning that starts at pre-admission and interlines with convalescent and rehab institutions. Unless we are all using the same book, and are all on the same page, the delays that are now standard will continue - the patient bears the brunt of the fallout.

4. Effective and statistically sound database that provides
   - Demographics - a patient Registry that can feed into the Vascular Lab Registry
   - Outcome evaluation both specific and via standardized postop complications; and general via SF12 or 36 questionnaires
   - Satisfaction data

5. COI manipulation of protocols for progressive improvement

It is important to realize that these clinical initiatives call for identified infusion of capital from the institutions we serve. I am appalled at the extent to which institutional expenses at our hospital have been foiled on the physicians. Moreover, our initial attempts at some of these initiatives have been foiled by the absence of an identified unit or budget under which Vascular Surgery operates at the MUHC. As identified in the hospital accreditation, this will have to come. But let me publicly commend the institution firstly for seeing the need for an Assistant O. R. Head Nurse in Vascular, and secondly for more recently providing us with a Patient Care Coordinator on whose shoulders will fall the burden of bringing this together. I have already started meeting with her weekly to press these initiatives and monitor progress and I will continue to do so. A third infusion will be required for the endovascular and endoscopic initiatives. I hope that
we can be creative and provide the mathematical imperatives that will drive that agenda.

Dr. Ron Zelt
HEAD, DIVISION OF SURGICAL EDUCATION

McGill now has a new Division of Surgical Education and the following is a brief outline of surgical education as it stands and what we will strive for in the future.

UNDERGRADUATE SURGERY
The Department of Surgery contributes to undergraduate surgery in three areas:

Firstly, the various divisions of surgery make numerous significant contributions to the Basics of Medicine (BOM) and Dr. Larry Conochie serves as a Unit Head for one of the systems-based learning periods.

The students enter the hospital in their second year and are exposed to surgery during their Introduction to Clinical Sciences (ICM) period. ICM-A is equivalent to the old Introduction to Clinical Sciences and this program is run by Medicine in January of every year. Surgery sees the students eight times over the course of a month to show them how to examine various areas of the body from a surgical point of view. ICM-C is a 10-week block during which we introduce the students to the pathophysiology of surgery and how to make a diagnosis. This is a new program, part of the new curriculum development done at McGill over the last four years.

After they graduate from the ICM-C period, the students do Principles of Medicine (POM) in their third and fourth years. During this period, which used to be called clerkship, they come to the hospital for a two-month period: one month of general surgery and one month of sub-specialty training.

RESIDENCY TRAINING IN SURGERY
Our residency training programs at McGill are divided into two sections: the first two years of Core Surgery training and the next three years of sub-specialty training.

Once the medical school graduates are accepted into a surgical subspecialty, they enter McGill’s Core Surgery program and we become managers of those residents during these first two years of their training - their clinical rotations are decided by the program directors, not us. Currently, Core Surgery at McGill, and certainly across the country, is going through a transition period. With regards to clinical rotations, we are developing attainable objectives for the residents. We will be studying how to evaluate the residents objectively so we know whether or not they have actually learned what they were supposed to learn. Secondly, we have divided our teaching of the principles of surgery into 15 or 16 individual units - from 3 to 8 weeks in duration depending on the topic. We assign staff to head these teaching units, we have clear objectives for each unit, and have evaluations based on those objectives. This is a cyclical two-year program for all residents and all sub-specialties that participate in it. We are in the early stages of developing a surgical skills training program. The first Core year would emphasize basic surgical skills common to all sub-specialties. This would be more sub-specialty specific in the second year.

With regards to subspecialty training, we are hoping to create a subspecialty committee to share ideas on how to train residents and build on each other’s strengths.

FACULTY DEVELOPMENT
We have a very strong faculty development program at McGill. Our own Larry Conochie is an active member of this group and we hope he will help us in our quest to increase the skills of our faculty members in teaching and evaluation.

RESEARCH IN SURGICAL EDUCATION
With regards to research in surgical education, we already have McGill people actively involved on the national and international scene. We would like McGill to become a national leader in areas of skills development and evaluation in surgery.

LOOKING TO THE FUTURE
Education boils down to four steps and it is very important that within each division we strive to adhere to these four principles -- the education spiral.

Modern learning is through objectives. If you have no idea of what you are supposed to know at the end, there is no way to actually put forth a viable learning program. Secondly, one must develop evaluation instruments. Thirdly, you figure out how to implement your program and, when the teaching program is completed, you begin the evaluation process. This process includes evaluation of the learner, the teacher and the program. When you know if the objectives are met, that’s when you modify the objectives and the spiral begins again. That’s how education works and how we must structure all aspects of our surgical training.

We have purchased and are beginning to use a new computer-based evaluation system called Performance Enhancement Technology (PET). We now have an easy method of obtaining data quickly and efficiently, allowing us to evalu-
ate all aspects of our programs and learners. We are very excited about this and know that it will make a significant contribution to our department. It will be available to all divisions for use with their residents.

We want to emphasize that we are committed to developing a surgical skills program. All of us are frustrated at seeing residents in their junior and senior years seemingly not able to perform tasks we think they should. We know many of these skills can be taught outside the operating room; they can be acquired in a dry-bench lab before moving on to the operating room. We hope to have a workable program running in July 1999.

Our division can only work with the continued support of all of you and we see the Division of Surgical Education as playing a significant role in the MUHC.

Dr. Lawrence Rosenberg

DIVISION OF SURGICAL RESEARCH

SUMMARY OF PRESENTATION

1 The current divisional mandate was reviewed. Basically, until now, this has revolved mainly around the graduate program in Experimental Surgery. This program is undergoing a significant change. Old courses are being dropped or radically altered to meet changing needs. New courses are being brought, with the first one to receive university approval — Cell Signalling, to commence in the Fall. As well, a new 30 credit diploma program in Health Care Assessment in Surgery is being readied as well. As plans proceed with the development of the Cell, Tissue and Organ Engineering Axis, new courses will invariably be added (see below).

2 At the time of the presentation, a proposal for a Cell and Tissue Engineering Research Axis had been submitted to Dr. Emil Skamene, the new Scientific Director for the envisaged newly merged MUHC Research Institute. This has recently been approved and the details now remain to be developed.

3 A major thrust of the Division will come in the area of industrial partnerships and technology transfers. The Division must develop policies to foster activities in these areas in order to begin to provide a revenue stream to the Department at large. To further this objective, a new Executive Committee will be constituted with a mandate to deal with these and related issues.

4 A summary of research past and present was presented as a road map to the future (see enclosed diagram). The areas in which research activities seem to be coalescing are: 1) Host response modification; 2) Tissue engineering; 3) Technology R & D; and 4) Outcomes analysis and health care assessment. This scheme was prepared prior to the development of the proposed research axes of the MUHC, but obviously complements it quite nicely. This scheme will guide our development of activities into the foreseeable future.

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Ed’s Note: The report of Dr. Max Aebi on the Division of Orthopedics will appear in the next issue of “The Square Knot.”