

DEPARTMENT OF MEDICINE

2003 – 2004

ANNUAL REPORT

CALGARY HEALTH REGION AND UNIVERSITY OF CALGARY

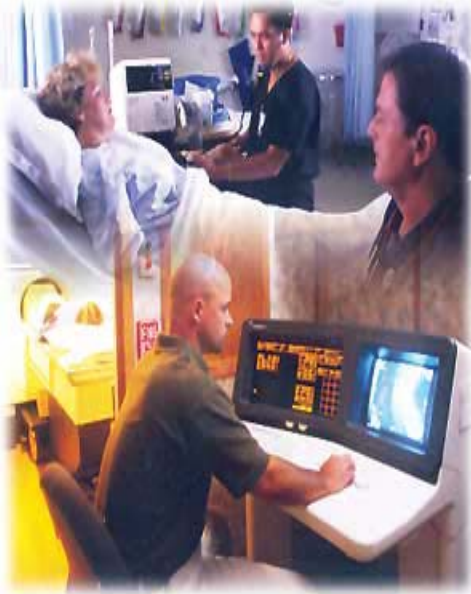
Respectfully submitted by; Dr. John Conly MD, FRCPC, FACP, Professor and Head, University of Calgary and Calgary Health Region, and the Department of Medicine - September 2004



INTRODUCTION

The Department of Medicine is pleased to provide the detail of our 2003-04 Detailed Annual Report to the Calgary Health Region, Medical Advisory Board.

VISION, MISSION, & CORE PRINCIPLES



Our Vision

Creating the medical network of the 21st Century

A network without walls, without professional boundaries, and without limits on quality patient care, research, and education

Our Mission

To be the best Department of Medicine in the country

To be widely recognized for advancing health and wellness, leading innovation, creating technologies and disseminating knowledge

Our Core Principles

*Innovation – Excellence – Patient Care –
Scholarship – Education Leadership - Technology*

DEPARTMENTAL STRUCTURE AND ORGANIZATION

The Department is comprised of twelve divisions and one hundred eighty three physicians i.e. Dermatology (12), Endocrinology and Metabolism (14), Gastroenterology (29), General Internal Medicine (37), Geriatric Medicine (7), Haematology (15), Clinical Immunology and Allergy (1), Infectious Disease (10), Medical Oncology (6), Nephrology (18), Respiriology (20), and Rheumatology (14). In terms of academic standing, the physicians include sixty two (62) geographic full-time, forty seven (47) major clinical, and seventy four (74) clinical appointees.

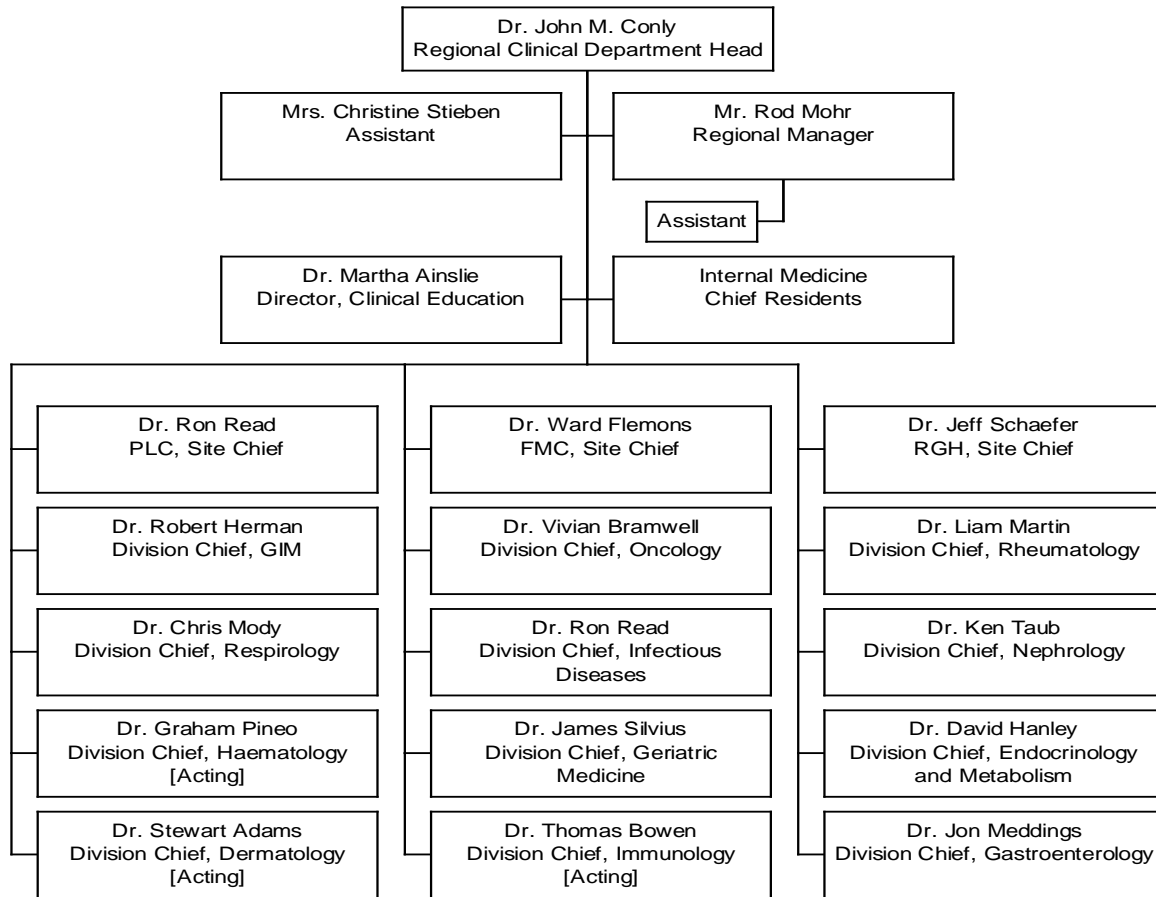
The average member age is 45.1.



Total Medical Specialists							
	GFT	MC	C	Total	Average Age	FTE	% of Females
General Internal Medicine	5	7	21	37	40.5	33.9	45%
Dermatology	0	8	8	12	--	12.0	17%
Endocrinology	7	3	4	14	47.6	13.6	33%
Gastroenterology	12	5	12	29	45.7	28.7	14%
Geriatric Medicine	1	0	6	7	40.2	6.6	43%
Hematology	7	6	2	15	49.1	14.8	23%
Immunology	0	1	0	1	41.4	1.0	0%
Infectious Diseases	10	0	0	10	44.4	9.8	10%
Medical Radiation Oncology	1	0	5	6	--	6.0	33%
Nephrology	9	4	5	18	45.8	18.0	17%
Respirology	5	13	2	20	44.7	19.8	28%
Rheumatology	5	0	9	14	51.1	14.0	43%
TOTAL	62	47	74	183	45.1	178.2	25%



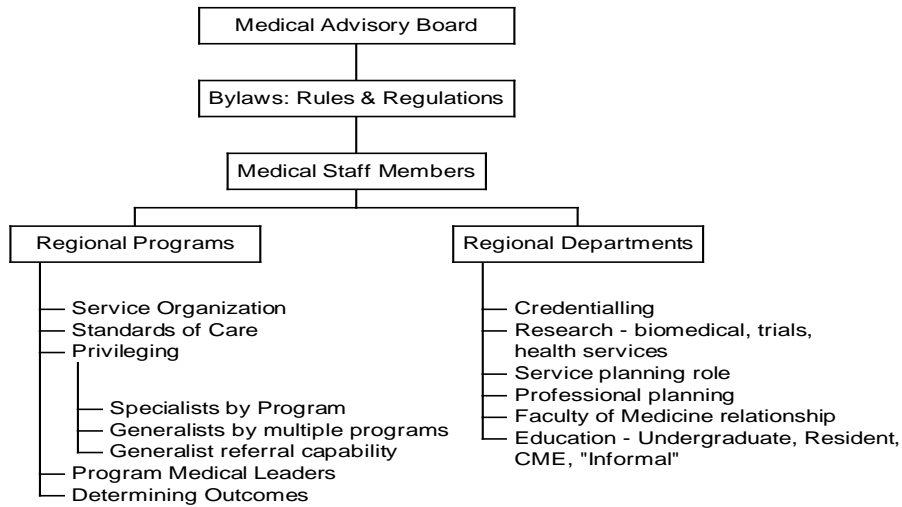
The Departmental organization chart is illustrated in the following figure:



* Dr. Paul Gibson, Associate Director, Clinical Education joined the management structure in fall of 2003.



The Department Head reports to the Calgary Health Region through the Regional Medical Staff organizational structure. The specific relevant functions are itemized in the following figure.





RECRUITMENTS

Completed April 1, 2003 to March 31, 2004

<i>Last Name</i>	<i>First Name</i>	<i>Role</i>	<i>Sub-specialty</i>	<i>Previous Location</i>
Holton	Donna	GFT	Infectious Diseases	University of Saskatchewan Regina, Saskatchewan
Leigh	Richard	GFT/ AHFMR	Respirology	McMaster University Hamilton, Ontario
Michaud	Gaetane	Major clinical	Respirology	University of Ottawa
Penney	Christopher	Major clinical	Rheumatology	Calgary
Bahlis	Nizar	Major clinical	Hematology/ Oncology	Case Western Reserve University, USA
Schoenroth	Leanne	Extended locum	Rheumatology	University of Calgary, Calgary, AB
Ferraz	Jose	Major clinical	Gastroenterology	Brazil
Jenkins	Deirdre	Major clinical	Hematology/ Oncology	University of Calgary Calgary, AB
Myers	Robert	Clinical Scholar	Hepatologist	Paris, France
Rabi	Doreen	Clinical Scholar	Endocrinology	University of Western Ontario
Hemmelgarn	Brenda	GFT/ AHFMR	Nephrology	Calgary
Nash	Carla	Major clinical	Gastroenterology	Sloan Kettering, NY
Goldstein	Cheryl	Major clinical	General Internal Medicine	Cedars- Sinai, NY
Savoie	Mary Lynne	Major clinical	Hematology	University of British Columbia Vancouver, B.C.
Ma	Michael	Clinical Scholar		University of Alberta
Feng	Xiumei	Major clinical	General Internal Medicine	Providence, USA
Didyk	Nicole	Major clinical	Geriatric Medicine	



In the last fiscal year, the Department was advised of the following members leaving their practices in Calgary:

Last Name	First Name	Role	Sub specialty	Destination
Gordon	Diane	Clinical	Rheumatology	retired
Fagnou	Gilbert	Clinical	Rheumatology	retired
Didyk	Nicole	Major clinical	Geriatric Medicine	LOA
Sutherland	Lloyd	Clinical	Gastroenterology	retired

The success of our recruitment this past year may partially reflect the positive impact the ARP will have on income stabilization. Clearly, the ARP is viewed as a positive incentive for recruiting new physicians. Total recruitment is still far short of the 2003 Physician Resource Plan as reported last year, but is meeting the most pressing clinical needs. There are still serious insufficiencies in the number of Residents entering sub-specialty training programs, and market competition in these areas will remain for several years.

