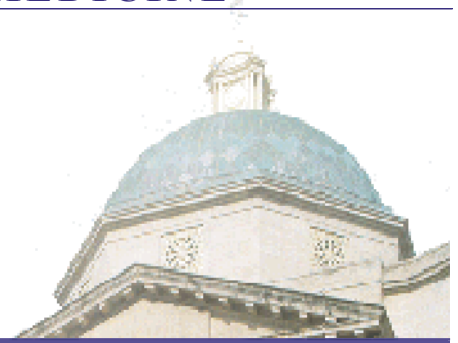


THE DEPARTMENT OF
**INTERNAL
MEDICINE**



Newsletter of the Department of Internal Medicine

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The Section of Cardiovascular Medicine

Introduction

The Section of Cardiovascular Medicine first became an entity under the leadership of the late Alan Goodyer. Lawrence Cohen was recruited to Yale as Chief in the latter portion of the 1960s. In 1973 Barry Zaret became Chief of the Section. Over the past 25 years there has been enormous sectional growth. The current faculty is 43. There are currently 34 fellows in training. This includes those both in the core two year clinical training program as well as subspecialty and specific research trainees. This program is supported by a staff of 71 people. The annual operating budget for the section is approximately 27.5 million dollars.

The Section is extraordinarily diverse with respect to both its research and clinical programs. The faculty include a spectrum involving MDs, MD-PhDs and PhDs whose phenotypes range from quintessential clinician-educators, to primary investigators devoting 80-90% of their time to research, and to clinician scholars. The research effort ranges from programs of excellence in vascular molecular and cell biology to outcomes research involving large populations of patients. The individual research and clinical programs will be discussed in more detail below. A basic priority over the past several decades has been to foster the sense that clinical and investigative excellence must coexist effectively in the same environment in order to develop an optimal academic effort. As such, substantial effort has been placed upon developing excellence in both spheres.

1. Clinical Programs

The Section of Cardiovascular Medicine represents the largest referral cardiology practice in the state. Faculty referrals result in 45-55% of inter-hospital referrals to Yale-New Haven Hospital. The interventional cardiology group refers the largest number of coronary angioplasties in the state. The Section leadership has taken the prime leadership role in developing the Yale-New Haven Heart Center. Last year resulted in a major one million dollar increase in clinical collections, resulting in gross collec-

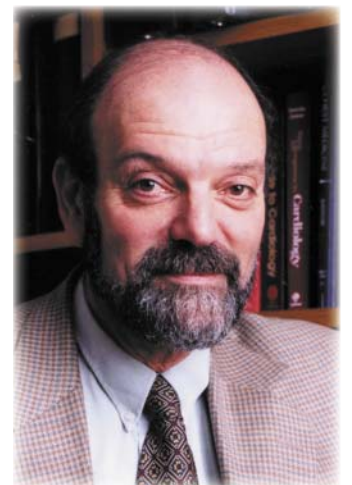
tions of 10 million dollars. This represents well over half of the clinical revenues of the Department of Internal Medicine. The Section recently has taken responsibility for its front end billing process. This change has played a critical role in enhancing collections.

The following clinical programs exist within the section. It is important to recognize that each program (with the exception of general cardiology and preventive cardiology) is led by a program chief who reports directly to the Section Chief and Associate Section Chief for Clinical Affairs. The specific subgroups are:

- Interventional Cardiology
- Electrophysiology
- Echocardiography
- Nuclear Cardiology
- Congestive Heart Failure/Cardiac Transplantation
- General Cardiology
- Preventive Cardiology
- VA Cardiology Program

It should be noted that the program at the VA Connecticut Healthcare System has grown dramatically and now consists of 7 faculty members. The program has just received approval for a second cardiac catheterization laboratory.

The specific heads of the individual programs are:
Interventional Cardiology – Michael Cleman, M.D./ Henry Cabin, M.D.
Electrophysiology – William Batsford, M.D.
Echocardiography – Robert McNamara, M.D.
Nuclear Cardiology/
Exercise Testing – Frans Wackers, M.D.



Barry Zaret, M.D., Section Chief

Congestive Heart Failure/Cardiac Transplantation

– Stuart Katz, M.D.

West Haven VA – Robert Soufer, M.D.

The clinical program has emphasized outreach to referral sources both in our primary and secondary cachement areas. We have established extensive referral lines for interventional procedures throughout the state, particularly in New London, Norwich, Danbury, Westerly Rhode Island, Greenwich, and Waterbury. Seamless procedures have been developed for immediate patient transfer.

We have several additional sites for outpatient cardiology besides the Dana 3 clinic. This includes an extremely active outpatient site in Branford, staffed by the interventional cardiology group as well as additional members of the Section. The Heart Failure/Transplantation group has its clinical and investigative offices and laboratories at 135 College Street. In addition, we have placed a faculty cardiologist (Christopher Howes, M.D.) in an internal medicine practice office in Hamden where he sees patients and does echocardiography 2 ½-3 days/week. We are constantly evaluating new clinical opportunities that will expand and solidify our referral base.

2. Research

The Cardiovascular Medicine Section research portfolio has dramatically increased in breadth and quantity over the last 10 years. Sectional extramural support includes 16 NIH R01s, R21s and projects in program project grants, 6 K08 and other NIH career development grants, 7 American Heart Association and other non-federal grants, 1 new NIH postdoctoral research training grant, 2 other NIH awards (N01 instrumentation) and 9 clinical trial contracts.

