Department of Medicine Grand Rounds

State of the Department
"Making Better Decisions"
Robert C. Aber, M.D., MACP
Professor and Chair, Department of Medicine
November 17, 2009

Good morning and welcome to Medical Grand Rounds. My name is Bob Aber and I currently serve as Chair of the Department of Medicine. This will be my seventh annual State of the Department address, and I've subtitled it "Making Better Decisions" for reasons I will explain.

First, I'd like to thank the many individuals who helped pull together the data and information I'll be sharing with you this morning - my personal thanks to each of you. And a special thanks to Christine Newberry, Sue Hassenbein, and David Towery for coordinating the data collection and producing the slides, and to Mathea Jacobs and Ken Smith for producing the video clips. I'd also like to say what an honor and privilege it has been for me to serve as your Chair for yet another year. I continue to take great pride in our collective accomplishments.

My Sincere Thanks To:

Ted Bollard Linda Duncan Carol Freer Susan Hassenbein Judy Himes Mathea Jacobs Rita Lahr Philip Masters Sharon McGarrity Christine Newberry Paul Primrose Brian Reeves Glenda Shoop Ken Smith Bob Stager Debbie Stevens David Towery Lisa Walborn Cynthia Whitener Eileen Wiley

Division Leads

Each year since 2003, I have tried to incorporate a message into this State of the Department update. During the past year and a half, I've had the opportunity to read several books and journal articles which have stimulated my thinking about the process by which we make decisions, the application of advances in the cognitive sciences to these processes, and perhaps most importantly, what we can do to make better decisions. I'd like to share with you some of the things I've learned which I hope will help me make better decisions – but, I'll leave that judgment to you!

In May 2008, Dean Paz and Mr. Brechbill requested that two members of the Clinical Chairs Council volunteer to assist them with the Retirement Management Committee, or RMC as it has come to be known. The purpose of this committee, as I understood it at the time, was to review the existing investment options, communications, participation, satisfaction, and polices around our 401k, 403b, and 457b retirement plans, and to serve in a fiduciary role to optimize the availability and performance of, and participation in, these plans on behalf of our employees. John Repke and I agreed to represent the Clinical Chairs Council and attended almost all of the scheduled meetings and sessions. This proved to be a valuable learning experience for me both personally and professionally, but the one thing I hadn't expected as an outcome was to think more about how we think and make decisions about many things, including our retirement accounts. I have to confess up front that during my 32 years here as a participant in the TIAA/CREF plan, I seldom paid much attention to contribution amounts, asset allocations, and so on, except when forced to do so during the annual benefits selection process.

Last fall (2008), I happened to see a new book title which caught my eye – Nudge – Improving Decisions About Health, Wealth, and Happiness (Yale University Press, 2008) by Richard Thaler and Cass Sunstein, both at the University of Chicago. The central thesis of the book is that the human mind is fallible, subject to a variety of errors in cognition and, therefore, not always capable of making rational choices or decisions. Their solution is to invoke the concept of "libertarian paternalism", which employs "choice architecture" to nudge people to make better decisions while at the same time providing other options and free choice. There are many examples and illustrative cases in the book, but chapters 6 and 7 entitled "Save More

Tomorrow" and "Naïve Investing", respectively, helped me think about the work of the Retirement Management Committee, and our eventual recommendations and decisions. A plan which nudges individuals to select a diversified portfolio of investment vehicles which have had 5 and 10 year track records for returns, stable fund managers, and lower costs was implemented. Those who default, that is, do not make active decisions about their portfolio, and those who do choose the recommended default option, are nudged into a target maturity fund which automatically changes asset allocations during the periods leading up to and following expected retirement. Of course, individuals "nudged" in this way are free to make different choices if they want to.

So, in trying to learn more about thinking and decision making, I read several additional books and journal articles while I was recovering from a right knee replacement earlier this summer. Dorlands Medical Dictionary defines cognition as "that operation of the mind by which we become aware of objects of thought or perceptions; it includes all aspects of perceiving, thinking, and remembering." Pat Croskerry, an Emergency Medicine Physician at Dalhousie University in Canada, describes knowledge-based cognitive behavior as that which "involves interpreting and understanding novel situations and problems against a background of specific domain knowledge (e.g. integrating the presenting complaint, past medical history, physical examination, and laboratory findings in a patient with syncope)."

Cognition

"that operation of the mind by which we become aware of objects of thought or perceptions; it includes all aspects of perceiving, thinking, and remembering"

Dorlands Medical Dictionary, 1988

Cognitive error refers to error in our thinking processes which may or may not be apparent to us. Such errors are widespread and have their origin in failed heuristics, biases, or cognitive dispositions to respond in an inappropriate fashion. Heuristics are mental short cuts or aids to problem-solving, such as, the availability heuristic which is the disposition to judge things as being more likely if one has had recent experience with it (despite the fact that such things may, in fact, be very rare occurrences). Biases, according to Webster's Ninth Collegiate Dictionary, are "inclinations of temperament or outlook," including "highly personal and unreasoned distortions of judgment," such as the ascertainment bias which occurs when our thinking is shaped by prior expectation as in stereotyping or gender bias. Cognitive dispositions

to respond (CDRs) to particular situations in various predictable ways represent a more generic and less pejorative way to describe biases and failed heuristics, a term I first encountered in one of Croskerry's articles. Croskerry has catalogued, described, and characterized 30 failed heuristics, biases, and CDRs in a classic paper published in *Academic Emergency Medicine* in 2002, and I encourage you to become familiar with it. As you look at this list, I've noted with asterisk those errors I've witnessed most often in the practice of medicine.