Plans for the Fiscal Year 2004/2005 are for recruitment of 15 – 20 new members. but subject to sufficient resources available in the ARP.

ACCOMPLISHMENTS AND HIGHLIGHTS OF OUR DIVISIONS

Departmental

Submission of AFP October 31, 2003

Agreement to Grid and principles of recruitment and innovation by March 2003

Successful Telehealth initiation with hiring of Medical (Jim Silvius) and Nursing Coordinator

Finalization of planning for W21C

Recruitment of 15 new members (against loss of 4 members)

Endocrinology and Metabolism

The Division continues to provide leadership in innovative care delivery models for chronic diseases; this includes continued development of shared care practices for common chronic conditions such as diabetes, lipid disorders and hypertension. Administrative leadership provided by the Division to the Diabetes/Hypertension and



Cholesterol Centre (DHCC) promotes community-based care delivery while enhancing tertiary care services in the Centre. An extremely successful program to manage diabetes and its risk in Calgary's Indo-Canadian community is a prime example of effective resource employment in the community. As well, the institution of an insulin pump clinic at DHCC provides a service that focuses on safety in technological management that is lacking in community resources. The volume of referrals to the Diabetes Centre is still on the rise; compare the 600 referrals/month received on two consecutive months in the spring of 2004 with a combined total of less than 200 referrals/month from the 3 diabetes centres in operation in 1995.

Osteoporosis is another Divisional area which lends itself well to chronic disease delivery redevelopment.

The Division also remains dedicated to the management of less common conditions requiring the unique skills of various Division members. The Neuroendocrine and Inherited Endocrine Tumour clinic has achieved excellence in care through effective multidisciplinary participation under the leadership of Dr O. Rorstad with increasing demand and the recognition of excellence reflected in referrals from beyond provincial borders.

All Division members participate actively in the Undergraduate course and welcome trainees from all Departments and other educational institutions. All levels of education are completely supported; currently the Division has three endocrinology specialty residents and one post-Fellowship physician training in Endocrine Oncology. Again, this reflects the renown of this aspect of activity in Calgary.

Research activities are still prominent in divisional activity. The recent trend has been to focus on clinical research as well as health service delivery and outcomes; these will provide important measures of the effects of innovations in care delivery implemented by endocrinologists in the Region.

The Division still has three active bench researchers and enjoys fruitful collaboration with the University's Endocrine Research Group and Julia MacFarlane Diabetes Centre; however, basic science research will need to be bolstered by faculty recruitment in coming years.



Gastroenterology

In the last year, Gastroenterology (GI) recruited Rob Myers, a hepatologist, and three gastroenterologists, Carla Nash, José Ferraz and Michael Ma.

Over 2003 we added a second endoscopic ultrasonographer (Carla Nash) so that we could provide additional capacity in this growing area. Thanks to a private donation and support from the University of Calgary, we have begun the development of a Centre for Digestive Health and a Calgary Colon Cancer Screening Centre. With the help of the Region, we opened a new endoscopy unit at the FMC site; this has led to better efficiency and improved patient access to care. We began a Capsule Endoscopy service, a new innovative service that is currently in a research and testing mode but offers the potential for improved patient care. Dr. Ron Bridges has arranged for the acquisition of a laser and other materials necessary to start treating patients with Photodynamic Therapy, a new and innovative modality. At the present time, Calgary is the only site in Western Canada with this technology.

Two trainees have completed their gastrointestinal training and passed their exams. Ian Gan and Ayman Abdo have both gone on, Dr. Gan to further sub specialization and Dr. Abdo to an academic position.

The 4 first-yr GI Fellows were successful in both their Internal Medicine exams and in the written portion of their Royal College GI exams. In 2003, all presented research work at national meetings (e.g., Canadian Digestive Disease Week) or international meetings (e.g., American Gastroenterology Association meeting). They have gone on to complete their second year. Each plans a career in academic medicine: Alex Aspinall in bench-research immunology of hepatology (Birmingham); Chris Andrews in functional bowel research (Mayo Clinic); Melanie Stapleton in nutrition; and Shane Devlin in inflammatory bowel disease (Mount Sinai – UCLA). In fact, all have received funding to continue their sub specialization training and each has plans to return to Calgary.

The GI Course was a success with innovation, including being the first division to employ the Curriculum Information System technology, a web-based system for medical students containing schedules, updates, and course outlines and notes that is also accessible via Palm Pilot. In addition, the GI course continued the Case-Based approach that has been the basis for the philosophy of our curriculum.



The GI Division is actively involved in all aspects of research. As a division we are a national leader in clinical and basic research. Numerous presentations and publications came from our group over this year.

In the last year, members of the Division of Gastroenterology received the following awards:

Dr. Eldon Shaffer, Canadian Association of Gastroenterology Distinguished Service Award

Dr. Jon Meddings, Canadian Association of Gastroenterology Research Excellence Award

Dr. Kelly Burak, Excellence in Teaching Letter from Class of 2004

Dr. Sylvain Coderre, Department of Medicine Silver Finger award for Excellence in Resident Teaching

Dr. Paul Beck, Letter of Excellence in Teaching by the University of Calgary Medical Student Association

Dr. Paul Beck, Elected to University of Calgary's Great Teachers Website

General Internal Medicine

In accordance with the recommendations of the February 2003 Royal College Accreditation Review of the Department of Medicine Residency Training Program, the acute care on call coverage of the MTU by GIM at the Foothills site was split off from the remainder of the GIM in-hospital services and the size of the Unit split from a single Team of 25 – 30 patients to 2 Teams of 15 – 20 patients each. Also, after rationalization of the smaller Team numbers, the Division agreed to fully cover the residents on Thursday afternoon Academic Half-day to further comply with the recommendations of the Report. This was accomplished by increasing the allocation of residents to the Units and Training Program as a whole and through doubling of the numbers of GIM staff assigned to Teams and on call nights and on weekends. The result has been uniformly positive for all. Our GIM in-patient census has risen by 25 – 30% with added improvements in the quality of individual patient care. Staff are less overextended and better able to cope with the daily functioning of the Unit. Finally, residents indicate that they are now receiving better teaching and supervision and are particularly happy with



the smaller, preceptor-based, Yellow Team as it provides an excellent 1-on-1 experience for junior residents with the staff. Also, the longstanding issue of coverage on Academic Half-day appears to have been solved. The expectation is that the Program will have little difficulty passing its next interim review in the spring of 2005.

Dr. Gibson was appointed as the Co-director of the Internal Medicine Residency Training Program at the Foothills site in July 2003. In addition to his core training and experience in Internal Medicine, he brings a wealth of new knowledge to the Region in the areas of Maternal Fetal and Peri-obstetrical Health. He is a superb educator and a personal favorite of many of the residents. Undoubtedly, the Program will fare well under his capable leadership.

As the volume and complexity of acute, in-hospital care has increased throughout the Region, it has become near impossible for physicians to remain the sole provider of health care services to their patients. Thus, it was both an evolution of process and a necessity that the private General Internists at the Rockyview Hospital began merging their common interests and goals into a single, group practice including a comprehensive and integrated call and teaching schedule. A geographically dedicated area was developed for this purpose in November of 2003, and medical students and residents from General Surgery, Anaesthesia and Family Medicine began attending on their Teaching Unit, which officially opened in April 2004. The expectation is that with the improved quality and organization of the Program, they will soon be attracting core IM residents looking to fulfil their community service and elective blocks. It has also proven to be very fruitful ground for the professional development of junior GIM faculty like those in our International Medical Graduate (IMG) Program as well as GIM Fellows and for the Internal Medicine training of Nurse Practitioners. Patient census for the unit and the new GIM Admitting service, which opened in July now numbers of 38 – 40 per day versus historical highs of 18 to 20. Also, recent data suggest that length of stay has dropped from 15 to 10.3 days.

The Ward of the 21st Century (W21C) was officially commissioned at the FMC on April 29, 2004. Originally the 'brainchild' of Dr. John Conly and Andrea Robertson, GIM has played a major role in the design, implementation and staffing of this new Unit. The goal has been to create a multidisciplinary, patient centered, point-of-care medical ward focusing on the evaluation and treatment of patients with complex, multi-system clinical problems and at the same time bridge these to new innovations in education and



technology and outcomes research. The lead committee has recently procured corporate funding to outfit the educational area with TeleHealth technology. In January 2004, a second committee was struck to oversee the development and submission of a CFI grant. The over-riding theme of the retreat is patient safety and excellence of care. Partnerships have been forged with local and international business, the Faculties of Medicine, Engineering, Computational Sciences and Social Sciences, with Harvard University, University of Aberdeen, and the University of Toronto, and with Foothills Medical Center and the Calgary Health Region. Applications for funding are presently pending with AHFMR, NSERC/CIHR, and Alberta Science and Innovation. We see the Ward of the 21st Century as the future for academic medicine in Calgary and elsewhere.

