



Department of Medicine 2014

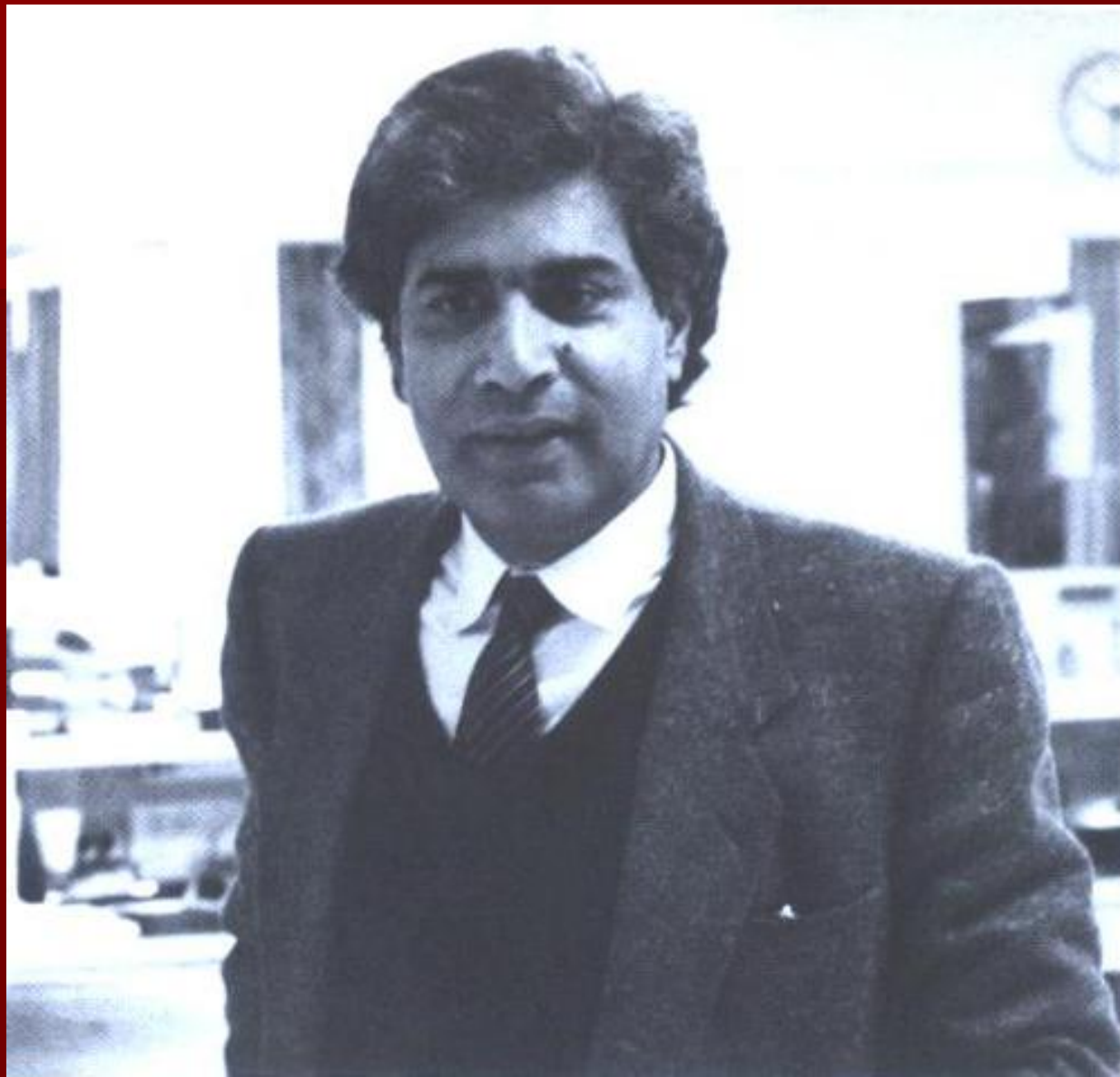
RUTGERS

New Jersey Medical School

State of the Department

Marc Klapholz, MD, FACC
Chair, Department of Medicine





Comparative antiarrhythmic effects of intravenously administered lidocaine and procainamide and orally administered quinidine☆