ailed Heuristics, Biases, and Cognitive Dispositions to Respon	
Aggregate bias	Outcome bias
*Anchoring	Overconfidence bias
*Ascertainment bias	Playing the odds
*Availability bias	Posterior probability error
*Base-rate neglect	*Premature closure
Commission bias	Psych-out error
*Confirmation bias	Representativeness restraint
*Diagnosis momentum	*Search satisfying
*Fundamental attribution error	Sutton's slip
Gambler's fallacy	Triage-cueing
Gender bias	Unpacking principle
Hindsight bias	Vertical line failure
Multiple alternatives bias	*Visceral bias
Omission bias	Yin-yang out
Order effects	Zebra retreat

Lest we think this is all about rational decision making and deliberate cognition, Ori and Rom Brafman remind us in their book Sway: The Irresistible Pull of Irrational Behavior (Doubleday, 2008) that emotions play a major role in decision making, and make us susceptible to irrationality, even though our rational thinking mind may not sense or recognize it. They point out the influence that loss aversion, the "chameleon" effect, procedural justice or fairness, pleasure, and group conformity may have on our decision making processes, and provide concrete examples of each. They suggest the best antidote to such effects is to be aware of them, and to take time to think about how we are thinking and making decisions, as in Donald Schon's "reflection in action", or Pat Croskerry's "metacognition."

Jerome Groopman's book <u>How Doctors Think</u> (Houghton Mifflin, 2007) strikes closer to home as Dr. Groopman is Professor and Chief of Experimental Medicine at Beth Israel-Deaconess Medical Center in Boston. He is an oncologist by training, and writes for The New Yorker magazine. The book identifies many of the same potential pitfalls in our thinking as the Brafmans and Croskerry did – attribution, anchoring, availability, confirmation, search satisfaction, premature closure, framing, and commission – and concludes by suggesting 3 questions which can help us and our patients try to avoid these errors: 1) What else could it be? (which gets at premature closure, framing, availability, and familiarity); 2) is there anything which doesn't fit? (which addresses commission, search satisfaction, anchoring, and premature

closure); and 3) is it possible there is more than one problem? (which gets at search satisfaction and premature closure). If you have not read Dr. Groopman's book, I recommend you do so.

The last book I'd like to bring to your attention is How We Decide (Houghton Mifflin Harcourt, 2009) by Jonah Lehrer, a science writer and former Rhodes Scholar. Lehrer acknowledges the cognitive errors which influence our decisions, and lays the groundwork for understanding some of the neurobiology underlying the "rational brain" and the "emotional brain", and the myriad ways these parts interact when we are thinking and making decisions. Lehrer describes it as a continuous tug of war argument which gets resolved as a decision, and that this give and take between emotional and rational thought is a necessary component of good decision making. He suggests that many of the decisions we make as doctors are too complex; i.e. contain too many variables, to be processed solely by the rational prefrontal cortex, and therefore are best made in conjunction with the emotional brain which brings to bear things like empathy, intuition, and experience. Lehrer further suggests the "while reason and feeling are both essential tools, each is best suited for specific tasks", and he follows with 5 general guidelines for making better decisions: 1) simple problems (i.e. less that 4-9 variables) require reason, i.e. the prefrontal cortex; 2) novel problems also require reason because creativity requires the flexibility of the prefrontal cortex; 3) embrace uncertainty - hard problems are seldom easy or straight forward to solve, always consider alternatives; 4) you know more than you know because the emotional or subconscious brain is always working; and 5) think about thinking which should reduce the number of stupid errors and allow one to learn from his/her mistakes.

Given the fact that each of us is confronted with making many decision every day, what can we do to improve quality of these decisions? Croskerry proposes a process he calls "cognitive de-biasing" and the use of "cognitive forcing strategies" which are specific de-biasing techniques which introduce self-monitoring of decision making. The first and fundamental step in this process is simply to be aware of the range and types of cognitive errors we are all susceptible to. The next step is to force one's self to reflect on the process by which we have made or are making a decision, often referred to as metacognition, and ask the questions Groopman proposed: 1) What else could it be?; 2) It there anything which doesn't fit?; and 3) Is it possible there is more than one problem?

Cognitive Debiasing Strategies

- Develop insight/awareness
- •Consider alternatives
- Metacognition (think about thinking)
- •Decrease reliance on memory
- •Specific training
- •Simulation
- •Cognitive forcing strategies
- •Make task easier
- •Minimize time pressure
- Accountability
- •Feedback

Croskerry, P. Acad Med 2003; 78:775-780

This would be a good place for all of us to start if we are not already hardwired to think this way. Expert clinicians generally are hardwired to do so!

Well, now on to the primary focus of today – celebrating some of the accomplishments of members of the department during the past academic year.

Although the sequence of topics will be similar to previous years – Leadership and Administration; People; Space; Finances; Education; Research; Clinical Affairs; Quality Improvement; and Scholarship – I'm going to be more selective in data presented and how they are presented visually. I've also incorporated a few video vignettes for your enjoyment again this year.

In terms of department leadership, I want you to know that I've been talking with Dean Paz about extending my term as Chair for another 4-5 years, assuming I remain healthy and able to do so. I officially began my term as Chair on November 27, 2004, so my fifth anniversary is approaching. You are certainly welcome to provide your feedback and thoughts, positive or negative, on my suitability as Chair to Dean Paz.