GIM is a dynamic, growing subspecialty within the CHR. We do approximately 35% of all the acute, in-hospital and ambulatory care and provide significant undergraduate and postgraduate teaching in the Department of Medicine. We also have an active role in research and administration at all 3 Calgary sites. Indeed, within our Division there are 2 Department of Medicine Site Chiefs, a Vice Chair of Career Development for the University and Department of Medicine and the Lead Physician for the Regions QIHI and Anticoagulation Initiatives. In the past 18 months we have recruited no less than 8 new faculty members, 3 IMG's and 3 GIM Fellows. We have joined the ARP process and look forward to participating in the Innovation Project.

Geriatric Medicine

The most significant change that occurred for Geriatric Medicine during the last year was the dissolution of the Care in the Community (CITC) Regional Portfolio to which our service program had belonged. While attempts were made to have the service program assigned to the Northeast Portfolio along with the other Medicine divisions, we were instead amalgamated into the newly created Southeast Portfolio. Geriatric Medicine also merged with two other former CITC programs, seniors' Health (program planning for seniors) and Palliative Care. The new service area, seniors' Health and Palliative Care, is now supported by Pam Brown as our administrative director and by Mike Conroy and Dr. Richard Musto as our Executive Vice President and Executive Medical Director, respectively. Dr. Silvius remained as the Medical Director. This arrangement enables Geriatric Medicine to continue working with our other CITC colleagues, and increases the potential for synergy with Palliative Care.



The second significant initiative was work in collaboration with other Divisions towards development of the Medicine ARP. While not concluded until after the end of the fiscal year, the Division anticipates to benefit by having a solid financial platform which should facilitate recruitment. Recruitment was underway with a geriatrician to be assigned to the Peter Lougheed site; this had not been concluded as of the end of March '04.

During the last year, Geriatric Medicine experienced some changes in service delivery. The seniors' Health Clinic and the Calgary Fall Prevention Clinic moved from the Foothills Medical Centre site to the Cross Bow site. The Seniors Health Clinic had been founded at the Foothills site as the Seniors Urgent Assessment Clinic, but the move from an acute care site required a change in focus. In addition, monthly Telegeriatric services were established with 5 rural Calgary Health Region sites, with expansion planned at the end of March '04. The benefits being seen include enhanced scope and geographic coverage of the program, as well as efficient use of Division resources.

Colleen Maxwell has been involved in the development of the CIHR funded Calgary Cardiac Cognition project. David Hogan is significantly involved in the Canadian Longitudinal Study of Aging; he is also a collaborator in the Canadian Initiative on Frailty and Aging. Dr. Silvius has remained active with the CIHR-funded DementiaNet project, in collaboration with colleagues in Ottawa and Toronto. These activities allow us to fulfil our mandate to create new knowledge, and, through collaboration with colleagues across the country, enrich our Division by exposing us to alternative ways of considering common challenges.

During this last year, David Hogan has continued in the role of sub-specialty training program director; largely due to his efforts, the Royal College of Physicians and Surgeons of Canada granted full approval to our residency training program in Geriatric Medicine. Our first sub-specialty trainee in geriatric medicine successfully completed the program and obtained her Royal College certification in the fall of '03. She has now assumed a faculty position with the U of S in Saskatoon. With a proven track record in our training program, we have a better chance of competing in a very tight national market for residents. We envisage that, ultimately, we will be able to meet our human resource needs by training our own residents.



Haematology & Haematologic Malignancies

For the period April 2003 to April 2004, Dr. Pineo was acting head of the Division. Also during this period, he represented the Division on the Division Head's Committee and the Medical Staff Executive Committee and the Transition Committee for the ARP.

In 2003 – 2004 the Division was busy with recruitment. During that time Dr. Nizar Bahlis was appointed to a GFT position within the University/CHR. Dr. Deirdre Jenkins and Dr. Lynn Savoie accepted major clinical appointments with the University and CHR. Dr. Rebecca Elstrom accepted a GFT position within the Division but elected to remain at the University of Pennsylvania for one more year. Recruitment efforts continue for at least one further clinical haematologist for the PLC/RVH sites as well as individuals to fulfil special areas of interest at the FMC site.

The Division continued to fulfil its education obligations with strong support from the newly appointed haematologists. There are now three haematology fellows, one second year and two first years, the first time we have had three trainees within the Division.

The Division has been active in research and publication. During the year there were four new research grants funded and twelve continuing research grants. During that time there were forty-one publications as well as 13 publications in press and sixteen abstracts.

For a six month period, Dr. Linhua Yang was a visiting scholar within the Division with a special interest in hemostasis and thrombosis. A collaborative agreement is being established between the Division of Hematology, University of Calgary and the Department of Hematology at Shanxi, China. Collaborative projects of particular interest include hemophilia management and thrombosis in cancer.

Discussions are underway to develop formal relationships between these three groups with particular respect to the bone marrow transplant program and hematologic malignancies to provide formal reporting relationships for the clinical service and research and education involving both inpatients and outpatients.

Ongoing challenges for the Division include the following: continued recruitment for the

Division particularly at the PLC/RVH sites but also within special areas at the FMC, to integrate members of the Division into the ARP, to continue to formalize the relationships between the Division of Hematology, Department of Medicine, University of Calgary, TBCC and the CHR to develop innovative programs related to health care delivery and quality improvement and to continue to develop research programs for faculty members and fellows in training.

Infectious Disease

The HPTP program continues to be increasingly successful in providing intravenous antibiotic therapy to patients with infections who do not otherwise require hospitalization. Planning is underway to move the Rockyview HPTP to the new South Calgary Health Centre as an experimental trial of providing care outside of an acute care setting, and a review of this trial will be conducted 6 months after the move. The HPTP clinics at FMC and RVH continue to operate 7 days a week, and the PLC HPTP clinic operates Monday to Friday. This program has been radically successful in decompressing the Emergency Department, averting hospital admission, expediting hospital discharges, and acting as an urgent referral clinic for community physicians whose patients require IV antibiotic therapy.

The Division of Infectious Diseases welcomes Dr. Donna Holton, who takes up the Infection Prevention and Control responsibilities at the Peter Lougheed Centre. Dr. Manuel Mah has moved to a GFT position as of July 1, 2003 and will be moving from the Peter Lougheed Site to the Rockyview General Hospital. Agreement was received from Dr. Andy Pattullo to come to Calgary from the United Arab Emirates to offer ID consultation service at the Rockyview Hospital. All members of the Division of ID are planning on being members of the Department of Medicine Alternate Relationship Plan.

As a direct result of recruitment this year, the Division of Infectious Diseases is planning to open a full ID service at the Rockyview Hospital. The new RVH service will include Drs. Roy Cook, Manuel Mah and Andy Pattullo. Dr. Mah has also assumed responsibility as site leader for Infection Prevention and Control at the RVH site.

The Division has been asked by the Curriculum Committee and the office of the Associate Dean of Undergraduate Medicine to review the Infectious Diseases and



Medical Microbiology content of the current undergraduate medical curriculum, and will report any areas of deficiency and recommendations back to the Curriculum Committee.

The Division continues to be actively involved in research activities in a variety of areas including antibiotic resistance, HIV/AIDS, Sexually Transmitted Infections, Infection Control, Cystic Fibrosis and Infectious Diseases Epidemiology. Members of the Division have made many presentations at scientific meetings and published papers in peer-reviewed journals. Members of the Division are actively involved in the creation of the new Institute of Infection, Inflammation and Immunology in the Faculty of Medicine.

Nephrology

The renal program has expanded with a new hemodialysis units at the South Calgary Health Centre, the PLC and at Health on Twelfth. New units are planned for 2005 at FMC and at Northland Shopping Centre. This is consistent with the overall vision of the renal program to deliver services in the community. In addition a Nocturnal Hemodialysis program was launched and is very popular with patients and staff. There are over 50 patients requesting this program which entails 8-10 hours of hemodialysis 6 nights per week.

The renal programs of Southern and Northern Alberta have combined to form a network to monitor and investigate renal disease. Drs. Hemmelgarn, Manns, Taub and Culleton and others have initiated this network with the help of investigators from Edmonton and have started the task of standardizing laboratory measurements across the province.

After completing his Master in Medical Education Dr. Kevin McLaughlin, the new Program Director, revised the Nephrology Residency Education Program. The program continues to attract some of the best internal medicine residents available. An emphasis on weekly small group learning sessions and frequent evaluations has noticeably improved the program. The Division continues to present the popular weekly teaching session to the clerks and residents in internal medicine at the FMC and have expanded this to biweekly teaching sessions to the clerks, residents and hospitalists at the PLC.

One new member has joined the Division this past year. Dr. Brenda Hemmelgarn brings expertise in epidemiology and clinical trials to compliment other members of our Division.



The Division has also received several individual grants and awards totalling nearly 3 million dollars from AHFMR, CIHR, Kidney Foundation and the pharmaceutical industry for ongoing academic activity. Continued development of research in basic science, medical education and clinical trials is a priority with the Division

Respirology

The Calgary Asthma and COPD Program is nationally recognized for providing a cohesive service that links together family physician offices, hospitals, and emergency departments. Dr. Robert Cowie leads this team of dedicated health care providers, including physicians, respiratory therapist kinesiologists and nurses.

Respirology has established an Interventional Bronchoscopy Service, one of only two such services in Canada. Dr. Alain Tremblay is the leader of this program, which uses a variety of new tools including endobronchial ultrasound, permanent and removable stents and indwelling pleural catheters. Helped by a major private donation, this program has been able to purchase the equipment necessary to perform this highly technical and innovative service as well as provide unique training opportunities for this rapidly expanding area.

Respirology has also established a Pulmonary Hypertension Clinic, one of only four such services in Canada. Dr. Doug Helmersen, of the Division of Respirology is the leader of this program, which provides day to day management as well as comprehensive diagnostic services including right heart catheterization and pharmacologic treatment.

The Division of Respirology Residency Education Program is fully accredited by the Royal College of Physicians and Surgeons of Canada. The program is recognized as one of the best in the country. The division was also honoured when Dr. Stephen Field, Dr. Ward Flemons and Dr. Chris Mody became “great teachers” at the University of Calgary.

Dr. Gaetane Michaud joined the Division as a clinical assistant professor. Her focus will be on Interventional Respirology, and in particular, pleural diseases.