[Mortimer L. Schwartz](#), MD, FACC, [N.Conant Webb](#), MD, [Benjamin G. Covino](#), MD, PhD, [Edward M. Finck](#), MD, [Bunyad Haider](#), MD

From the Department of Medicine, New Jersey College of Medicine and Dentistry, Newark, N. J. USA

Received 12 September 1969; accepted 16 February 1970.

Abstract

A double-blind control study compared the ventricular antiarrhythmic efficacy of a single dose each of intravenously administered lidocaine and procainamide and orally administered quinidine. A statistically significant reduction in ventricular ectopic contractions occurred immediately and was present 30 minutes and 1 hour after the onset of injection of procainamide. Lidocaine produced a statistically significant reduction in ventricular extrasystoles immediately and for 30 minutes thereafter. No decrease in the incidence of ectopic contractions was observed with either orally administered quinidine or placebo therapy alone. The duration of ventricular antiarrhythmic action of a single injection of procainamide was significantly greater than that of lidocaine. A statistically but probably not clinically significant reduction in systolic blood pressure was observed with procainamide, quinidine and placebo therapy. No change in either systolic or diastolic blood pressure was observed with lidocaine in the dose employed.

Ischemic heart failure: Sustained inotropic response to small doses of L-epinephrine without toxicity☆

[Bunyad Haider](#), MD, FACC, [Mohammad I. Khan](#), MD, [William M. Burke](#), MD, FACC, [Timothy J. Regan](#), MD, FACC

From the Department of Medicine, College of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, N. J., USA

Accepted 30 October 1974.

Abstract

As a prelude to a study of severe ischemic heart failure, the therapeutic response of the ischemic ventricle to epinephrine and acetylstrophanthidin in nontoxic doses was determined in 24 intact anesthetized dogs undergoing a first episode of acute regional ischemia. A thrombotic obstruction was produced in the left anterior descending coronary artery, effecting moderate left ventricular dysfunction. The elevation of end-diastolic pressure and reduced stroke volume in control dogs were not significantly altered by administration of strophanthidin. Epinephrine (0.05 $\mu\text{g}/\text{kg}$ per min) elicited a significant reduction in end-diastolic pressure and increase in stroke volume. The latter was not attended by an increased incidence of ventricular fibrillation, whereas fibrillation occurred in half of the group given strophanthidin. Thus, the catecholamine was selected to study pump failure.

Severe ischemic heart failure was assessed in two groups with scar from previous infarction for up to 4 hours. By 60 minutes of ischemia, the increase in end-diastolic pressure and volume and decrease in stroke volume and ejection fraction were comparable in both groups. Thereafter, alternate animals received small doses of epinephrine (0.05 to 0.15 $\mu\text{g}/\text{kg}$ per min) with graded increments at 60 minute intervals to counter tachyphylaxis and findings were compared with those in control dogs. Over the subsequent 3 hours, there was progressive deterioration of left ventricular function in the untreated group with an increase in end-diastolic pressure from 10 ± 1 to 33 ± 2.4 mm Hg. End-diastolic volume increased by 63 percent; stroke volume and ejection fraction decreased by 48 and 66 percent, respectively. The infusion of epinephrine was attended by a significantly lower end-diastolic pressure of 20 ± 2.5 mm Hg, whereas end-diastolic volume, stroke volume and ejection fraction were restored to control levels after 4 hours of ischemia. Mortality in the untreated group was 62 percent by 4 hours; all seven animals in the treated group survived.