The historical anchor of the section's research program has been in nuclear cardiology. Dr. Zaret has been the originator and innovator of this field, developing exercise myocardial perfusion and equilibrium radionuclide angiography techniques. Dr. Frans Wackers, another pioneer in the field, has optimized the quantification of myocardial regional blood flow during physical and pharmacological stress. Dr. Zaret and Dr. Robert Soufer have described the role of mental stress and various psychological factors in acute coronary syndromes. Dr. Soufer has developed a strong cardiac PET program at the VA and he has used PET approaches to begin unraveling the basis for this neurocardiac interaction. Dr. Matthew Burg has collaborated and contributed great psychology expertise in these studies. He is also performing clinical trials in therapy for depression in the acute MI population. This psychological stress work has extended to cardiac electrophysiology research, in which Dr. Rachel Lampert studies the effect of mental stress on heart rate variability, ventricular tachycardia, and atrial fibrillation.

Most recently, Drs. Zaret, Sinusas and Sadeghi has been spearheading a new area of "molecular imaging" the union of nuclear imaging with basic principles of molecular and cell biology, largely of the vascular system. Dr. Mehran Sadeghi is screening for and developing novel ligands that bind to activated/altered endothelium, and addressing their utility in animal models of vascular pathology. Dr. Albert Sinusas is developing noninvasive nuclear imaging strategies to identify the hypoxic stimulus for angiogenesis, including the imaging of selected integrins in both large and small animal models. This is possible at Yale not only because of the strength in nuclear cardiology, but also because of the broad-based expertise in molecular and vascular biology.

The move to The Anlyan Center (TAC) has allowed the coalescence of the Section's cellular and molecular research laboratories, into a cardiovascular medicine research program. Dr. Jeffrey Bender has studied leukocyte-endothelial cell interactions, recognized to be important in the rejection of vascularized allografts and atherosclerosis. His work on the immune, inflammatory and hormonal effects on the endothelium has laid the foundation for the Section's vascular biology program development. His studies on endothelial estrogen receptors have led to new paradigms in hormonal effects on the vasculature. Dr. Frank Giordano has been studying myocardial angiogenesis, evaluating the consequences of deletion or over-expression of pro-angiogenic genes in animal models. He has been working on the development of new viral vectors for gene delivery, in ongoing assessments of cardiovascular gene therapy. Dr. Giordano is leading the efforts to develop a viral vector core at Yale. Dr. Kerry Russell studies signaling pathways induced by growth factors of the neuregulin family, and their erbB receptors, and the effect of activation on vascular form and function.

Studies on cardiomyocyte physiology and pathology complement the aforementioned vascular biology studies throughout the Section. Dr. Russell studies the effects of the noted signaling responses in cardiomyocytes and in animal heart failure models. Dr. Giordano uses gene delivery approaches to modulate cardiomyocyte phenotype and myocardial function in animal models. Furthermore, a primary effort in cardiomyocyte biology is directed by Dr. Lawrence Young, who has collaborated with Yale endocrinologists to develop a program in the cellular and molecular mechanisms of metabolic adaptation to ischemia, with a focus on glucose transport proteins. Dr. Raymond Russell also studies cardiac metabolism, in the setting of heart failure, and the control of myocardial glucose metabolism in animal models.

An additional component of the vascular biology program also lies at the interface of vascular and myocardial biology. Dr. Stuart Katz, the director of the Section's Heart Failure and Transplant Program, has established a clinical

vascular research laboratory to investigate pathophysiology and pharmacology in heart failure patients, and the role of the endothelium in the pathogenesis of heart failure. Dr. Daniel Goldstein, another member of the Heart Failure and Transplant Program, is using murine models to elucidate the role of innate immunity in the acute and chronic rejection of vascularized allografts, including dissecting the mechanisms of resultant vascular pathology.

The fourth additional component of the vascular biology program involves translational research performed by the Section's Interventional Cardiology group which includes Drs. Michael Cleman, Henry Cabin, Michael Remetz, Joseph Brennan, John Setaro, Steven Pfau and Christopher Howes. The group has been exploring the role of vascular inflammation, specifically involving neutrophil and complement activation, in acute coronary syndromes, and hormonal influences on these inflammatory, vascular events in patients. Beyond Cardiovascular Medicine, there exists a strong vascular biology community that is highly interactive with the Section's faculty. This strength, both within the Section and throughout the school, is the basis of the Section's Vascular Research NIH Postdoctoral Training Grant (T32). There are currently 7 postdoctoral fellows funded by this mechanism.

Outcomes research in cardiovascular disease highlights the Section's clinical research efforts. Dr. Harlan Krumholz directs this world class program. He is also the Director of the Robert Wood Johnson Clinical Scholars Program. Using methods of clinical epidemiology and health services research, Dr. Krumholz's efforts have been directed at determining optimal clinical strategies and in identifying opportunities in the prevention, treatment and outcome of cardiovascular disease, with emphasis on older populations. The work has been facilitated by innovative collaborations with Yale-New Haven Hospital Center for Outcome Research and Evaluation, the Centers for Medicare and Medicaid Services, and the Department of Defense. Dr. Martha Radford, as the System Director for Clinical Quality for the Yale-New Haven Health System, works on understanding organization factors the impact on quality of care and outcomes. Dr. JoAnne Foody also uses epidemiologic methods to identify preventive, clinical strategies that will reduce cardiovascular events in patients with and without coronary artery disease, in particular in the elderly. This includes evaluating the impact of older patient's preferences for preventive therapies on their care and outcomes.