Members of the division have been involved in research. Recently a paper has been

accepted demonstrating an effective, but less toxic regimen for elderly patients with *Mycobacterium avium* complex infections that cause debilitating chronic chest infections. A project has also recently been completed examining the management of multi-drug resistant tuberculosis.

Members of the division have been very active in national and international clinical guideline committees. Dr. Ward Flemons was the chairperson for the joint American Thoracic Society/American College of Chest Physicians/American Academy of Sleep Medicine guidelines for home diagnosis of sleep apnea. Dr. Gordon Ford was a member of the Canadian Thoracic Society guidelines for COPD and was chair of the “Risk factor” and “ α 1-antitrypsin” subsections of those guidelines.

Members of the division are also active in basic science research. A paper demonstrating the first use of gene silencing in primary human cells was published. In this paper, gene silencing using RNA inhibition established for the first time the mechanism by which cytotoxic lymphocytes directly kill microbes.

Rheumatology

The Division of Rheumatology negotiated a transfer of its out-patient program from Area 6 to Area 5 at the University of Calgary Medical Clinic. The Division will share this space with the Division of Endocrinology and allow Division members to begin to develop more comprehensive out-patient programs. Space has been allocated in this area for a nurse practitioner. The nurse practitioner position has been funded by Bone & Joint Health and the practitioner involved will have a 0.2 appointment in the Division. A space for patient education has also been allotted in the clinic to assist in teaching patients self-injection techniques for biologic therapies.

The Division has been in negotiations with the government to establish a pharmacovigilance program to monitor patients whose rheumatoid disease is being treated with biologic agents. This program, which is unique in the country, will act as a model for the development of other programs within other subspecialty areas to monitor the use of expensive medications in patient management.

The Division has lost three members to retirement this year. The Division is attempting to recruit further rheumatologists to the region to replace those who have retired.



Recruitment of such individuals will be very much dependant on outside funding sources to attract these individuals.

Research activities within the Division continue to grow. Dr. Marvin Fritzler continues to receive support from the Canadian Institute of Health Research for his work in auto-antibody research. The Division's clinical trials unit continues to expand. There are currently five clinical trials underway within the Division, with plans to begin two more studies in the not to distant future. The Division, under the direction of Dr. Susan Barr, is participating in a CIHR funded study in the evaluation of the occurrence of cancer in systemic lupus erythematosus. Also, under the direction of Drs. Martin and Barr, the Division continues to evaluate the efficacy and complications of biologic therapies in patients with rheumatoid arthritis.

Teaching continues to be an important component of the Division's activity and, under the direction of Dr. Chris Penney, a standardized approach to the physical examination of the musculoskeletal system is being developed to be used by clinical clerks and medical residents.

DEPARTMENT OF MEDICINE TELEHEALTH PROJECT

The Department of Medicine Telehealth Project was funded by Alberta Health and Wellness in response to a request to explore alternative methods of care delivery using Telehealth. Project approval was received in mid-October '03 for a 6 month project involving use of Clinical Telehealth in 5 Divisions within Medicine: Allergy & Immunology, Dermatology, Geriatrics, Infectious Diseases, and Nephrology. Internal Medicine at the PLC indicated an interest in joining the project and was added shortly after project initiation. The first couple of months were spent in developing business cases for service provision and arranging initial clinical services, culminating in the first two clinical sessions being held on December 19, 2003. The project was slow to meet its initial milestones but made sufficient progress that an extension in the funding was granted to the end of December '04.

As of March 31, 2003:

Allergy & Immunology – initial clinic was held in December '03. The service was focused on chronic urticaria and three consults were completed as of the end of March '04.



Dermatology – initial attempts to develop a service were slow to progress. Attempts were being made to look at the technology in terms of image quality and one demonstration had been completed.

Geriatrics – initial clinic was held with Claresholm in December '03. The Clinic expanded to encompass 3 sites (Black Diamond, Claresholm, and High River) using a virtual concept visiting all sites in the same clinic session by March '04. Eleven discrete consults were completed, and plans were underway for further clinic expansion to Vulcan, Didsbury, Strathmore and Red Deer.

Infectious Diseases – development of service model was underway, with a focus on cystic fibrosis. No clinics had been held by March '04.

Internal Medicine PLC – planning was underway for addition of a Telehealth component to an existing onsite clinic in Brooks. Training was booked for the first week of April with the Clinic planned to move forwards shortly thereafter.

Nephrology – process planning meetings were held through the first part of '03. A trial pre-dialysis clinic had been held in March from the Health on 12th site. Three discrete consults were completed, with plans for a regularly scheduled clinic to be initiated. In addition, a Nephrologist clinic was also being planned.

The Telehealth coordinator had resigned as of March 31 and a search for a replacement was underway. The role of the coordinator has been shown to be critical for the success of the Project and thus there was some urgency to see the position replaced.

The initial target of 40 consults by June 30, 2004 was on the way to being met, though there had been an initial slow start. For future Projects, it is also clear that a “ramp-up” phase has to be anticipated, with targets set that reflect the slower nature of start-up as compared to the numbers that can be achieved once the Project is established.

Other lessons learned from the Project were that for sustainability, integration into existing clinic/outreach activities was essential and this will be built into further planning as services consolidate and expand.

Department of Medicine Telehealth Project is experiencing huge success. The project has exceeded its clinical requirement of consults and they are ahead of schedule. The six



specialties under the project include Geriatrics, Nephrology, Internal Medicine, Infectious Disease, Allergy & Immunology and Dermatology. Telehealth services are in the process of reaching all rural communities in the Region. The plan is to institute virtual clinics, scheduled throughout the Region, which we anticipate being well integrated into the daily service delivery.

ALTERNATIVE CARE PROVIDERS

Most Divisions in the Department of Medicine have worked with nurse practitioners, nurse clinicians, nurse educators and/or other alternative care providers. In particular, Endocrinology and Metabolism, Respiriology and Rheumatology have been quite active in this regard.

EDUCATION SUMMARY

The Department delivers the equivalent of 8.0 FTEs education per annum to undergraduates based upon an annual intake of 100 students. The Department delivers the equivalent of 32.0 FTEs education per annum, primarily in clinics, on wards, and in the medical teaching units, to post-graduate residents.

RESEARCH SUMMARY

In calendar year 2003 Department members achieved (including academic division of Cardiology):

- Peer reviewed publications: 339 (includes invited publications, editorials, and letters)
- Non peer reviewed publications: 32
- Abstracts published: 321
- Book chapters published: 53
- Invited presentations (inter-provincial, national, and international): 445



Population:

Calgary continues to be the most rapidly growing metropolitan area in Canada. Its population is expected to increase by 200,000 additional people by 2010 (just under 100,000 in the 2004/05-2006/07 three year planning cycle). Foreign immigrants comprise from forty to fifty percent of the Region's annual growth, reflecting an ever increasing multi-cultural society. For many of these individuals, English is not their first or even second language and fifteen percent are refugees with complex health and social problems.

Workload:

The Calgary Department of Medicine already has a substantial workforce deficit. The average Department member is currently working as a 1.20 FTE (includes call-back, excludes on-call hours) and many are well above this level. Serious concerns among Department members about "physician burnout" remain as in the 2002 – 2003 report.

Age/Gender:

In light of population projections, the average work week will increase further. Senior faculty constitute a significant proportion of the Calgary Department of Medicine, and two thirds of members are 45 years or older. With recruitment, the average age of a Department member is now 45.1 years. A significant gender shift amongst specialist physicians, new recruits, and medical trainees continues to create a significant challenge for the Department.

Recruitment:

Historic reductions in medical school class sizes, compounded by trends in population growth and diversity, workforce gender shift, and aging, have created a growing shortage of specialist physicians in Calgary and Canada, and little has changed since 2002 – 2003. Calgary, as well as Alberta in general, will need to be extremely competitive in order to attract and retain physicians. When making practice location decisions,



physicians will not only compare compensation levels but will also consider working conditions and the overall health care environment. Increasing numbers of medical trainees are choosing to enter traditionally higher earning specialties and/or “private” clinical practice. This trend must be reversed if academic medicine and the lower earning disciplines are to survive, let alone thrive.

Access:

Within Alberta, accessibility is still viewed as the most critical issue facing health reform. On September 19, 2003, in a speech delivered at the University of Calgary’s Faculty of Medicine, Health Minister Gary Mar offered the following comments on accessibility: “Canadians have confidence in their health system and the quality of their care. The top health care priority for Albertans and all Canadians is not safety, but access. Once people are being seen and treated in the system, they are pleased with the care they receive.”

Most Divisions continue to cite infrastructure issues as a key challenge to reducing wait times. A need for allied health professionals and lack of space were the most commonly cited constraints.

The Calgary Department of Medicine must serve a truly regionalized health care environment. Service integration is region-wide, not site or academic/non-academic specific. This has been a major positive outcome of regionalization and must not only be preserved but enhanced.

Summary:

Considering these trends and facts as a whole, some of the key challenges for Calgary’s Department of Medicine for 2003 – 2004 continues to be much the same as 2002 – 2003. These include:

- ✓ Maintaining and delivering high quality, accessible services to a population that is the most rapidly growing in Canada;
- ✓ Retaining needed specialists in Calgary in the face of increasingly stiff competition from other provinces, and attracting new recruits to decrease patient wait times, to keep pace with improvements in service delivery, to cope



with the impact of an aging Southern Alberta population and to manage the impact of an aging physician workforce.

- ✓ Maintaining excellence in undergraduate and post-graduate medical education, provide high quality continuing education opportunities for physicians in practice and support the training of other members of the health care team such as nurses, pharmacists, and rehabilitation therapy personnel; and,
- ✓ Continuing to provide innovative care delivery and to do innovative health research that attracts research funding to the province and leads to novel treatments and therapies that improve the population's health.



WORKFORCE PLANNING

The workforce requirements described in the following figure are based upon the needs based assessment results. Reconciliation to the supply assessment has been integral for validation purposes.