Evidence for Cardiomyopathy in Familial Diabetes Mellitus

TIMOTHY J. REGAN, MICHAEL M. LYONS, S. SULTAN AHMED, GILBERT E. LEVINSON,
HENRY A. OLDEWURTEL, MEHMOOD R. AHMAD, and BUNYAD HAIDER, *The
Departments of Medicine and Pathology, College of Medicine and Dentistry of
New Jersey-New Jersey Medical School, and the Martland Hospital Unit,
Newark, New Jersey 07103*

ABSTRACT Recent epidemiologic studies have suggested that cardiac disease is common in diabetics and may often have a noncoronary basis. To examine the status of the left ventricle, 17 adult-onset diabetics of familial type without hypertension or obesity underwent hemodynamic study and were compared to 9 controls of similar age.

Of the 17, 12 subjects had no significant occlusive lesions by coronary angiography. From this group eight without heart failure had a modest, but significant, elevation of left ventricular end-diastolic pressure. End-diastolic and stroke volumes were reduced, but ejection fraction and mean rate of fiber shortening were within normal limits. The left ventricular end-diastolic pressure/volume ratio was significantly higher than controls. Afterload increments effected a significant increase of filling pressure compared to normals without a stroke volume response, consistent with a preclinical cardiomyopathy. Four patients with prior heart failure had similar but more extensive abnormalities. None had local dyskinesia by angiography, and lactate production was not observed during pacing-induced tachycardia. Left ventricular biopsy in two patients without ventricular decompensation showed interstitial collagen deposition with relatively normal muscle cells. These findings suggest a myopathic process without ischemia.

Postmortem studies were performed in 11 uncomplicated diabetics. Nine were without significant obstructive disease of the proximal coronary arteries, and the majority succumbed with cardiac failure. On left ventricular sections, none had evident luminal narrowing of the intramural vessels. All nine exhibited periodic acid-Schiff-positive material in the interstitium. Collagen accumulation was present in perivascular loci, between myofibers, or as replacement

fibrosis. Multiple samples of left ventricle and septum revealed enhanced triglyceride and cholesterol concentrations, as compared to controls. Thus, a diffuse extravascular abnormality may be a basis for cardiomyopathic features in diabetes.

INTRODUCTION

A relatively high incidence of cardiac deaths in patients with diabetes mellitus has been attributed to coronary atherosclerosis and its complications (1). However, two recent studies of vessel pathology in diabetics failed to support the assumption that all cardiac deaths were related to this process. In a quantitative study of the extent of surface involvement in the coronary vessels, only a modest increase in the quantity of atherosclerotic disease was present in diabetics compared to age- and sex-matched controls (2). In addition, Ledet observed that intramural vessels commonly exhibited accumulation of glycoprotein but did not show luminal narrowing (3). Thus, the question is raised as to whether a portion of the cardiac diabetic population may have primary myocardial abnormalities as a basis for their symptomatology, independent of ischemia, hypertension, or obesity.

As an initial approach to this problem in a canine model with chronic diabetes, ventricular function and compliance were observed to be abnormal (4), associated with accumulation of periodic acid-Schiff-(PAS) positive glycoprotein in the myocardium as well as increments of triglyceride. In humans, a functional abnormality was also found in noncardiac adult diabetics by the systolic time-interval method (5), similar to the preclinical abnormality of ethanolism (6, 7).

This report is concerned with an examination of left ventricular function and coronary arteriograms after the development of cardiac symptoms in uncomplicated adult diabetics with a familial history, to determine if the development of symptomatology is de-

*Received for publication 30 April 1976 and in revised form
23 May 1977.*





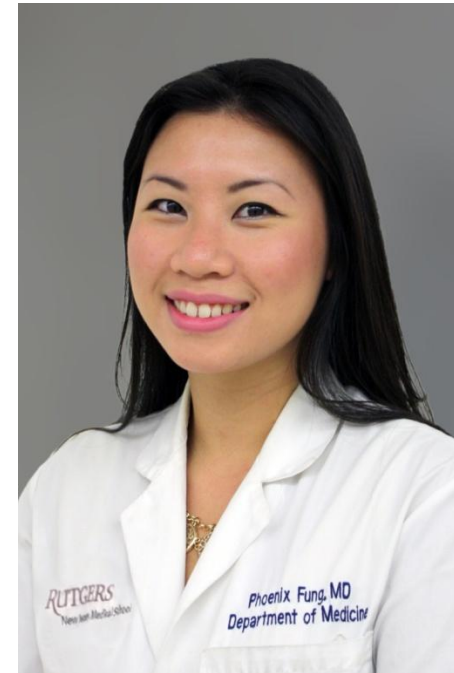
Department of Medicine 2014 Welcoming New Faculty