Leadership and Administration

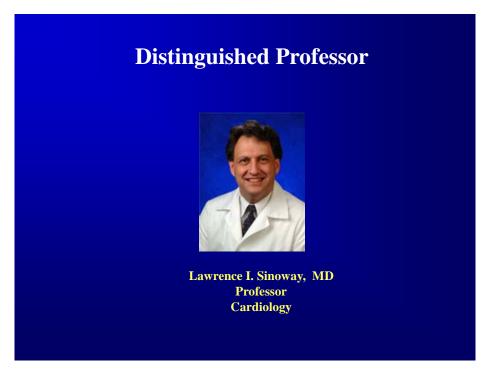
Carol Freer, M.D. agreed to serve as Vice Chair for Clinical Affairs as of October 1, 2009. You may recall that Carol joined our department on September 1, 2008 as Director of Hospitalist Outreach, and has been busy establishing our Hospitalist program at Mount Nittany Medical Center in State College. She is also Chair of the institution's Quality Informatics Advisory Committee. Please join me in thanking Carol for taking on these additional responsibilities.

Carol's appointment frees up some much needed time for Cindy Whitener to focus on Quality Improvement initiatives at the Department and Medical Center levels. She will serve in our newly established position as Vice Chair for Quality Improvement.

Sharon Banks, D.O., assumed responsibility as Interim Chief of Rheumatology on April 1, 2009, thus relieving Barbara Ostrov of some responsibilities so she can devote more time to the Department of Pediatrics. Please join me in thanking Barbara for her service as Interim Chief since July of 2006, and Sharon for taking on this responsibility. As you may know, the search for a Chief is well underway and I hope to have it concluded during this academic year.

Recently, Tom Loughran and I met with David Claxton and decided it would be in everyone's best interest to provide additional leadership support in Hematology/Oncology. David has essentially maintained a very full clinical load while at the same time trying to develop his research program, recruit faculty, and perform many other duties as Interim Chief. We decided to designate Tom Loughran as Interim Chief and divide some of the other necessary leadership duties and functions among David (as Interim Academic Chief), Chris Ehmann (as Interim Clinical Chief), and Witold Rybka (as Interim Affiliation Chief). The search for a new Chief is well underway here as well, and we are hopeful we can have someone appointed during this academic year.

I was very pleased and proud to nominate and introduce Larry Sinoway, M.D. as a Pennsylvania State University Distinguished Professor during this past year. This is a very competitive process in that the College of Medicine has only 16 of Penn State's 110 Distinguished Professors. Congratulations to Larry!



Chet Ray was selected as a Fellow in Penn State's CIC Academic Leadership Program. CIC is the Committee on Institutional Cooperation, a consortium of 12 research universities, including the 11 Big Ten schools and the University of Chicago. The program is designed to develop the leadership and managerial skills of faculty. Chet is one of 5 Penn State fellows this year. Congratulations Chet!

Three faculty were elected to membership in Alpha Omega Alpha Honor Medical Society this past year — David Dougherty, Michael Green, and Nicole Swallow — bringing the total number in the Department to 49, including 8 residents or fellows. Congratulations to each!

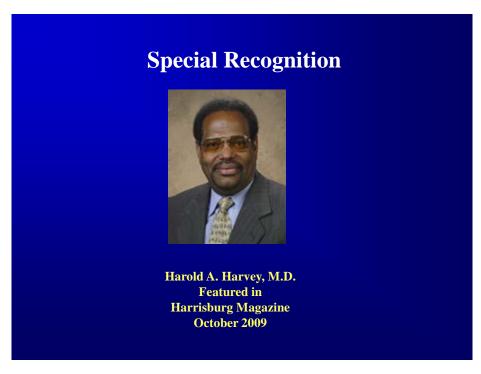
Two members of the Department received Steven and Sharon Baron Leadership Awards – Luanne Thorndyke in the faculty category, and David Towery in the manager/supervisor category. Congratulations to both.

Luanne Thorndyke also received a 2009 YWCA Tribute to Women of Excellence – congratulations again to Dr. Thorndyke!

Beth Ann Magnifico was selected as one of only two Faculty Organization Ombudspersons – congratulations to Dr. Magnifico.

Cynthia Chuang delivered a very moving and inspiring keynote address to incoming medical students during the White Coat Ceremony last August which I attended. Congratulations to Dr. Chuang for a job well done!

It's no surprise to anyone that Harold Harvey was featured in the October, 2009 edition of Harrisburg Magazine as one of the areas' top, and I might add busiest, doctors. Congratulations Harold!



The Department's Rewards and Recognition Committee was established in July of 2008. Members include Tracey Erickson, Chair, Carolyn Creter and Cindy Strine, Co-Chairs, Laurie Peiffer, Treasurer, and current members – Tami Cassel, Laura Delo, Dr. Nasrollah Ghahramani, Marilyn Hoke, and Rita Lahr. They established The Department of Medicine Employee of the Quarter program about a year ago, and four exceptional employees have been recognized this past year - Renee Morton, Carolyn Creter, Sharon McGarrity, and Eileen Feeley. Please join me in congratulating our first four Employees of the Quarter.



There may be others in the Department who have served in prominent leadership or administrative positions, or who have received special recognition or awards whom I've not learned about so I apologize for leaving you out – just let my office know when these things occur.

Faculty

Turning to faculty, there has been net growth in faculty and staff in the department during the past five years despite the loss of Dermatology and Neurology. This past year we had 188 faculty, including 163 physicians and 25 research faculty or allied health staff.