#	CATEGORY	STATUS	REQUIREMENT	INTEGRATED NEEDS/SUPPLY BASED: <u>TOTAL 5 YEAR FTE REQUIREMENTS</u>												
				DEPT. Head	Endo/M	GI	GIM	Geriatric Medicine	Haem	ID	Neph	Resp	Rheu	TOTAL		
1	NEED: Population Growth	SYSTEMIC NEED	To deliver IP and OP services to the age/referral rate adjusted 5 year population growth forecast	-	2.8	3.6	6.1	1.3	1.9	1.4	2.6	3.4	3.5	26.6		
2	ACCESS: Wait Time Reduction and Management	Mandated	To reduce chronic wait times in Gastroenterology and Endocrinology	-	1.1	3.3	-	-	-	-	-	-	-	4.4		
3	DEMAND: CHR Boundary Expansion	Mandated	To deliver medical administrative services to the expanded regional geographic area (10 * 0.125)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.3		
4	DEMAND: CHR Infrastructure - IP beds	Mandated	To support the addition of 54 Internal Medicine beds and decanting of chronic/LTC offsite. Assume IP Service done by GIM and Consult service based on 2yr historic trend.	-	0.0	0.3	8.0	1.0	0.1	0.1	0.1	0.2	0.0	9.9		
5	DEMAND: CHR Infrastructure - D&T centres	Mandated	To support the opening of two comprehensive diagnostic and treatment centres by 2005.	-	-	-	6.0	-	-	-	-	-	-	6.0		
6	NEED: Hospitalist to GIM shift	Risk management	To support the shift of 10%-20% of cases currently managed by hospitalists to GIM and internists at an ALOS of 6.0.	1.0	-	-	3.1	-	-	-	-	-	-	4.1		
7	NEED: Research	Innovation	To support innovation in assessment, evaluation, clinical informatics through clinician investigators	2.0	-	-	-	-	-	-	-	-	-	2.0		
8	SUPPLY: Teaching	Mandated	To support the split of the 30 bed FH MTU into 2x15bed units	-	-	-	4.0	-	-	-	-	-	-	4.0		
9	SUPPLY: Teaching	Mandated	To deliver the needed 15,398 incremental UG and PG teaching hours (structured not bedside)	-	0.5	0.5	3.5	0.5	0.5	0.5	0.5	0.5	0.5	7.4		
10	SUPPLY: Gender Shift - Baseline current workforce	SYSTEMIC NEED	To support the gradual shift in gender among current FTEs from the current 83% male. Assume the go forward recruitment will approximate 50/50 over the five year forecast period.	-	0.3	0.9	0.8	0.2	0.4	0.4	0.6	0.6	0.4	4.4		
11	SUPPLY: Gender Shift - for evidence-based needs recruitment	SYSTEMIC NEED	To support the shift in gender mix for future recruitments (112 FTEs) going ward to 2008 at a 50/50 mix instead of the historic 82/18 mix	5.5	0.2	0.8	2.2	0.2	0.2	0.1	0.3	0.3	0.3	10.2		
12	SUPPLY: Sustainable Work Week	SYSTEMIC NEED	To support move from 54 hours per week, excluding on-call and call back duties, to 50.0 hours per week.	-	0.7	1.0	6.3	-	0.1	0.4	0.2	0.1	1.9	0.8	0.9	8.8
	MEDIUM PLANNING RANGE			TOTAL FIVE YEAR NEEDS BASED REQUIREMENTS [excluding "replacement"]												
				8.0	4.0	15.9	33.6	3.7	3.4	2.6	6.1	5.9	5.7	89.0		

The distribution of FTE needs by Status type is summarized as follows:

- Systemic clinical requirements – 9 per annum (50%)
- Systemic education requirements – 3 per annum (17%)
- Gender recognition requirements – 3 per annum (17%)
- Investment in innovation – 3 per annum (17%)
- Net for each of the Nine Divisions analyzed to date is 2.0 per annum.

The three and five year needs based incremental required recruitment, excluding replacement needs, are summarized by driver and clinical/academic requirements in the table below.

26% of the need (23 FTEs) is systemic needs due to population growth. 28% (25 FTEs)

NEED	NEW RECRUITMENT FTEs			YEAR 1	YEAR 2	YEAR 2	3 YR. SUBTOTAL	YEAR 4	YEAR 5	5 YR. TOTAL
	CLINICAL	ACADEMIC	TOTAL							
SUPPLY: Teaching		6.86	6.86	6.86			6.86			6.86
NEED: Population Growth	23.08		23.08	4.62	3.62	4.62	12.85	5.12	5.12	23.08
NEED: Research	-	2.00	2.00	-	1.00	1.00	2.00			2.00
SUPPLY: Gender Shift - Baseline current workforce	1.95	2.72	5.67	5.67	-	-	5.67			5.67
SUPPLY: Gender Shift - for evidence-based needs recruitment	5.63	5.19	10.82	2.16	2.16	2.16	6.49	2.16	2.16	10.82
SUPPLY: Sustainable Work Week	6.76	7.65	14.41	5.41		1.6	7.01	3.70	3.70	14.41
DEMAND: CHR Infrastructure - IP beds	11.00		11.00		3.63	3.63	7.26	3.74		11.00
DEMAND: CHR Boundary Expansion		1.39	1.39	1.39			1.39			1.39
DEMAND: CHR Infrastructure - D&T centres	6.00		6.00		3.00	3.00	6.00			6.00
ACCESS: Wait Time Reduction and Management	4.67		4.67	4.67			4.67			4.67
Hospitalist to GIM shift	4.06		4.06	1.00	3.06		4.06			4.06
TOTAL MEDIUM RANGE FTE RECRUITMENT NEED ¹	63.14	25.81	89.95	31.77	16.47	16.01	64.25	14.72	10.98	89.95
% Needed Distribution	70.2%	28.7%	98.9%							-
Current Mean Time Distribution	56.1%	43.9%	100.0%							-
ESTIMATED EQUIVALENT NUMBER OF INDIVIDUALS	70.00	30.00	100.00	40.00	19.00	18.00	77.00	17.00	13.00	107.00

¹ Excludes replacements.

is mandated by regional health system expansion to address the current shortfalls and expansion of the Medical School and is not related to new population growth. The balance of 46% is in effect, a correction of a physician resource deficit which arose because of the expansion of CHR and U of C capacities in response to pressing requirements and recognition of the gender shift occurring in the work force. With the correction of this deficit it will prove possible, for example, to get inpatient bed occupancies below their current “full, 90%+ occupancy” rates and to begin the necessary build-up in our local ability to increase the supply of specialist physicians and alternative care providers.

To recruit these FTE’s in the correct proportion, the “member” recruitment requirements will be the equivalent of 70 clinical and 30 academic members



QUALITY ASSURANCE AND QUALITY IMPROVEMENT

QI for Inpatient Medicine Units & Outpatient Clinics & Services

INTRODUCTION

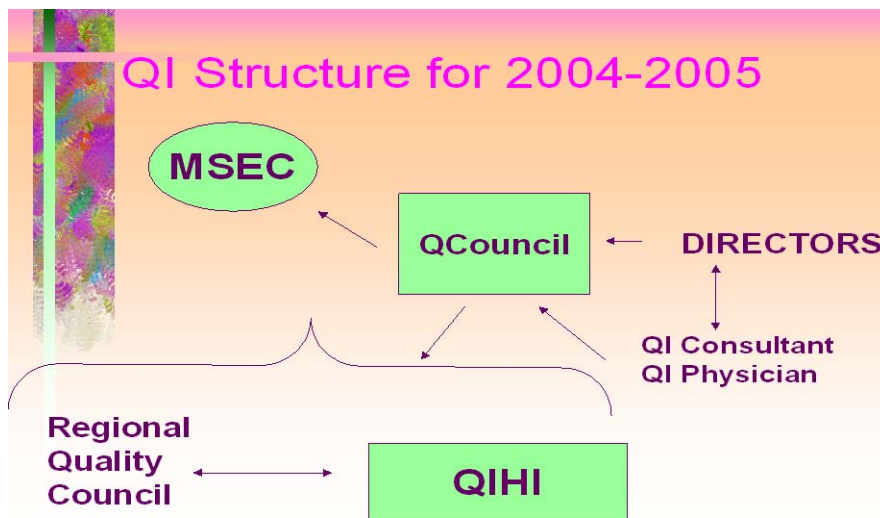
Over the past year the juxtaposition of a quality improvement *philosophy* and *infrastructure*, including major *elements* and *approaches*, formed the basis of a strong QI programme for the Department of Medicine. As a result the programme saw successful developments in the areas of QI collaborative project work, the use of improvement methodology and training, and the initiation of *patient safety* as an integral aspect of the programme.

Philosophy and Approach: The development of an *improvement* culture within the Department emphasized a focus on information, outcomes, and the application of QI tools.

Information	<ul style="list-style-type: none"> •success of QI projects were immediately applied to and communicated within the clinical work area •QI measurement methods were made accessible and available to all QI project team members to use <i>where they</i> worked •All project work and successes were communicated at collaborative learning sessions and QI committee meetings
Outcomes	<ul style="list-style-type: none"> •QI project test cycles illustrated how improving processes could make an important difference to patient care. The test cycles were applied through the <i>Improvement Model</i>: <ul style="list-style-type: none"> →what are you trying to accomplish? →how will you know a change is an improvement? →what changes can you put in place that will result in an improvement? •project successes were integrated into day to day clinic work and evaluated

Application of Tools	<ul style="list-style-type: none"> •all QI project teams utilised a comprehensive 4-phase education and testing model (FOCUS-PDSA) that: <ul style="list-style-type: none"> →organised teams around a QI problem →used a problem-solving, testing, and evaluation approach (PDSA → ‘plan-do-study-act’)
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Infrastructure: The following structure illustrates the support and reporting arrangement underlying QI accomplishments for the year:



At the centre of the chart is the *Medicine Quality Council* that discusses and prioritises QI projects and initiatives, giving guidance and support for ongoing programming in the Department. Its multi-level and multi-representational front-line membership provides good perspective on both QI issues as well as solutions. Through membership input as well as input from the Department’s directors and QI team (Consultant and Physician) the Council worked on 2003-2004 priorities through the support of QIHI – Quality Improvement and Health Information Dept. All reporting of Council activities and outcomes was carried out at *Medical Services Executive Council (MSEC)* and at the *Regional Quality Council*.