Hospitalists



Eugene Festa, MD



Phoenix Fung, MD



Department of Medicine 2014 Welcoming New Faculty



Pulmonary and Critical Care



Anne Sutherland, MD
Director ICU



Keith Guevarra, DO



Department of Medicine 2014 Welcoming New Faculty



Hematology & Oncology



Samhita Chakraborty, MD

Hepatology



Vivek Lingiah, MD



Department of Medicine 2014 Welcoming New Faculty



Cardiology



Alfonso Waller, MD
Director, Advanced
Cardiovascular Imaging,
Faculty Scholar - HCOE



Department of Medicine 2014 Promotions



Associate Professor of Medicine

Neil Kothari, MD

Professor of Medicine

Lisa L. Dever, MD



Department of Medicine 2014 New Leadership



Neil Kothari, MD

Vice Chair, Education, DOM
Assistant Dean, GME, NJMS

Nancy Connell, PhD

Director, Research

Alfred Lardizabel, MD Executive
Director of GTBI

Amee Patrawalla, MD Medical
Director of Lattimore Clinic

Iris Herrera, MD

CMIO, University Hospital

James Maher, MD

Director, Echo Lab
Director (Interim), Cardiac
Cath Lab

David Cennimo, MD

Program Director, Med-Peds
Residency

Kristin Wong, MD

Associate Director, Med-Peds
Residency; DOM Liaison to
Observation



Department of Medicine 2014 Awards



NJMS Faculty Organization Faculty of the Year Award
(Clinical Science): David Alland, MD

NJMS Faculty Organization Teaching Award (Clinical
Science): Lisa L. Dever, MD

NJMS Faculty Organization Distinguished Career Award
(Clinical Science): Bunyad Haider, MD

NJMS Graduating Class 2014 Excellence in Teaching Award:
Andrew Berman, MD

Arnold P. Gold Foundation Humanism and Excellence in
Teaching Award: Ipsit Pandya, MD and Raymond Malapero,
MD



Department of Medicine 2014 Golden Apple Awards



Faculty

- Andrew Berman, MD (Class of 2016)
- Ralph Oriscello, MD (Class of 2015)
- David Cennimo, MD (Class of 2014)
- Alla Fayngersh, MD (Class of 2014)
- Lillian Pliner, MD (Subspecialty Faculty)
- Eugene Capitle, MD (Subspecialty Faculty)

Housestaff

- Hayder Hashim, MD (Class of 2014 Cardiology Fellow)