This was another good year for the Department in terms of generating promotion or tenure dossiers. Ted Bollard, Michael Katzman, and Deb Wolbrette were promoted to Professor. Cynthia Chuang and Rosalyn Irby were promoted to Associate Professor. Jianhua Li was awarded tenure. Our congratulations to each of you for a job well done!

Five faculty members are on the College of Medicine's Promotion and Tenure Committee – Kevin Gleeson and Brian Reeves are new members this year, and J.O. Ballard, Becky Bascom, and Chet Ray continue to serve. Hence, 5 of the 11 committee members continue to be from our Department. Chris Ehmann and Ann Ouyang have joined the Department's P & T Committee this year and Jerry Naccarelli became the committee's Chair. My thanks to Brian Reeves for having served as Chair of the Department's Committee for the past 6 years.

Twenty-six new faculty members have joined the Department since my State of the Department address last October, including three Chief Residents. Please stand as I call your name — Alaa Awad, Neil Baman, Amit Barochia, Harold Bell, Shana Bomberger, Thomas Covaleski, Saima Durvesh, Elliot Epner, Zhaohui Gao, Susan Hafenstein, Paul Haidet, Eileen Hennrikus, John Hustad, Zachary Huston, Faoud Ishmael, Jamal Joudeh, Jennifer Kraschnewski, Omobolawa (Mobola) Kukoyi, Yasmin Masood, Thomas O'Leary, Erica Penny-Peterson, Roneka

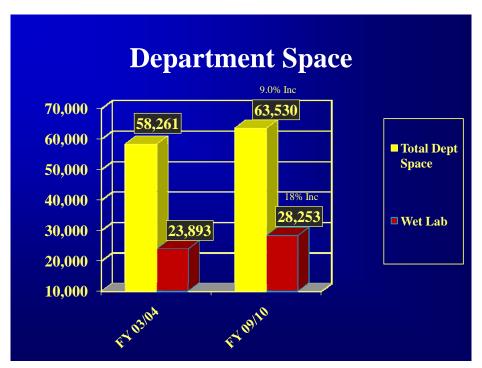
Ravenell, Liza Rovniak, Folarin (Kolada) Sogbetun, Heather Stuckey, and Wenhua Zhou. Please join me in welcoming these new colleagues to the Department.

Seven faculty members completed the junior Faculty Development Program last year – Karen Bell, Jennifer McCall-Hosenfeld, Colleen Rafferty, Nazia Raja-Khan, Javier Banchs, Jennifer Grando-Ting, and Mary Lott. Congratulations to each of you.

Ted Bollard served as a mentor for the Junior Faculty Development Program. Thanks Ted for doing so.

Space

Space continues to be a challenge as we recruit more faculty. The Cancer Institute building opened this past summer so we have added some laboratory and office space on the 6^{th} floor of the BMR. We have also gained some lab and office space on the 7^{th} floor which was previously vacated by Pharmacology.



A series of office moves is nearing completion. The Department's administrative office moved into office space vacated by the Cancer Institute (C6840), and the Division of Infectious Diseases backfilled into C6860. General Internal Medicine recently moved from UPC to the two suites (C6833 and C6830) vacated by Infectious Diseases and Hematology/Oncology. C6832 has been restored as a Department Conference Room. Gastroenterology/Hepatology moved into the UPC space vacated by General Internal Medicine, thereby consolidating 3 office locations into one. Palliative Care will move into the space vacated by GI in C5800, and Pulmonary, Allergy, and Critical Care Medicine will expand into some of this space as well.

General Internal Medicine has moved into its West Campus outpatient site, and has some room to grow the practice.

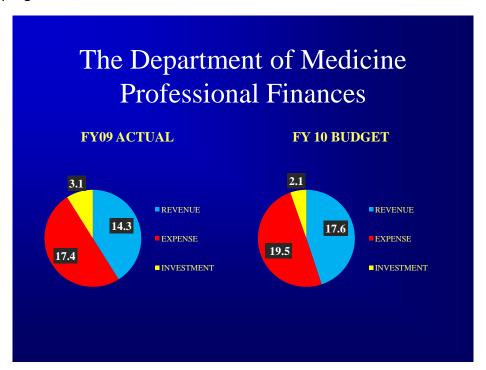
The Infectious Disease outpatient practice has moved into the new Cancer Institute building as they were previously sharing space in UPC with each other.

Although the new Children's Hospital will not provide any new space for us, there will be new operating rooms in that building, and the 7th floor of the current hospital will be opened up for additional adult medicine and surgery patients. So, we will benefit indirectly from the new Children's Hospital.

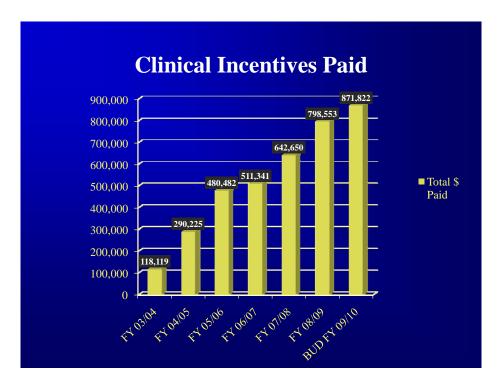
Hence, we continue to grow our clinical and research missions as we add faculty and programs. I appreciate your patience and support during the various moves along the way.