Elements: The following elements formed the basis of the above structure and complemented the philosophy of QI in the Department for a successful QI programme:

- There must be integration of quality improvement (QI) and quality assurance (QA) such

that work in one area of quality influences the other. Improvement initiatives need to work along this QI/QA spectrum

- System integration: The Department of Internal Medicine sees itself as a department influencing and being influenced by other departments and systems within the Calgary Health Region.
- QI project teams are essential to solving clinical problems in direct patient-care areas.
- There is an expectation in the department that: all divisions and clinical areas will be involved in quality improvement of some form
- Department executive members will take the responsibility for continuously setting the Quality agenda and communicating this agenda and vision to the QI team (Consultant & Physicians) for QI operations

QI Programme Priorities: The QI Programme focused project work on the following specific priority areas. These priority areas were identified summer of 2003.

QI issues related to COMMUNICATION and INFORMATION TRANSMISSION re: inter-departmental communication, patient records, and the reporting and timely access to patient test results.

PATIENT SAFETY in the areas of adverse medication events (ADE's) and the development of a clear and accessible system of near miss and incident reporting relating to ADE's.

Improvement of PATIENT FLOW where a patient receives the right service in the right bed at the right time.

Improvement in the DISCHARGE of patients where the timely co-ordination of discharges is enhanced among the full multidisciplinary team.



COLLABORATIVE PROJECT WORK (Summer 2003 – April 2004)

Five (5) successful Collaborative Projects, supported and monitored by the CHR’s Department of Quality Improvement and Health Information (QIHI) took centre stage during the 2003-2004 year. These projects, focused on both *patient safety* and *patient flow*, allowed CHR regional Medicine departments to integrate problem solving on the main QI priority areas identified within the Department. These projects ran from the summer of 2003 to April of 2004.

Project teams started teamwork with the “pre-work” of setting down aims, outcome measures, and an overview of what their baseline data description would include. They were familiarised with the *Improvement Model* and PDSA methodology of rapid (process improvement and evaluation) test cycles. Thereafter they were supported and coached through the almost year-long process of action periods (testing), reporting, solution sharing, meeting processes, and final storyboard communication by the QI Consultant for Internal Medicine.

Patient Flow: Four (4) *patient flow* project teams completed a successful year of Collaborative project work. Below is a description of their main projects aims, area of process measurement, and outcomes. Each project’s outcomes had implications for quality improvement in the Department.

PROJECT	Project Aim	Process Measurement	Outcome & Implication
Acute Medicine Patient Flow Project (ER and Inpatient Medicine PLC site)			
Discharge Flow Project (NU 61 FMC)			
Palliative Flow Project (NU 47 FMC)			
Nephrology Flow Project (NU 37 FMC)			

Patient Safety: One 1 *patient safety* project team completed a successful year of Collaborative project work. Below is a description of its main projects aims, area of process measurement, and outcomes. This project has major implications for quality improvement in the Department.



PROJECT	Project Aim	Process Measurement	Outcome & Implication
Adverse Drug Events with Hypoglycemic Agents (NU 59 & 61 RGH)			

The foundation for the following areas of QI Programme work for 2004-2005 was laid down this past year:

→Patient Safety Initiatives

- Development of QIHI “Model for Improving Patient Safety” model for the Dept, inclusive of data sources, ‘closing the loop’ on data flow, evaluation and monitoring
- Completion of CHR Safety Task Group focus group data compilation, inclusive of hazards and risk
- Development of Dept Patient Safety committee and reporting structures
- Preliminary Consultant training on prospective (*Root Cause Analysis*) and retrospective (*Failure Mode and Effect Analysis*) safety analysis methodology



Patient Safety Initiative

Description

<p>The development of a Safety culture</p>	<p>Use of Patient Safety Culture Survey (origin: QIHI's Prospective Measurement & Evaluation unit)</p> <ul style="list-style-type: none"> •through its use in 2003-2004, the survey determined the <i>safety climate score</i> in a patient care area •it currently is now used to assess the level of communication about safety and level of reporting and management of incidents by staff on a unit. •the survey emphasises philosophies of proactive prevention of human error through design, developing a climate of 'no blame', a focus on health care process rather than individual action, and 'closing the loop' on safety reporting, including near-miss reporting.
<p>Analysing Safety using TOOLS: FMEA and RCA</p> <p>(QIHI carried out training on these tools for all QI Consultants)</p>	<ul style="list-style-type: none"> •FMEA (Failure Mode and Effect Analysis) is a prospective approach to analysing a process and identifying what the effects of a failure in system, equipment, and resources would be within that clinical process. •RCA (Root Cause Analysis) is a retrospective look at root causes of a process or event.
<p>QIHI Patient Safety Collaborative Project: Adverse Drug Events with Hypoglycemic Agents</p> <p>This project was undertaken in Medicine at the RGH.</p>	<p>An <i>adverse event</i> is defined as: an unintended injury or complication resulting in a disability, death, or prolonged hospital stay and is caused by actions of individuals or broader health care system rather than the patient's underlying condition.</p> <ul style="list-style-type: none"> •prevention of adverse drug events (ADE's) were examined with this QI project team through the study of incidents with hypoglycemic agents. •The team aimed at both improving the culture of safety on the Medicine unit as well as improving the medication delivery system for hypoglycemic



	<p>agents, in order to decrease ADE's by 75% in 9 months. Measures are still ongoing in 2004.</p> <ul style="list-style-type: none"> •The main way in which culture is being improved is through better reporting systems, including the voluntary reporting of near misses or “good catches”. •The main way in which ADE’s are being assessed and improved is through the use of a specified (hypoglycemic) ADE trigger tool that the team refined with the help of QIHI. •Successes have been seen in the following ways: an increase in good catch reporting using the Region’s incident report form, and a decrease in the incidences of hypoglycemic episodes through the use of modified charting sections in patient’s charts, RNs double-checking insulin orders, and the use of a hypoglycemic information pocket card.
<ul style="list-style-type: none"> •CHR Safety Task Group (Focus Group data) – hazards list, risk scenarios 	<ul style="list-style-type: none"> •In May/June 2004 focus group data was compiled with respect to top priority safety concerns in Medicine, the hazards they cause, and the scenario of risk that would ensue as a result. This information has been forwarded to QIHI to be included in a full Task Group report, inclusive of recommendations. This report will be submitted to the CHR executive Fall 2004.
<ul style="list-style-type: none"> •External Pt Safety Review report (June 2004) 	<p>Recommendations made by an external review team as a result of 2 ICU patients’ deaths winter of 2004. The review committee verified internal CHR reviews of the incidents as well as all factors contributing to the patients’ deaths and changes were recommended to the culture of patient safety at the CHR, including the manner in which critical incidents are reported in the Region, as well as the re-design of pharmacy services.</p>
<ul style="list-style-type: none"> •Development of Regional and 	<ul style="list-style-type: none"> •The basis for a Department Patient Safety

departmental Pt Safety cttees	<p>Committee was developed this past year through the design of a committee reporting structure. This structure would be decentralised among the different CHR hospital sites and would forge connections to the Region's Patient Safety Committee as well as QIHI.</p> <ul style="list-style-type: none"> •A plan for evaluating reporting lines and data flow within this structure is to take place in the 2004-2005 year.
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→Internal (Department) QI Project Development

- Development of teams and QI project areas for (8) Departmental QI projects, inclusive of the following Divisions and Clinics: *Pulmonary, Endocrinology, GI, PLC Specialty Clinics, FMC Day Medicine.*

→Quality Council Reporting

- Reporting from monthly Council, as per development of QI Programme components:
 - QIHI Collaborative and Dept QI Projects
 - Division QI reports and Indicator development
 - Systems QI
 - Patient Safety
 - QI Communications and project spread

→Plan for Quality Communications and Reporting

- Plan for improving access to integrated QI information on websites, newsletters, QIHI reports, inclusive of QI project inventories, project status reports, Quality Council materials, education and training resources, and patient safety updates.

→QIHI Collaboratives 2004-2005 Project/Team Mapping

- For next year's *Patient Flow* and *Medication Safety* teams, a systematic approach to mapping areas of focus for 2003-2004 innovation, associate, and spread teams, as per the successes achieved in 2003-2004

→Frameworks and Plans for Quality Indicator Development

- Plan for developing QIHI data sources for AFP quality indicators
- Plan for integrating QIHI and Internal Medicine corporate Balance Score Cards

→ QI Education and Training Plans

- Development of new QIHI 4-phase teaching approach for the Department for the following groups: *Internal Medicine Residents, Inpatient and Outpatient Managers, Quality Council members.*
- Development of training materials and ongoing education supports for QI project teams
- Development of QI as integrated into Internal Medicine *Standards of Practice*

QI DELIVERABLES FOR 2004-2005


The following table outlines area of deliverables for the 2004-2005 year:



Internal Medicine QI Programme Initiatives 2004-2005

QI Project Types







QIHI Collaborative 





Internal to Dept 





Fam Med/Other Dept collaboration 
Spread

Name/Aim/Division	QI Projects					Communication	Education & Training	Pt Safety
	PLC	FMC	RGH	CHR				
NU 43 MAST Team (Medication Administration Safety Team) Reduce errors in RN admin of oral meds to pts General Internal Medicine						WEBSITE •Projects (Charters, Div Heads, Team members, data plans, test cycle progress, storyboards) •education/training info •resource materials & tools	→Managers →Quality Council Members →Project Teams	→Cttee structure & QI/QA integration →Evaluation of data and info flow
NU 61 Med Safety Team Reduce errors with narcotics Hospitalist						•Pt safety updates •Accreditation •Quality Council	→Residents →Inpatient nurses –	→Med Safety Teams (QIHI Collaborative)

2003-04 ANNUAL REPORT EXECUTIVE SUMMARY

Pt Flow Systems Team Improve flow from ED to inpt discharge All divisions						updates •QI/QA newsletter CTTEE REPORTS MSEC, RQC, Inpatient Mgrs, Outpatient Mgrs QUALITY COUNCIL MEETINGS (monthly)	Standards of Practice	
Specialist/Family Medicine Communication/Access Targeting access & referrals between Family Medicine & GI GI/Family Medicine								
	PLC	FMC	RG H	CH R				
Drug Utilisation Review Shaping appropriate use of drugs, ed, containing costs MTU's/ Hospitalist								
NU 59 RGH Good Catch Development & info management and flow of (near miss) good catch reporting Medicine & Hospitalist								