Department of Medicine 2014

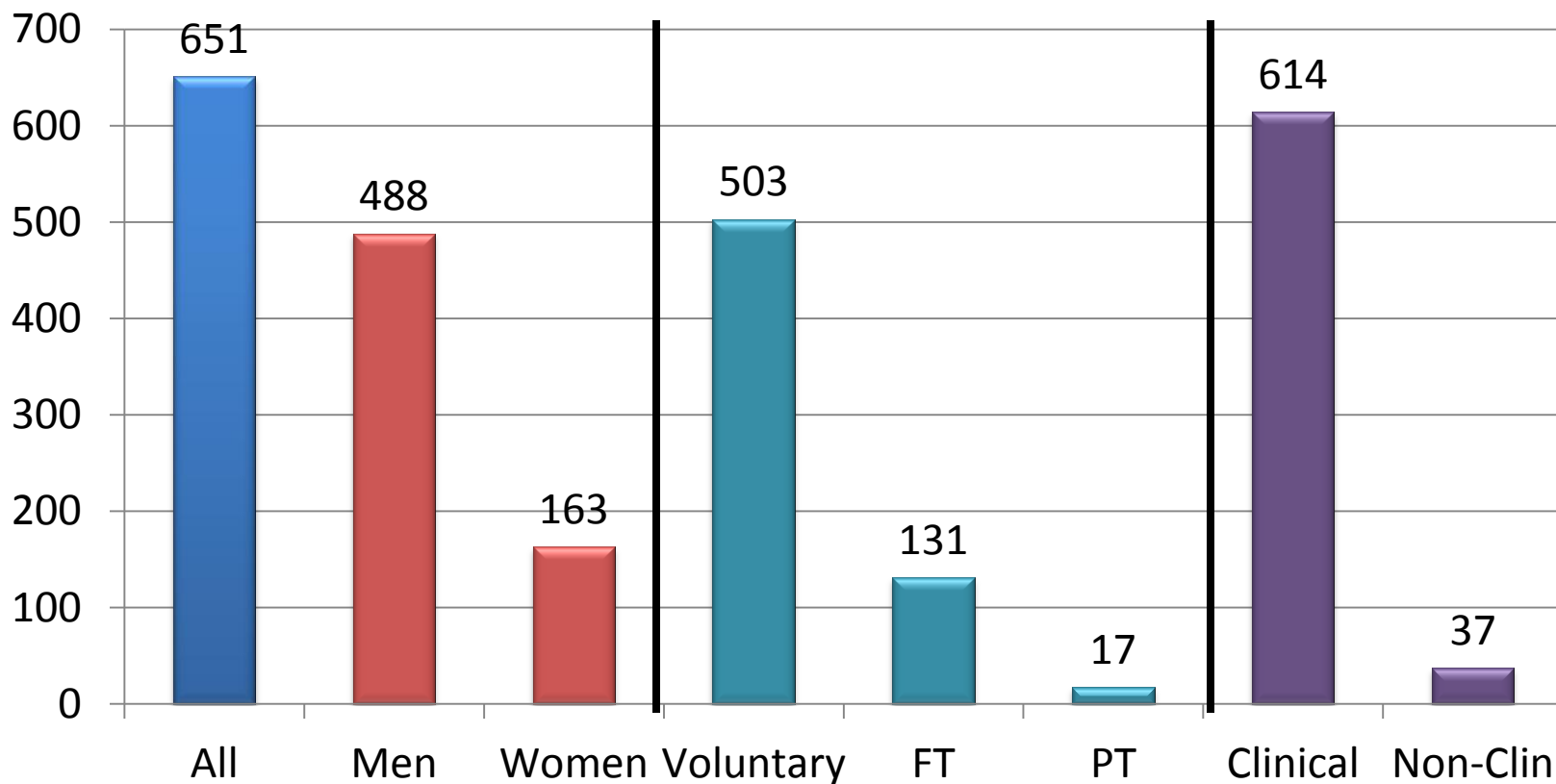
Governance: Elected Officers

- Governing Council (Medical Staff) University Hospital : Michael Jaker, MD (President), Lisa Dever, MD, Ana Natale-Pereira, MD, & Lillian Pliner, MD
- NJMS Faculty Organization: Lisa Dever, MD, Vice President Clinical Sciences
- NJMS Faculty Council At-Large Representatives: David Bleich, MD, Robert A. Schwartz, MD, MPH
- UPA Board: Ana Natale-Pereira, MD, Neil Kothari, MD, Jim Maher, MD, Michael Jaker, MD, Marc Klapholz, MD (Chair Member)
- Rutgers Senate: Robert Schwartz, MD, MPH, Sultan Ahmed, MD