Finances

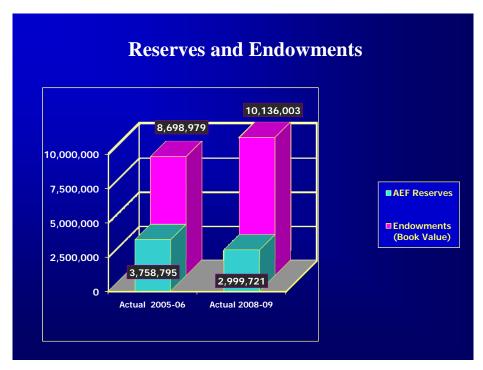
The high level financial picture for the Department for FY09 is compared with FY10 budget. Both net revenues and expenses have increased proportionately. There continues to be an investment of approximately \$2 to 3 million in the Department on the professional side, but I believe we are viewed as good stewards of this investment by senior leadership and my fellow department chairs. As in the past, approximately 80% of our budgeted expenses are for faculty, staff, and housestaff salaries and benefits, and HMC is supporting our residency and fellowship programs in the amount of \$6 million dollars.



This past year we missed our budgeted margin by \$153,000 after all incentive payments were made. Our gross revenues were down by less than 1% at approximately \$47 million on the professional side, and expenses were under budget by approximately \$1 million. We have made clinical and research incentive payments totaling nearly \$800,000 dollars to faculty this year, and \$2.7 million over five years or a 638% increase since FY 2002-2003.



Our AEF reserves are now being impacted by commitments made to recruiting new faculty and we have re-invested approximately \$1.5 million this past year in bridge funds, research enhancement, and faculty recruitment packages, and plan to do so again this year.

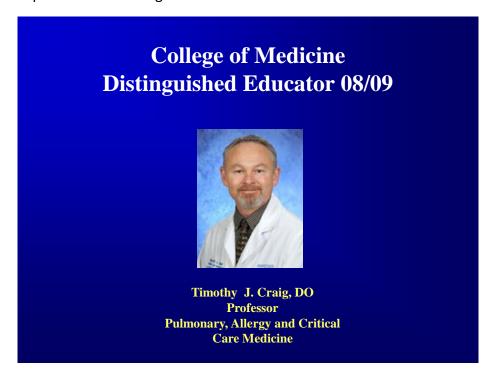


The net book value of our endowments has increased by nearly \$1.4 million over the past three years. We now have 11 endowed professorships or chairs in the Department compared with the 7 we had in FY 03/04, and my goal remains to have at least one in each division. Two new professorships this past year include the M Elaine Eyster, M.D. Professorship which Dr. Han-Mou Tsai from Hematology/Oncology holds, as well as the Career Development Professorship in Nephrology held by Dr. Ganesan Ramesh.



Education

Moving to the <u>Education</u> Mission, Tim Craig was selected as a College of Medicine Distinguished Educator this past year, making a total of nine from the Department since the program's inception in 2003. Congratulations Tim!



New on the scene this past year were the Dean's Award for Excellence in Teaching, and I am pleased to announce that 6 faculty in the Department were among the inaugural awardees

 Ted Bollard, Tonya Crook, Nasrollah Ghahramani, Phil Masters, Abraham Mathew, and Ian Schreibman. Congratulations to each!

During the past three years, the proportion of total teaching contact time with medical students during all four years has flattened despite an increase in the number of faculty in the Department.

Likewise, the Year 3 Medicine clerkship ranked near the bottom of the 7 required clerkships on student evaluations again the past year. We've met with students and solicited feedback, and have made major adjustments this past July to improve our students' perceptions of and satisfaction with the clerkship experience. Phil Masters and Sue Glod have worked very hard at this, and they deserve our full support going forward. I have asked Dr's Masters and Glod to put together a brief video to tell us a little bit about the Department of Medicine Core Clerkship. Thank you Dr's Masters and Glod for your continuing work towards making the Department of Medicine Core Clerkship a key teaching experience in the lives of our students. As a side note, Sue has recently been elected to serve on the CUMED Oversight Committee.

I remain very concerned that the Education mission is suffering from the increased emphasis on clinical and research productivity, and I welcome your suggestions and recommendations as to how we can re-focus and maintain excellence as educators and scholars in the challenging environment.

We have 12 faculty participating as preceptors in the Clinical Skills Program – these faculty serve as teachers, coaches, and advisors to medical students.

With respect to our residency program, the RRC Site Visit for re-accreditation took place this past April, and we received continued accreditation for three years with <u>no</u> citations. However, the Review Committee noted with alarm that the ACGME's residency survey has indicated chronic violation of multiple duty hour standards over the past three years as compared to annual national normative data. I am fully committed to fixing this problem, and to having our program becoming a national leader with respect to residency education.

During the past 3 cycles of RRC review, we have had 1 year (13 citations), 2 year (8 citations), and 3 year (no citations) cycle lengths, which represents steady improvement. This is largely the accomplishment of the Residency Program Leaders—Ted Bollard, Jen Goldstein, Mike Beck, and now Nicole Swallow, and Debbie Stevens with the support of Phil Masters as Vice Chair for Education.

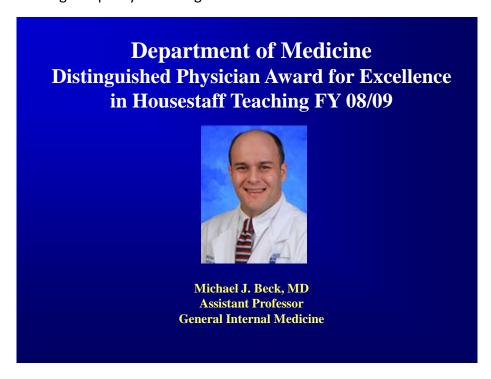
The number of residents and fellows has remained flat during the past two years, and we have filled all our categorical positions in the match for five consecutive years compared with the 70-75% fill rates in the late 1990's and early 2000's.