<p>PLC ER/MTU Acute Medicine Pt Flow – appropriate allocation <i>Medicine & Hospitalist</i></p>								
<p>Diabetes Transition Project (NU 47 RGH) Improve level of preparedness for diabetic patient, for discharge Endocrinology – Alun Edwards</p>								
	PLC	FM C	RG H	CH R				
<p>RT ABG Protocol Evaluation Evaluate success and appropriateness of RT using ABG protocol <i>Pulmonary – Chris Mody</i></p>								
<p>GI Area 2 Process Flow Improve flow related to procedure bookings <i>GI – Jon Meddings</i></p>								

<p>SAC Pre assess Flow Improve pt flow in pre-assessment clinic <i>SAC – Ron Read/John Gill</i></p>								
<p>Pulmonary Outpatient Flow Improve reporting of pt tests/results Pulmonary – Chris Mody/Doug Helmersen</p>								
<p>Day Medicine Pt Flow Modify flow in new space G. Pineo, B. Herman, L. Martin, J. Meddings</p>								
<p>Inpatient Falls project (NU 47 FMC) To determine intervention & communication strategies for nurses Ron Spice/Lyle Galloway</p>								

FUTURE DIRECTIONS AND INITIATIVES

Background

Workforce Needs:

Recruitment of physicians to offset natural turnover is a large enough challenge in and of itself let alone when compounded by the average Department member age, gender shift (is 25% female, will be 40% in time), and highly competitive environment for replacement recruits. Overwhelming natural turnover as a workforce issue are the pressing additional needs of Calgary and Southern Alberta. ***The CHR is responding*** in terms of infrastructure by increasing bed capacity by 25%-30% between 2002 - 2007 through existing site expansion and the proposed opening of a new hospital in south Calgary. Additional higher complexity diagnostic and treatment centres are planned as well. Government funding is expected to be in place in the coming year. ***The U of C Faculty of Medicine and Alberta Learning are responding***, with a 45% increase in undergraduate medical enrolment (69 in 1999/00 to 100 permanent positions), with the possible addition of another 25.

Workforce Plan:

The importance of successfully building capacity and implementing innovation in the Department to coincide with the plans of the CHR and U of C Faculty of Medicine cannot be overstated: they are interlinked hand in glove.

Alternative Funding Plan

The Department has set out specific strategies in response to the challenges outlined above and the drivers (access, sustainability, integration, and accountability) of health reform. The Department AFP Proposal (includes the CHR Regional Division of Cardiology within the Cardiac Sciences Department) was submitted to Stakeholders October 31, 2003, following an exhaustive, member-driven, fourteen month development and consultative process.

At this time, one hundred sixteen medical sub specialists have expressed serious interest in an AFP including 67 GFT's, 26 major clinical appointees, and 23 clinical appointees. This mix reflects the strong integration between clinical and academic medicine achieved

within the Department.

Preliminary AFP Member List

DIVISION	GFT	MC	C	Total	% Clinical	% Academic	Av. Hours/Week	Total FTE
General Internal Medicine	5	5	2	12	72	28	58.2	15.18
Cardiology	12	1	1	14	66	34	69.6	20.89
Dermatology	0	0	0	0	90	10	-	
Endocrinology	7	2	4	13	72	28	50.6	13.16
Gastroenterology	9	3	1	13	47	53	67.1	18.79
Geriatric Medicine	1	0	5	6	80	20	53.6	6.48
Haematology	6	3	0	9	68	32	54.6	9.84
Immunology	0	0	0	0	90	10		
Infectious Diseases	8	0	0	8	60	40	54.0	8.64
Medical Oncology	0	0	0	0	70	30		
Nephrology	8	2	1	11	55	45	58.7	12.92
Respirology	4	10	0	14	66	34	63.1	17.66
Rheumatology	7	0	9	16	66	34	54.0	17.26
TOTAL	67	26	23	116	69	31	59.1	140.72

The Department proposes innovation in service delivery (e.g. chronic disease management), a strong information technology underpinning, an evidence-based accountability methodology, and an integrated, sustainable physician workforce strategy. The participants in the AFP Proposal are integral leaders to past and current achievements in health outcomes, pioneering the lowest ischemic heart disease mortality provincially and second lowest nationally, community-based diabetes education and intervention programs, population-based colon cancer screening, lowering rates of HIV and STDs, and the lowest kidney disease mortality rate provincially and second lowest nationally. These achievements could not have been accomplished without the combined effort and leadership of both clinical and academic medicine within a truly integrated regionalized healthcare system. It is critical to preserve and enhance this level of

integration and collaboration and clearly appreciate how an AFP will either be a key support of this achievement or undermine years of effort.

Our Strategies

Our strategies are framed to align with and support our Stakeholder strategic directions. Our strategies focus on healthy populations, innovative and effective service delivery, being accountable for performance and responsible for resources, and fostering and maintaining effective collaborative relationships with all our stakeholders be they funders, purchasers, providers, or our members. These strategies have not been altered from 2002 – 2003.

Healthy Populations

The proposed 116 (head count) initial members represent 28% of the Internal Medicine specialist FTEs in the Province. The membership has a proven record of exemplary performance in helping Alberta and Calgary rank among the healthiest populations in Canada. An AFP can position this large component of the health delivery system for further success in the face of the key challenges driving the reform agenda. An AFP can translate to continued achievements in such core areas as chronic disease management; targeted needs based strategies to address emerging challenges, and a renewed focus on overall patient satisfaction.

Innovative and Effective Service Delivery

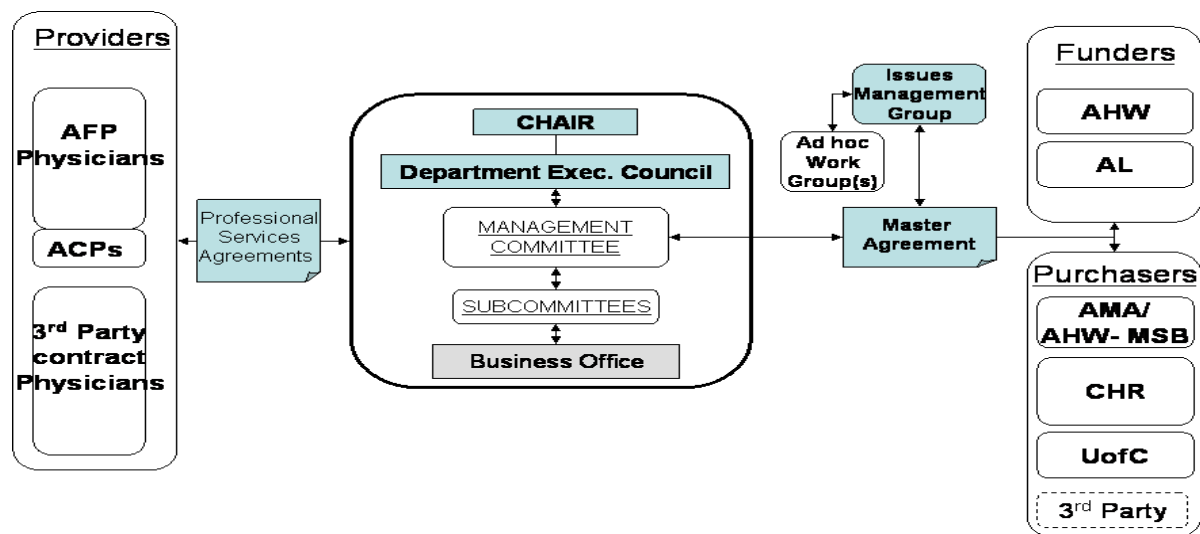
Fee-for-service (FFS) compensation is not necessarily the best suited to the nature of medical specialty service delivery. A specialist working 60 hours per week (excluding hours on-call), cannot optimize their effectiveness in the absence of an ability to innovate. Innovation is stymied when a compensation system requires a specialist to personally assess all patients presenting and expecting their undivided attention regardless of actual need. Evidence strongly suggests triage done by multi-disciplinary teams, with the support of inter-disciplinary integration and practice guidelines can lead directly to more effective use of time by specialists, increased capacity and reduced wait times. Leading information technology linked to skilled clinical informatics specialists is a powerful combination that has not been optimized anywhere in the health delivery system. This Proposal commits to breakthroughs in leveraging information technology efficiently and effectively at the bedside, as well as in education, and administration.

A detailed service agreement with the Calgary Health Region (CHR) will be instituted as part of the AFP and included within the terms and conditions of the umbrella Master Agreement. This agreement will be reflective of the services provided by participant members, CHR needs, and strategies for innovation and healthy populations.

People and Partners

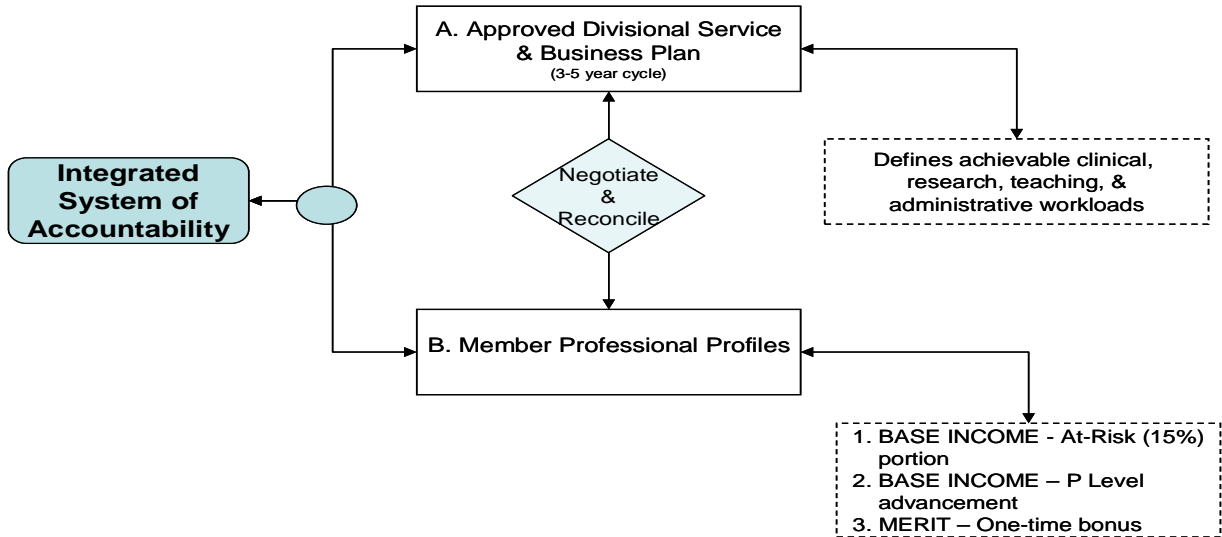
Inter-disciplinary teams: In our Workforce Plan we have identified a strategically important need for greater inter-disciplinary integration and collaboration vis-à-vis our primary care colleagues. Our primary care colleagues are integral to inpatient care delivery, the referral system (i.e. wait times and lists), outreach programs, and consumer education. Strategies must be collaboratively developed. An AFP can foster this essential integration.