The Section participates in several clinical trials at any one time. As a result, our interventional group has been the first in the region to use stents, brachytherapy and several other advances. Dr. Frans Wackers organized the ongoing DIAD trial, which is evaluating cardiovascular disease in asymptomatic patients with diabetes mellitus.

3. Education/Training

The education/training mission of the section has grown as well over the past 2 decades. There are several components.

A. Housestaff. The section is responsible for 12 months/year attending commitment on both the Coronary Care Unit and Goodyer Housestaff Services. This teaching responsibility is performed primarily by members of the full time faculty with some rotations taken by selected members of the community faculty. This program is under the direction of Michael Remetz.

B. General Cardiology Fellowship. The Fellowship Program is directed by James Arrighi with Brian Abbott serving as associate director. The program consists of core fellows and subspecialty fellows. Five fellows are recruited annually for the core program. This involves two years of training in all aspects of clinical cardiology including catheterization and angiography, electrophysiology, noninvasive cardiology, consultative cardiology, coronary care unit, etc. This program is highly competitive. A significant number of our best housestaff select cardiology as their area of interest and we have been quite successful in recruiting top candidates from our housestaff program for the fellowship in addition to candidates from outside institutions. The third year and beyond of training is devoted to subspecialty training and/or research. Fellowship programs require three years at a minimum. Our fellows remain in training for 3-6 years. For electrophysiology and interventional cardiology there is a minimum of four years of training. There are a significant number of subspecialty fellows in our program. These fellows are drawn from the core group as well as recruited from outside the institution. Subspecialty fellows currently are trained in interventional cardiology, electrophysiology, echocardiography, nuclear cardiology and stress testing, and congestive heart failure/transplantation. The programs in interventional cardiology and electrophysiology are independent ABIM-approved and directed by Joseph Brennan, M.D. and Lynda Rosenfeld M.D., respectively. In addition, there are a significant number of fellows being trained in various research laboratories.

C. NIH Training Grant. The section currently has a research training grant in vascular biology (Jeffrey Bender, M.D., PI). A significant number of our research fellows derive support from this program. Additional support has come from individual laboratory funding, individual research grants, Robert Wood Johnson Foundation, etc.

D. Student Cardiovascular Module. This is an important part of the second year curriculum. It is directed by JoAnne Foody, M.D. JoAnne took over this responsibility in the past academic year. The program has been

received very favorably by the students.

E. Physician's Assistant Cardiovascular Module.

This program is under the direction of John Setaro, M.D. He has directed this program for the past three years. It has received excellent reviews from students.

4. Administrative Structure

This Section of Cardiovascular Medicine, by all metrics, is larger than the majority of the clinical departments. Consequently, an infrastructure has been developed to deal effectively with managing this complex, large and growing enterprise.

M.D. Leadership. The section chief is supported by two associate section chiefs, one for research (Jeffrey Bender, M.D.), and one for clinical activities (Henry Cabin, M.D.). The fellowship program, which has become increasingly complex over the past five years, is directed by James Arrighi, M.D. with an associate director, Brian Abbott, M.D. To deal with the increasing administrative requirement of this program, a specific staff person has been assigned to deal only with the fellowship. Program chiefs i.e. Cath Lab, Electrophysiology, Congestive Heart Failure etc. report directly to the Section Chief and Associate Chief for clinical activities. Each subprogram is viewed as an independent center with respect to its finances and academic performance.

The staffing needs of the administrative structure have grown substantially as well. The business office is run by Steven Gentile, MBA, and his associate administrator, Dina Lanteri. There is a staff of three accountants working with them. Specific portions of the business office focus on managing the research portfolio while others focus on clinical activities. As noted above, we have taken over our front-end billing from the Department. This effort is directed by Patricia Aaronson who is assisted by three billing specialists. This has been an extremely favorable, efficient and cost effective operation. The complexities of current clinical billing require people to have very specific understanding of the subtle aspects and nuances that relate to billing for cardiovascular disease services. Such undertaking is directly translated into retrieval of otherwise lost clinical revenue.

5. Community Interactions

An important aspect of our section's role within the Medical Center has been the leadership role played in fostering a unified effort in the practice of cardiovascular medicine within the Medical Center and a bridging of town-gown issues which had been quite contentious

in the past. It has been extremely rewarding to be able to deal effectively with these town-gown issues. Two mechanisms have helped in this effort. The first involved the formation of the Yale Cardiology Network. This was an effort to unite key practices within New Haven and throughout the state in dealing with threats posed by managed care. An innovative program was created with a system of governance that stills exists. While the threat of managed care never materialized in CT, the group has been able to work together in dealing with a number of substantive issues dealing with office practices, billing and collection issues, etc. This effort is currently led by Steven Gentile who is also the Business Manager of the Section.