On a very bright note, 100% of our residency program graduates last year passed the ABIM exam on their first attempt.

Seven of our fellowship programs were reviewed this past April, and 4 received 3 year continued accreditation. We are waiting for the decision on the other three.

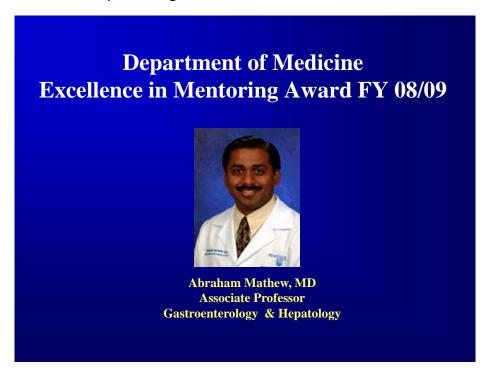
Mike Beck, M.D., received the Distinguished Physician Award for Excellence in Housestaff Teaching this past year. Congratulations Mike!



Scott Shreve, D.O., at the Lebanon VA Medical Center received the Department's Education Recognition Award during the Houstaff Banquet in June. Congratulations Scott!



Abraham Mathew, M.D. received the Department's Excellence in Mentoring Award during the Housestaff Banquet. Congratulations Abraham.



David Dougherty and Tareq Yasin were recognized as outstanding teachers and role models by rising fourth year medical students during the Student Clinician Ceremony this past June. Congratulations to both for a job well done!

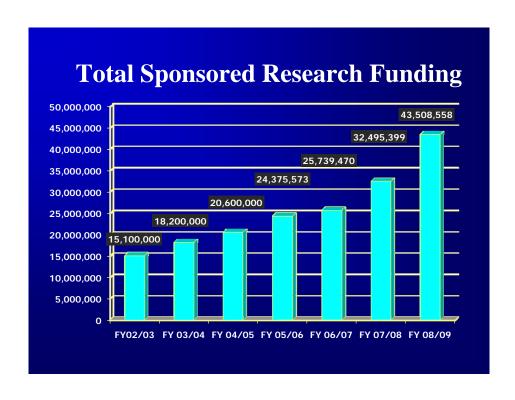


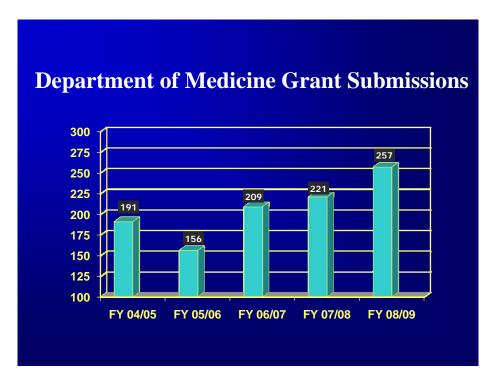
During the past five years, resident presentations at regional and national meetings have increased substantially, including 60 this past year largely due to efforts of program leaders, Cynthia Chuang, our Chief Residents, and faculty mentors. My congratulations to all involved.

Research

The research enterprise in the Department is growing steadily with the addition of new faculty and the efforts of existing faculty. I have asked Dr. Chuang within the Division of General Internal to tell us a little about her research as well as the research mission within the division. Thank you Cynthia for your time, and we look forward to hearing about your research as it continues to develop.

Total sponsored research funding reached \$43 million this past year, or a 34% increase over last year and nearly tripling since FY 03. Grant submissions increased by 16% last year and by 35% since FY05.





Just a reminder that Ann Ouyang co-chairs the College of Medicine's Scientific Review Committee, and Kevin Gleeson directs the Institutional Review Board and Human Subjects Protection Office.

Mark Kozak and Leslie Parent chair 2 of the 3 IRB Review Committees. The IRB needs faculty volunteers to serve each year, and I encourage you to consider doing so.

The climate for getting grants, especially NIH grants, is still very challenging but, despite this, we have 10 faculty with 2 or more NIH grants — John Boehmer, Michael Katzman, Urs Leuenberger, Jianhua Li, Kevin Monahan, Leslie Parent, Chris Sciamanna, Larry Sinoway, Jill Smith, and Tom Loughran. This compares very favorably with the 2 we had at the time of my first State of the Department address in 2003.

Eight faculty brought new NIH awards to the Department – Alaa Awad, John Boehmer, Susan Hafenstein, Paul Haidet, Nas Ghahramani, Liza Rovniak, Brian Reeves, and Jill Smith.

Five faculty have new NIH stimulus awards— Jianhua Li, Michael Katzman, Tom Loughran, Leslie Parent, and Brian Reeves.

Five faculty currently have active NIH K awards — Cynthia Chuang, Nasrollah Ghahramani, Susan Hafenstein, Paul Haidet, and Kevin Monahan. Congratulations to all our NIH supported investigators!

Larry Sinoway and Urs Leunenberger are co-Pl's on the Penn State CTSA application which was resubmitted last week. This award totals \$30 million if we receive it!

Seven faculty had new Foundation or Association awards —Jian Cui, Kebin Hu, Paul Haidet, Rosalyn Irby, Ganesan Ramesh, Witold Rybka, and Robert Vender.

Thirty-four faculty had 201 clinical trials or industry sponsored awards totaling \$21.7 million this past year. Of note, we have 5 faculty who are Pl's on 10 more such awards – Chandra Belani, David Claxton, Timothy Craig, Ian Gilchrest, and Allan Lipton.