Department of Medicine 2014

Demographics: All Faculty

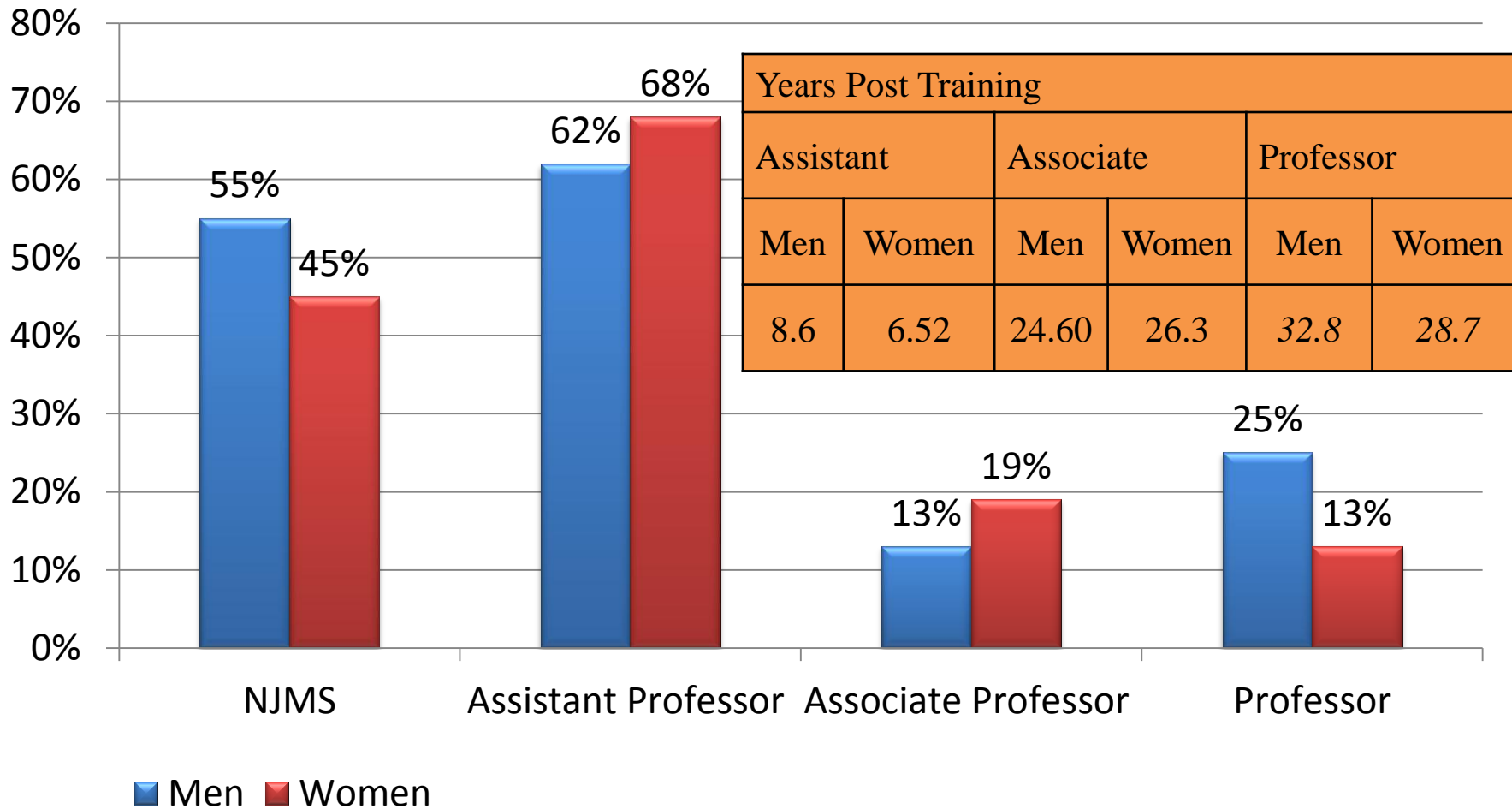




Department of Medicine 2014

Demographics: FT Clinical Faculty: Gender

Rutgers-NJMS(n=71)