The second effort has involved the formation of Yale-New Haven Heart Center. This is a hospital-based initiative that spans adult cardiology, cardiovascular surgery and pediatric cardiology. Barry Zaret has served as medical director of the Heart Center. This effort has focused on improving cardiovascular care within the medical center and has involved working closely with community cardiologists. We have truly developed a community of cardiovascular practitioners, independent of whether they are full time faculty or community based. As such we have been able to address key issues in quality of cardiovascular disease care within our Medical Center. It is imperative that in the future the efforts made and the advances attained with respect to town-gown relations be continued and enhanced. The Cardiovascular Program should be used as a model for how diverse and often competing components of the medical staff can work together for common good.

6. Development

It has been clear for a number of years that in order to have substantial growth of our faculty research programs we will need additional funding from that available through traditional sources. Consequently about eight years ago we began a development program focused on cardiovascular research. We have an annual fund raising gala in New Haven (Friendly Hearts Gala) which will occur for the eighth time in November. This black tie Saturday evening affair has raised over \$100,000 annually. This past year we expanded our fund raising efforts into New York City where we had our first event. This was a dinner on a large yacht. The second event is currently planned for June, 2004 at the Waldorf Astoria in New York City. We are in the process of forming a Board of Advisors for the Yale Cardiovascular Research Fund. I have devoted a significant amount of time and effort to nurturing potential donors. This effort has allowed us to recruit a number of new physician-scientists over the past six years.

Section of Cardiology Faculty

Batsford, William	MD	PROFESSOR	Blum, Michael	MD	ASSISTANT PROFESSOR
Bender, Jeffrey	MD	PROFESSOR	Burg, Matthew	PhD	ASSISTANT PROFESSOR
Cabin, Henry	MD	PROFESSOR	Clancy, Jude	MD	ASSISTANT PROFESSOR
Cleman, Michael	MD	PROFESSOR	Foody, JoAnne	MD	ASSISTANT PROFESSOR
Cohen, Lawrence	MD	PROFESSOR	Giordano, Frank	MD	ASSISTANT PROFESSOR
Jaffe, Conrad*	MD	PROFESSOR	Goldstein, Daniel	MD	ASSISTANT PROFESSOR
Krumholz, Harlan	MD	PROFESSOR	Howes, Christopher	MD	ASSISTANT PROFESSOR
Lee, Forrester	MD	PROFESSOR	Liu, Yi-Hwa	PhD	ASSISTANT PROFESSOR
Soufer, Robert	MD	PROFESSOR	Mani, Arya	MD	ASSISTANT PROFESSOR
Wackers, Frans**	MD/PhD	PROFESSOR	McNamara, Robert	MD	ASSISTANT PROFESSOR
Young, Lawrence	MD	PROFESSOR	Pfau, Steven	MD	ASSISTANT PROFESSOR
Zaret, Barry	MD	PROFESSOR	Russell, Kerry	MD/PhD	ASSISTANT PROFESSOR
Arrighi, James	MD	ASSOCIATE PROFESSOR	Russell, Raymond	MD/PhD	ASSISTANT PROFESSOR
Brennan, Joseph	MD	ASSOCIATE PROFESSOR	Sadeghi, Mehran	MD	ASSISTANT PROFESSOR
Katz, Stuart	MD	ASSOCIATE PROFESSOR	Wencker, Detlef	MD	ASSISTANT PROFESSOR
McPherson, Craig	MD	ASSOCIATE PROFESSOR	Collinge, Mark	PhD	ASSOCIATE RESEARCH SCIENTIST
Radford, Martha	MD	ASSOCIATE PROFESSOR	Lampert, Rachel	MD	ASSOCIATE RESEARCH SCIENTIST
Remetz, Michael	MD	ASSOCIATE PROFESSOR	Li, Ji	PhD	ASSOCIATE RESEARCH SCIENTIST
Rosenfeld, Lynda	MD	ASSOCIATE PROFESSOR	Li, Lei	MD/PhD	ASSOCIATE RESEARCH SCIENTIST
Setaro, John	MD	ASSOCIATE PROFESSOR	Vashist, Aseem	MD	ASSOCIATE RESEARCH SCIENTIST
Sinusas, Albert	MD	ASSOCIATE PROFESSOR	Zhang, Jiasheng	MD	ASSOCIATE RESEARCH SCIENTIST
Hebert, Patricia	PhD	ASSOCIATE PROFESSOR	Zheng, Haoyi	MD/PhD	ASSOCIATE RESEARCH SCIENTIST
Abbott, Brian	MD	ASSISTANT PROFESSOR	Jadbabaie, Farid	MD	INSTRUCTOR

* = LOA 7/1/03 - 6/04/04

** = Primary Appointment in DI

NEW GRANT AWARDS

Principal Investigator	Title	Funding Agency	Award
Bender	Molecular Models of Immune-mediated	NIH	\$2,043,750
Bender	Molecular Models of Estrogen-induced Vascular Protection	NIH	\$1,308,000
Burg	Consortium for Translation of Psycho-Social Depression Theories	NIH	\$2,314,726
Foody	Lipid Testing/Treatment in Older MI Patients	NIH	\$499,500
Krumholz	Strategies to Reduce Time To Reperfusion Therapy for MI	NIH-AHC	\$2,283,822
Lampert	Emotional Reactivity: A Trigger of Atrial Fibrillation	NIH	\$2,006,075
Liu	Systems and Methods form Small Animal Imaging	NIH	\$482,563
Russell, K	Role of STAT3 in Age Related Heart Failure	AHA	\$198,000
Russell, K.	Role of Neuregulin Signalling in the Progression of Heart Failure	NIH	\$50,000
Sinusas	Ultrasound Imaging System	NIH	\$161,450
Soufer	CV Response to Mental Stress: Mechanistic Considerations	NIH	\$1,286,064

DANA 3 Incentive Plan: An Update

As presented in last month's newsletter, in an effort to encourage clinical productivity, new Incentive Plan has been developed for the faculty's practice on Dana 3. The plan has been presented in detail to each of the Sections. Productivity will be measured beginning on November 1, 2003 and will be annualized from July 1, 2003 through June 30, 2004.