Six faculty received new Dean's Feasibility Awards — David Claxton, Philippe Haouzi, Yixing Jiang, Nazia Raja-Khan, Brian Reeves, and Jose Stoute.

We had six faculty who received Tobacco Settlement Awards – Elliot Epner, Robert Gabbay, Marc Kaufman, Leah Cream, Lakshman Sandirasegarane, and Shayoung Yu. One new GCRC award was given this year to David Claxton.

Kevin Monahan received the Department's Junior Faculty Excellence in Research Award this year, and two housestaff members - Saima Durvesh and Lawand Saadulla - received the Housestaff Excellence in Research Award.

Jose Stoute received a Grace Woodward Grant for Collaborative Research in Engineering Medicine.

Gisoo Ghaffari received the American College of Asthma and Immunology New Faculty Research Award.

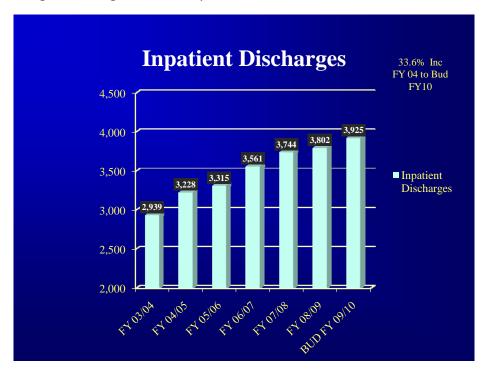
Two faculty are participating in the Penn State BIRCWH Scholars program, an NIH K-12 award led by Carol Weisman in Public Health Sciences – Jennifer McCall-Hosenfeld and Nazia Raja-Khan.

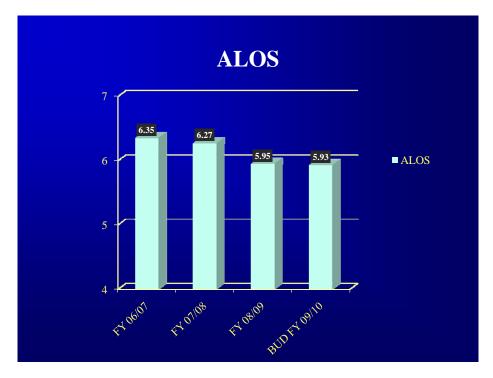
Six faculty are participating in Clinical Translational Science Institute Pilot Projects – Becky Bascom, Noel Ballentine, Timothy Craig, Yixing Jiang, Robert Gabbay, and Kevin Gleeson.

Nake Pooran completed the K30 program on May 2008. 2 faculty members - Joe Enama and Uchenna Ofoma are current second year participants. Three fellows — Umar Farooq, Shahzad Shah, and Akhil Vallabheneni are participants of the class of 2011. We have established a pilot mentoring program for 12 junior faculty this year which initially will entail asking junior faculty to work with their Division Chief to identify one or more mentors, meeting regularly with their mentors, and reporting progress to a Department Committee each year prior to the HR40 review with their Division Chief. We expect to expand the program or a modified version to all junior and mid-level faculty in the future. Brian Reeves is heading up this project.

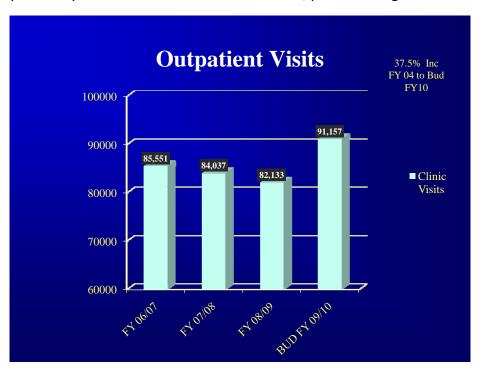
Clinical

Turning to the clinical mission, inpatient discharges increased again last year to 3,802 which was 123 or 3% short of budget. This likely is a consequence of bed allocation and reducing the number of patients transferred from other hospitals. Average length of stay for inpatients was right on budget at 5.95 days, and 5% lower than FY 08.





Total outpatient visits fell for the third consecutive year to 82,133 which was 9,024 or 9.8%, below budget. We revisited our budget assumptions and calculations this year, but we're still projecting 91,157 visits. It is very important that each provider meet or exceed her/his budgeted visit targets – if you don't know your targets, please speak with your Division Chief or David Towery. When you cancel scheduled clinic sessions, please arrange to make them up.



We started up a new Hospitalist service at Mount Nittany Medical Center in State College this past year. This was primarily due to the hard work of Carol Freer and David Towery. Tom Covaleski, a former medical student, resident, and chief resident here is the Medical Director of this program which is averaging 12-15 patients daily while additional

hospitalists are being recruited. We added a third year clerkship rotation to the program in September, and plan to add a second student after more hospitalists are hired. Phil Masters is coordinating this effort.

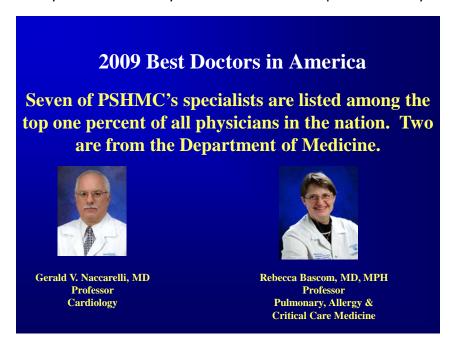
We also initiated a co-management service with the Department of Orthopedics for patients with either hip fractures or joint replacements and active medical co-morbidities. This service has outgrown original projections, and will continue to grow if Orthopedics hits its budgeted targets. So I've asked a group led by Carol Freer, Eileen Hennrikus, and Ted Bollard to make plans for meeting the service and educational needs, and goals of this service as it grows. My belief is that we can make this a scholarly, high quality, national model for the comanagement of patients, and enlist the participation of additional services and Departments here.