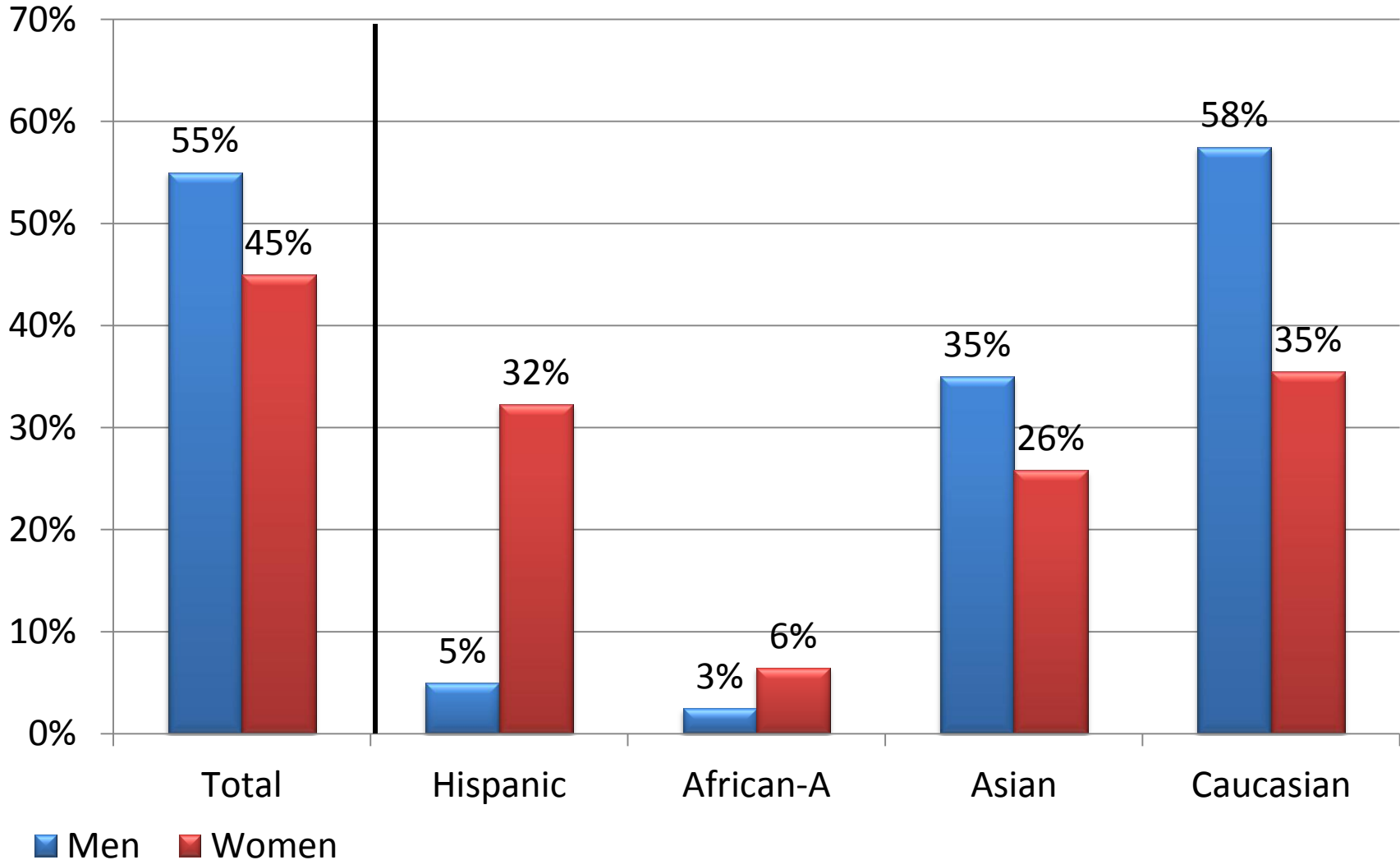




Department of Medicine 2014

Demographics: FT Clinical Faculty NJMS