Key features of the plan are:

1. Clinical productivity will be based on "RVUs", an accepted way of measuring a physician's work, which independent of payor mix. For example, a Level 3-4 Return Patient Visit is valued at 0.67-1.1 RVUs; a Level 3-4 New Patient Consultation is valued at 1.72-2.58 RVUs.
2. A "productivity target" for each afternoon or morning session has been set at 382.5 RVUs per year. Based on 45 attended sessions, this calculates to 8.5 RVUs per session. (Those working every other week will still have a target of 8.5 RVUs per session, but obviously the yearly target will be 0.5 x 382.5, or 191.25 RVUs, etc.) The target was arrived at by using published benchmarks for cognitive internal medicine services, adjusted for certain inherent inefficiencies and the teaching obligations of academic practice.
3. Based on coding for a mix of Level 3 and 4 CPT codes, 8.5 RVUs can be achieved in a number of ways. For instance, the target can be reached by seeing as few as 6 patients (2 Level 4 Consults, 2 Level 4 Returns, and 2 Level 3 Returns). However, in most circumstances evaluations of 7-9 patients per clinic session is recommended, and, given no-show rates historically in the 12-15% range, booking at least 10 patients per clinic session is advised.
4. Faculty members who achieve the target over the course of the year will have their practice costs (i.e., Dana room charges + percentage of their malpractice and license fees) covered *and* \$7500 will be credited directly to the Profit and Loss account of the individual. Importantly, for each 1% of activity above target, incrementally, an additional \$175 will be credited. All clinical collections from this activity will revert to the Department. Based on historical collection rates, for those faculty members who achieve the target, the return amount will calculate to roughly 30% of collections. Those individuals who reach very high productivity in the 140-150% of target (e.g., 2-3 New Consultations + 7-9 Returns) will achieve a greater return rate of 40-45%. Physicians in this range may actually attain in excess of \$16,000-17,000 per session. Of note, the Incentive Plan will allow busy clinically-oriented faculty to retain some salary coverage for their outpatient activity – previously not possible due to extraordinarily high outpatient practice overhead costs.
5. In the event that a faculty member does not achieve the target, all collections will revert to the Section. However, no monies from the Incentive Plan will be credited to that physician and practice costs will not be covered. Because of very high fixed overhead costs at the University, such physicians may run a deficit in the \$10,000 range annually, depending on actual collections. This deficit will be assigned to the Section.

Clearly, in addition to adequate patient volume, two other key elements for success within the new Incentive Plan include optimal coding and adequate clinic attendance (i.e. 45 weeks or more per year). Each faculty member is strongly encouraged to review his or her current clinic template to ensure that enough patient slots have been made available to meet these targets. (Patient "overbooks" will also be necessary, to allow for "no-shows" rate. A suggested template would be:

New Patient 45 min
 Return Patient 15 min
New Patient 45 min
 Return Patient 15 min
 Return Patient 15 min
 Return Patient 15 min
 Return Patient 15 min
 Return Patient 15 min
 Return Patient 15 min
 Return Patient 15 min
 Return Patient 15 min
 Return Patient 15 min

+ALLOW 2 OVERBOOK RETURNS WITHOUT
 MD APPROVAL

The Dana 3 staff would be happy to meet with you to adjust your template as necessary. Also, “make-up” sessions are encouraged before or after vacations or other absences to help the faculty reach and surpass the RVU target, while also helping to accommodate waiting patients and improving the Department’s overall access to care.

The Business Office staff can also review your current coding patterns – many faculty members may be “undercoding”, and this might have a significant deleterious effect on their performance under the new plan.

Gary Mulligan, Associate Chair for Administration, has developed a report to be sent quarterly to each faculty member with active sessions on Dana 3. This report will update each faculty member on their recent outpatient productivity, with a running tally of RVUs generated. By closely reviewing this report, the faculty member can easily see how far they are exceeding or falling short of the target.

Please address any questions to Silvio Inzucchi, Dana 3 Medical Director at 7-1932 or by e-mail silvio.inzucchi@yale.edu. Also, contact Silvio for additional information, such as your recent productivity; an updated, comprehensive list of outpatient CPT codes and their corresponding RVUs; or for current documentation guidelines to ensure proper coding.

Yale-New Haven Hospital Adult Emergency Department Admission Process Update

During the latter part of the 1990’s and continuing into the current decade, a number of factors have had a significant impact on the evaluation and admission process for patients in the Adult Emergency Department of YNHH. These factors have included an increasing number of patients presenting to the ED, a higher level of acuity and illness seen in those patients (as manifested by a rising admission rate from the ED), increasing complexity of illness and complexity of evaluations in the ED (including increased reliance on diagnostic imaging), longer lengths of stay in the ED, especially during the winter months, and lack of timely access to in-patient beds for admitted patients, leading to overcrowding that reaches potentially dangerous levels in the Adult ED.