Competitive Recruitment and Retention: The AFP financial plan includes a compensation system that is, and must remain, competitive nationally. An AFP will enable the



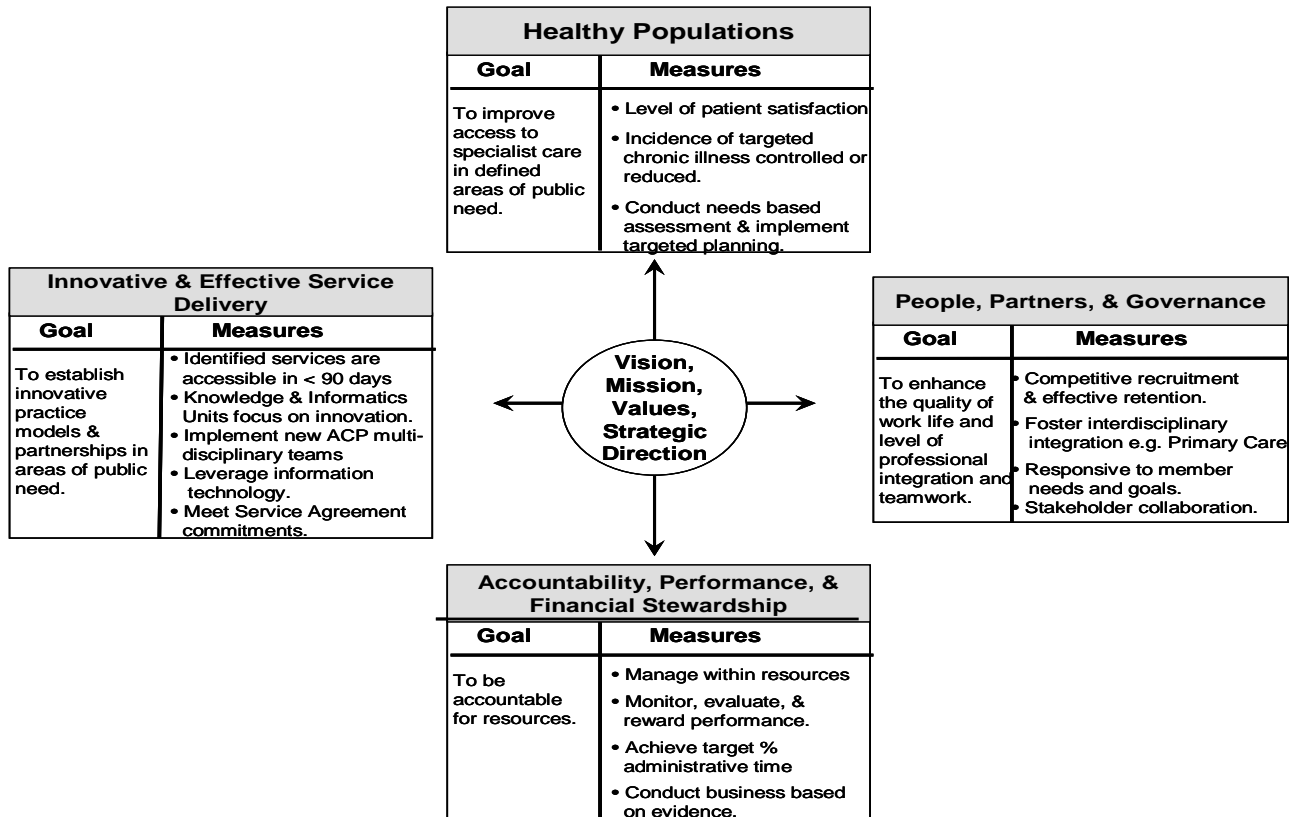
Department to compete nationally in the increasingly difficult challenge of recruiting and retaining skilled medical sub specialists.

Stakeholder collaboration: For the AFP to succeed it must be member driven and based on open collaboration with key external stakeholders including Alberta Health and Wellness, Alberta Learning, Alberta Medical Association, Calgary Health Region, and the University Faculty of Medicine, Calgary. The proposed governance model has been designed based upon these tenets and is illustrated in the next figure. It closely follows the model used in Pediatrics.

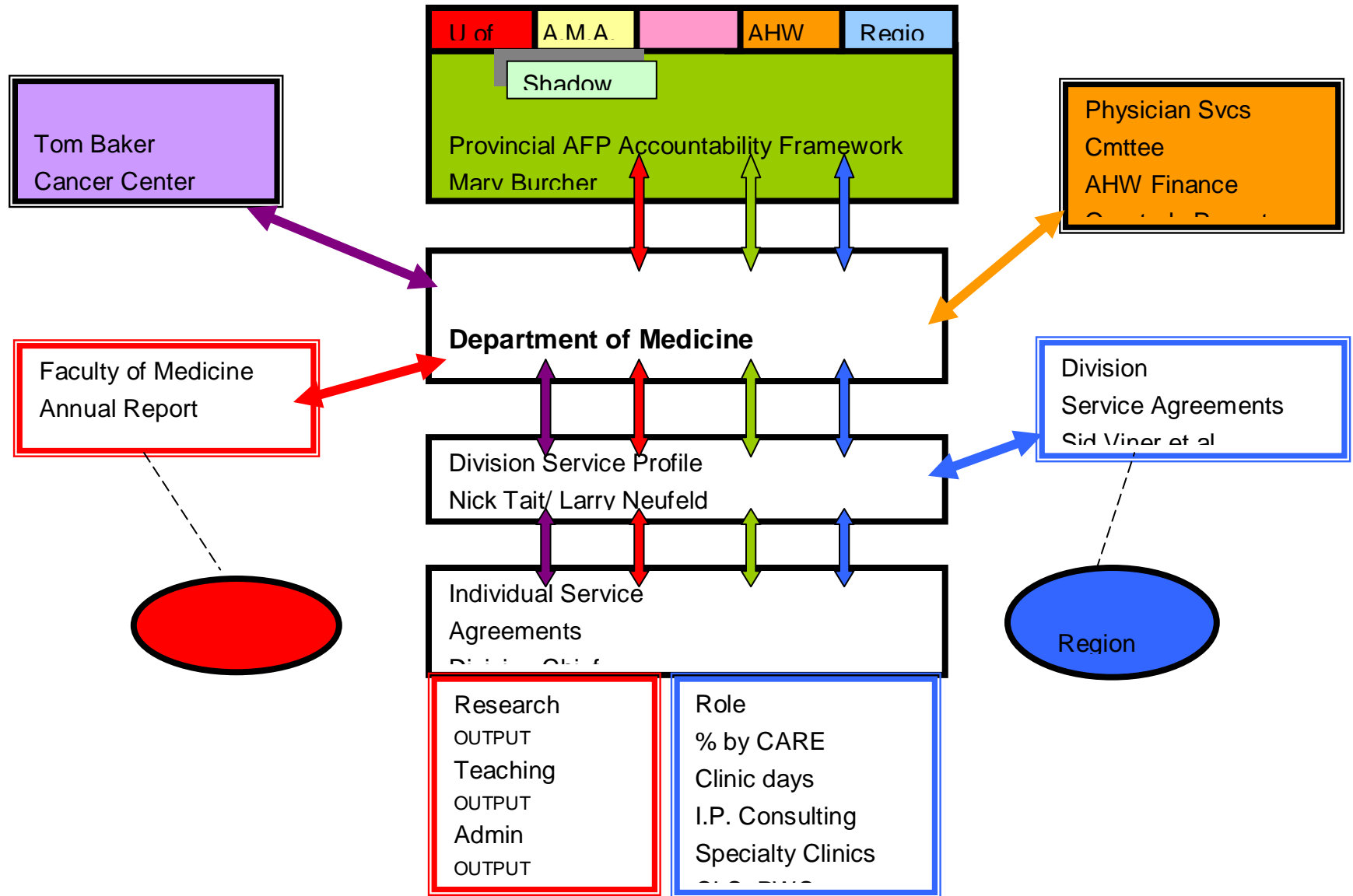


Accountability, Performance, and Financial Stewardship

Our health system is constantly grappling with creating better models of accountability and measuring performance. This circumstance is reflective of the highly complex nature of health delivery itself. Nonetheless each Stakeholder must hold themselves accountable for defined levels of performance including financial stewardship. On this premise, the Department has committed to collaboratively developing an effective accountability and performance system with its Stakeholders. The Department will integrate and coordinate this external accountability system with its own internal accountability, performance, and reward system. Our proposed internal system is framed in the subsequent figure.



AFP Enabled - Strategies Summary



SUMMARY

The challenges for Calgary and Southern Alberta are tremendous but provide unique opportunities to allow innovative and bold strategic initiatives to be instituted to ensure our publicly funded health system remains sustainable and responsive to needs. Funded strategic action plans have been developed and are being implemented in terms of infrastructure, innovation, technology, and undergraduate healthcare worker education by the CHR and U of C. Stakeholders acting in a collaborative manner can ensure the Calgary Department of Medicine will also meet these challenges through its AFP enabled strategies.