The new Sleep Lab across Bullfrog Valley Road in the HCAR building is up and running and I want to remind you to refer all sleep studies for your patients to our faculty. There is no longer any need or good reason to send them elsewhere. Dr. Leon Sweer will tell us about what makes the Hershey Medical Center Sleep Lab special. I would like to take this opportunity to thank Dr. Sweer and everyone in the Pulmonary division for helping to make this a reality. It has been a tremendous effort on your part.

Likewise the renovated Endoscopy Suite in UPCII is up and running and hitting budgeted targets.

Plans are being developed to renovate and expand the sixth floor work rooms for faculty, residents, and other providers. We have a floor diagram available to show resident applicants who started interviewing here last week.

Thirty-nine of HMC's 155 physicians, or 25% are listed in the 2008 Best Doctors in America. Two – Becky Bascom and Jerry Naccarelli are in the top 1% nationally.



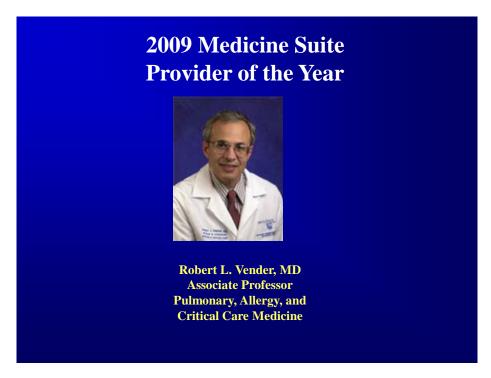
Thirty providers were in the 99th percentile for patient satisfaction nationally in the Press Ganey surveys, and another 13 were between the 95th and 99th percentile.

Three of our outpatient practice sites achieved STAR status – Internal Medicine at Hope Drive (formerly Cherry Drive), Heart and Vascular Silver Clinic, and Heart and Vascular Institute at Nyes Road. The Cardiovascular Procedure Unit was the highest scoring adult inpatient unit.



Three inpatient units were among HMC's most improved in patient satisfaction, Penn State Cancer Institute inpatient, Medical Intermediate Care Unit, and 2nd Floor Heart and Vascular Institute Acute Care – as were 3 inpatient services – Internal Medicine, Cardiology, and Gastroenterology.

Bob Vender was selected Provider of the Year by UPC Medicine Suite Staff.



Our new lineup of Medical Directors of our outpatient sites includes – Deb Bethards, Ted Bollard, Chris Fan, and Becky Masters. Ann Ouyang now serves as Chief Medical Officer of Medicine Specialties for the Penn State Hershey Medical Group.

Quality Improvement

Each of the past 4 or 5 years, I've continued to harp about how important focusing on quality improvement in each of our missions will be to our continued success. Well, a myriad of external organizations and our Board of Directors are raising the bar in terms of their expectations. We cannot afford to let up or lose our focus on quality. In fact, I'm convinced we have to figure out how to commit more time and effort to it going forward.

Just a reminder, Greg Caputo leads our organizations quality improvement programs as Chief Quality Officer. As such, he is a valuable resource to the Department.

Cindy Whitener is now Vice Chair for Quality Improvement in the Department and will be aligning the Department with Institutional goals and programs, developing Department goals and programs, and inventorying and monitoring Division QI projects. This is a big job and Cindy will need help from all of us — I ask that each provider in the Department a volunteer to work on at least one QI project each year.

As you know, we undertook 100 % review of all inpatients who died on our service this past year – which turns out to be 4 to 5 deaths on average per week, or 20 to 25 per month, or 240 to 300 annually. This was a huge undertaking, and in retrospect, was not worth the investment in terms of producing any meaningful understanding of what might have caused or prevented those deaths, or any change in policies, practices, or procedures as a consequence of the reviews. So, Cindy convinced Greg and others that looking at patients who die from or with a particular diagnosis, like pneumonia, may be a better approach, and we are gearing up for that now. I think H1N1 influenza is consuming most of Cindy's non-patient care time right now

in her role as Hospital Epidemiologist so it may be a couple of months until you hear more about this.

The Department is well represented on a number of the QI project teams, and have led or are leading several teams.

As examples, three faculty in the Department serve as Physician Champions/Leaders for institutional quality improvement teams — Mike Beck for Venous thromboembolism, Kathleen Julian for Urinary Tract Infections, and Colleen Rafferty for CLUE. We've just learned the CLUE project received an award at the Highmark Quality Blue Best Practice Forum two weeks again in Pittsburgh. Congratulations to all!



Turning to scholarship and scholarly activities, Department faculty, residents and staff published more than 200 scientific papers and 17 book chapters last year, and we've had more than 300 presentations or abstracts at regional or national meetings.

Eighteen faculty are currently serving on study sections ranging from NIH to specialty-based funding organizations.

 Let's look at one last video which demonstrates our continuing commitment to community service and outreach.

I am grateful to have your support, and for the many contributions each of you has made or will make in order to make this Department a vital and successful part of the College, Medical Center, University, and Central Pennsylvania community.

Thank you for your attention and I'd be happy to entertain comments or questions during the next few minutes.