Historically, the entire YNHH Emergency Department saw ~68,000 patients per year in the early to mid-1990s. Currently the Adult ED is seeing nearly that number yearly, with total ED visits now in the ~90-92,000 per year range. Admissions to the hospital have risen from 30-40 per day to 50-60 per day, and often considerably higher during the winter months. Since the opening of the YNHH Children’s Hospital in the mid-1990s, the Adult Emergency Department has not expanded its acute treatment areas in terms of hours of operation or number of beds. A Chest Pain Center has been added, and the Psychiatric area has been expanded, but the acute treatment areas of the Adult ED have remained the same. Thus, accommodating the increasing numbers and complexity of patients requires reduced length of stay for evaluation purposes, and shortened length of stay once a decision to admit has been reached.

Due to the factors noted above, and in light of regulatory activities by the State of Connecticut, there is an ongoing initiative to reduce the length of time from a patient’s arrival in the ED to a decision to admit, and an initiative to require transfer of the admitted patient to the

inpatient floor as soon as a bed becomes available, even if diagnostic studies, especially CT scans, have not yet been completed. Patients will, in some cases, not receive lengthy evaluations prior to the decision to admit, and once admitted, will be transferred upstairs to inpatient nursing units as soon as a bed is available.

In response to the above issues, the Section of Emergency Medicine has increased its coverage hours of Adult ED faculty physician staffing/supervision by 50% since 2000; the hours of Adult Urgent Care have been increased from 12 to 16 hours daily.

Failure to process patients efficiently through the YNHH Adult Emergency Department has led to numerous instances of acutely and seriously ill patients (who are ultimately admitted to the hospital) waiting in the waiting room for 1-6 hours prior to evaluation due to lack of acute treatment beds for assessment and treatment, with adverse outcomes encountered on some occasions.

The Emergency Department and Inpatient Nursing services have developed a system to respond to critical levels of over-crowding in the Adult Emergency Department. A color coded system has been implemented in August 2003, representing a graded response to levels of crowding in the Adult ED. The parameters included in the ED assessment include 1) total number of patients in the adult treatment areas, 2) total number of admitted patients awaiting inpatient beds, 3) total number of admitted patients awaiting critical care beds, and 4) total number of patients in the waiting room who have not been seen in the department. When three of the above four parameters exceed pre-established levels the department will move from the normal “green” zone to “orange”, leading to notification of the inpatient nursing services of a potential critical crowding situation in the Adult ED. If three of the four parameters continue to increase, and

exceed second critical threshold levels, then a “red” zone will be achieved. This will trigger the immediate transfer of all admitted patients to designated inpatient nursing units, even if an empty bed is not yet available. This may lead to patients being transferred from the Emergency Department hallways to hallways and treatment rooms on the inpatient services, where evaluation and treatment can continue.

The status of the ED in terms of “Zones” is reflected on the sign-on screen for CCSS throughout the hospital, making all personnel aware of the potential for patient

transfer to inpatient units.

It is expected that the red and orange zones will potentially become commonplace events during the coming fall and winter months. The hospital census reached an all-time high in the last week (September 29-October 3), a time of year that is usually less busy, and the ED reached the red zone once in this same week, and the orange zone on several more occasions.

Albert C. Weihl, M.D.
Adult Emergency Medicine Faculty Member

Community Health Fair a Big Success

The First Annual Primary Care Community Health Fair, held on September 13, 2003 on the town library grounds in Waterbury in conjunction with the annual Waterbury Festival, was a resounding success. Residents, faculty and staff from the Primary Care and Medicine/Pediatrics residency programs staffed 13 booths and registered over 900 people participants. The Health Fair included a blood drive in conjunction with the American Red Cross resulting in 61 units of blood being collected on site and additional blood donations by Health Fair participants were scheduled. Participant evaluation of the Health Fair was outstanding with many commenting on the positive benefit of this event to the community.

A total of 13 booths were staffed covering topics such as behavioral health, high blood pressure, diabetes and cholesterol screening, low vision testing, colon cancer risk assessment, smoking cessation, immunizations, nutrition, obesity and fitness counseling, pediatrics health maintenance and dentistry, sleep apnea, senior citizen health resources, and women’s health including vouchers for mammograms. Seventy residents, faculty and staff worked in shifts throughout the day starting with setup at 7:00 AM and ending with cleanup at 6:00 PM.

All expenses to support the Health Fair were raised by the residents through a variety of activities. A total of \$11,000 was raised which after expenses were paid left \$1,000 in the account to jump start this initiative for next year. Thank you to all members of the faculty, housestaff and office staff who contributed to this effort.

In addition to delivery of health care and referral for ongoing care, several residents and faculty are using data from the health fair to study the effectiveness of this type of intervention on the health of patients in the community. Planning for this event began one year ago as part of an ongoing effort by residents and faculty in the residency program to develop durable activities that link the training program with the communities in which we work and learn. While there were many individuals directly involved in various aspects of the Health Fair, primary credit goes to PGY 3 resident Kansky DeLisma who developed the idea and spear-headed all aspects of the project working tirelessly to ensure a highly professional and successful event.

Stephen J. Huot, M.D., Ph.D.
Program Director, Primary Care Residency

Advisory Committee for the Dean of the School of Medicine

An Advisory Committee has been established by President Richard C. Levin to assist him in the selection of a Dean for the School of Medicine. President Levin intends on Chairing the committee himself, with the assistance of the Deputy Provost for Biomedical and Health Affairs, Dr. Stephanie Spangler. The following is the list of those who have consented to serve on this committee:

Peter Aronson	Daniel DiMaio	Michael Merson
Kim Bottomly	Richard Flavell	Joan Steitz
Benjamin Bunney	Catherine Gilliss	Robert Udelsman
David Coleman	Peter Glazer	
Pietro De Camilli	Margaret Hostetter	

New Faculty

John McArdle joins the Section of Pulmonary and Critical Care as an Assistant Professor of Medicine



After graduating from the State University of New York at Buffalo School of Medicine, Dr. McArdle joined the housestaff at Yale-New Haven Hospital. Following residency and Chief Residency at Yale, he stayed on to complete a Fellowship in the Section of Pulmonary and Critical Care Medicine. His research during fellowship focused on the role of interleukin-13 and interferon gamma in the development of emphysema in transgenic murine models. On completion of his fellowship, he spent the next two years in private practice in the Hartford area, taking an active role in the teaching programs of the University of Connecticut. His goals on returning to Yale are the establishment of an Interventional Pulmonary program to provide access to electrocautery, stenting and laser therapy of endobronchial lesions with the advent of the Lung Cancer Center. Dr. McArdle will be spending three of the next twelve months at the Cleveland Clinic to obtain the appropriate expertise.

Douglas E. Befroy joins the Section of Endocrinology as an Associate Research Scientist



Dr. Befroy obtained a BA in Chemistry from the University of Oxford where a research project, investigating ion uptake in plants, stimulated his interest in biological Magnetic Resonance Spectroscopy. He remained at Oxford, for post-graduate study, and received a D.Phil in Biochemistry/Physiology. His doctoral thesis studied the application of MRS to investigate physiological events during cardiac ischaemia. Doug joined Dr. Jerry Shulman's lab as a post-doctoral fellow, in 2000, and has participated in clinical and basic studies of liver and muscle metabolism. His current research interests include the use of MRS to investigate perturbations in metabolism as a result of type 2 diabetes, aging and exercise.

Kerstin Calia joins the Section of Infectious Diseases as an Assistant Professor of Medicine



Kerstin E. Calia M.D., Assistant Clinical Professor, was recruited in 2002 to develop an outpatient clinic for non-HIV Infectious Diseases referrals. She came to Yale after ten years at the Massachusetts General Hospital, where she did her fellowship in Infectious Disease, after completing medical school and her Internal Medicine residency at Vanderbilt University. Her experience at MGH included outpatient Infectious Diseases consults, an HIV practice, a Travel medicine clinic, and providing physi-

cian coverage for the state-run sexually transmitted disease clinic. She also spent a portion of this time in a busy Primary Care Internal Medicine practice. Dr. Calia looks forward to expanding the Section of Infectious Diseases' capacity to provide outpatient consultation and management of a variety of non-HIV conditions.

Youcheng Liu, Occupational Medicine Program, was recently promoted to Assistant Professor of Industrial Hygiene



Dr. Liu obtained his medical and Master of Public Health degrees in China and Master and Doctor of Science degrees from Harvard University School of Public Health. He came to Yale for his industrial hygiene postdoctoral fellowship in 1997 and joined the faculty at Yale as an Associate Research Scientist in 1999. He was promoted to an Assistant Professor in July 2003. Dr. Liu joins the Department with 20 years of teaching and research experience in environmental and occupational health sciences. His major research interests include exposures assessments of environmental and occupational hazards and evaluation of exposure-related lung diseases and skin disorders. He recently received two CDC grants to conduct workplace intervention studies and evaluate safe methods for reducing isocyanate and organic solvent exposures in the collision industry. He also collaborates on other isocyanate asthma projects.

David Morris joins the Section of Pulmonary and Critical Care Medicine as an Assistant Professor of Medicine



Dr. Morris joined the Pulmonary and Critical Care Medicine Section of the Department of Medicine on August 1, 2003. Dr. Morris' research interests focus on disorders of lung remodeling including pulmonary emphysema and fibrosis. His clinical subspecialty is interstitial lung diseases with particular emphasis on pulmonary fibrosis, sarcoidosis, connective-tissue disease-associated interstitial lung disease, and hypersensitivity pneumonitis. Dr. Morris received his B.S. in Neuroscience in 1987 and was awarded a Doctor of Medicine with Distinction in Research in 1991; both from the University of Rochester. He was a Medical House Officer at the Massachusetts General Hospital, and completed his Pulmonary and Critical Care training at the University of California, San Francisco. At UCSF, his research work focused on integrin-mediated regulation of Transforming Growth Factor β in pulmonary fibrosis and emphysema. He joined the UCSF faculty in 2001 and was the Director of the Interstitial Lung Disease Program at San Francisco General Hospital before coming to Yale. He will be working closely with Drs. Elias and Noble in the pulmonary section to further develop both basic and translational research enterprises in pulmonary fibrosis and COPD here and throughout New England.

Medical Grand Rounds

- October 23, 2003 “Unraveling the Cellular Mechanisms of Insulin Resistance in Man: Implication for Type 2 DM and Obesity.” Kitt Petersen, M.D., Assistant Professor of Medicine, Section of Endocrinology and Gerald I. Shulman, M.D., Professor of Medicine, Cellular & Molecular Physiology, Section of Endocrinology.
- October 30, 2003 “The Future of Cardiac Transplantation”. Sir Magdi Yacoub, M.D., British Heart Foundation Professor of Surgery, Royal Brompton Hospital, London, England.
- November 6, 2003 “Sexually Transmitted Diseases in the U.S.: Update for the Globally Inclined Internist” Jeanne Marrazzo, M.D., M.P.H., Assistant Professor of Medicine, Section of Infectious Diseases, University of Washington, Seattle.
- November 13, 2003 “A 59-Year-Old Man with Acute Onset of Left Arm and Leg Weakness” Dawn Bravata, M.D., Assistant Professor of Medicine and Jerome Kassirer, M.D., Professor (Adjunct) of Medicine.
- November 20, 2003 “Sex, Drugs and HIV Drug Resistance” Michael J.Kozal, M.D., Assistant Professor of Medicine, AIDS Program.
- November 27, 2003 HAPPY THANKSGIVING!!

Grand Rounds begins at 8:30 a.m. in the Fitkin Amphitheatre.

Kudos

DR. GRETCHEN BERLAND's documentary “*Rolling*” won a prestigious award at a recent competition in New York City. This documentary is described as depicting “the struggle to maintain independence and dignity for three people, telling the story from the perspective of the wheelchair-bound subjects – three feet from the ground.” Her film was one of almost 500 entrees, 64 of which were selected for presentation, 5 of which were selected as “finalists” and one of which (Gretchen’s film) was selected as the overall winner of the competition. In addition, she has since been contacted by HBO and Sony Classic Pictures who are potentially interested in buying rights to her film for either television (HBO) or theatrical (Sony Classic Pictures) release.

DR. KAREN BROWN was selected to receive this year’s “Home Care partnership” Award from the Visiting Nurse Association for the physician who “best exemplifies the ideals of partnerships in care.” This award demonstrates Dr. Brown’s commitment to her patients and to the New Haven Community through her roles as a primary care physician and as the Medical Director of the Primary Care Center.

DR. JEROME KASSIRER recently received the Lifetime Achievement Award of the Society of Medical Decision Making in Chicago. Dr. Kassirer was chosen for his work in decision analysis, medical diagnosis and cognitive science.

REMINDER:

2003 American College of Physicians Annual Scientific Meeting

FRIDAY, OCTOBER 31, 2003

Aqua Turf Club, Southington, CT

*Registration Begins at 7:30 a.m.

Leland Kaiser, Ph.D., Medical futurist, will give the keynote address:

The Perfect Storm: The Future of Medical Care

Some of our Medicine Residents will be presenting their scholarly work

Dr. Asghar Rastegar will be receiving the George Thornton Teaching Award

Dr. Samuel Kushlan will be receiving the Lifetime Achievement Award

There is a \$50 registration fee for members (free for residents and students). Non-member physicians and guests will be charged \$60. For further information please contact: Nancy Sullivan at (860) 349-8995.

Faculty Development Seminar Reminder

October 27, 2003 *How To Give A Great Talk* William Rando

November 24, 2003 *Authorship Decisions* Larry Cohen

These are held in the Fitkin Amphitheatre at 12 noon. Lunch is provided.

Special Lectures

Thursday, October 23, 2003

Reverend John Young, MD, Associate Clinical Professor of Psychiatry at Yale University School of Medicine present The Howard Spiro Lecture entitled:

“AGGRESSION & RELIGION; CLINICAL APPROACH”

This lecture will offer reflections from a religious perspective on clinical experiences in caring for aggressive mentally ill patients. Religion provides a helpful lens for meeting and interpreting the challenges of this work because it also acts as a mirror with which to view one's own behavior. The results apply not only on the wards but also in the broader world.

LECTURE HELD IN THE BEAUMONT ROOM OF THE STERLING HALL OF MEDICINE AT 333 CEDAR STREET, 5:00 p.m.

Thursday, November 6, 2003

Jerome Groopman, MD, Professor of Oncology at Harvard Institutes of Medicine present The Irish Fischer Lecture entitled:

“THE ANATOMY OF HOPE: HOW PEOPLE PREVAIL IN THE FACE OF ILLNESS”

In his lecture, Professor Groopman prefaces his dictum by referring to the past: since the time of the ancient Greeks, human beings have believed that hope is essential to life. The search for hope is most urgent at the patient's bedside. His lecture will address a series of questions about this vital emotion: How does hope differ from optimism? Should we ever relinquish our right to hope when ill? How do we distinguish true hope from false hope? And can hope actually contribute to recovery by changing physical wellbeing? The answers to these questions are framed in stories of people at pivotal moments, when they reach for and find hope - or when hope eludes their grasp.

LECTURE HELD IN THE BEAUMONT ROOM OF THE STERLING HALL OF MEDICINE AT 333 CEDAR STREET, 5:00 p.m.

THE DEPARTMENT OF INTERNAL MEDICINE

Yale University School of Medicine

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