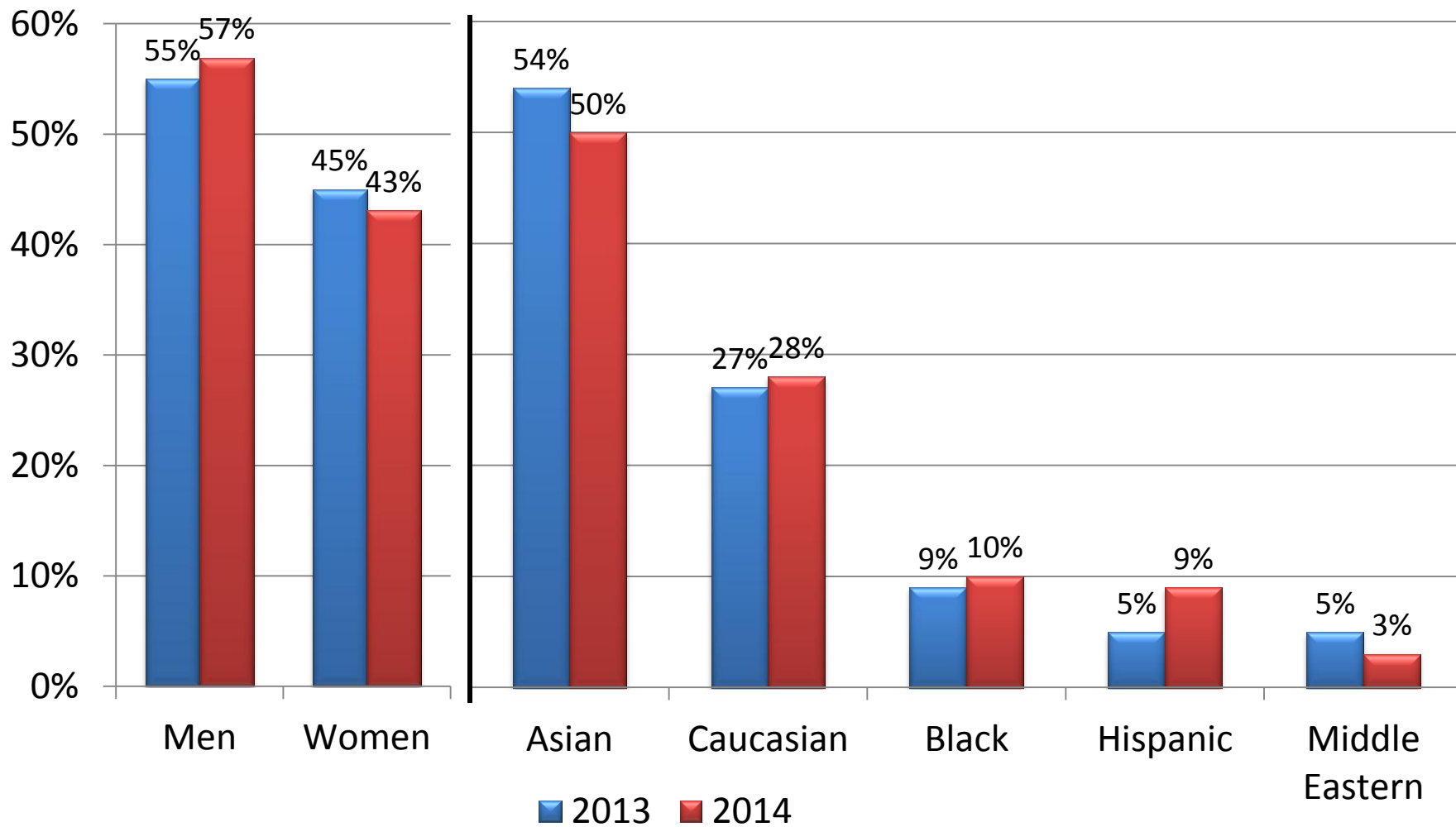
Ethnic and Racial Background (n=71)





Department of Medicine 2014

Demographics: Residents & Fellows (n=174)

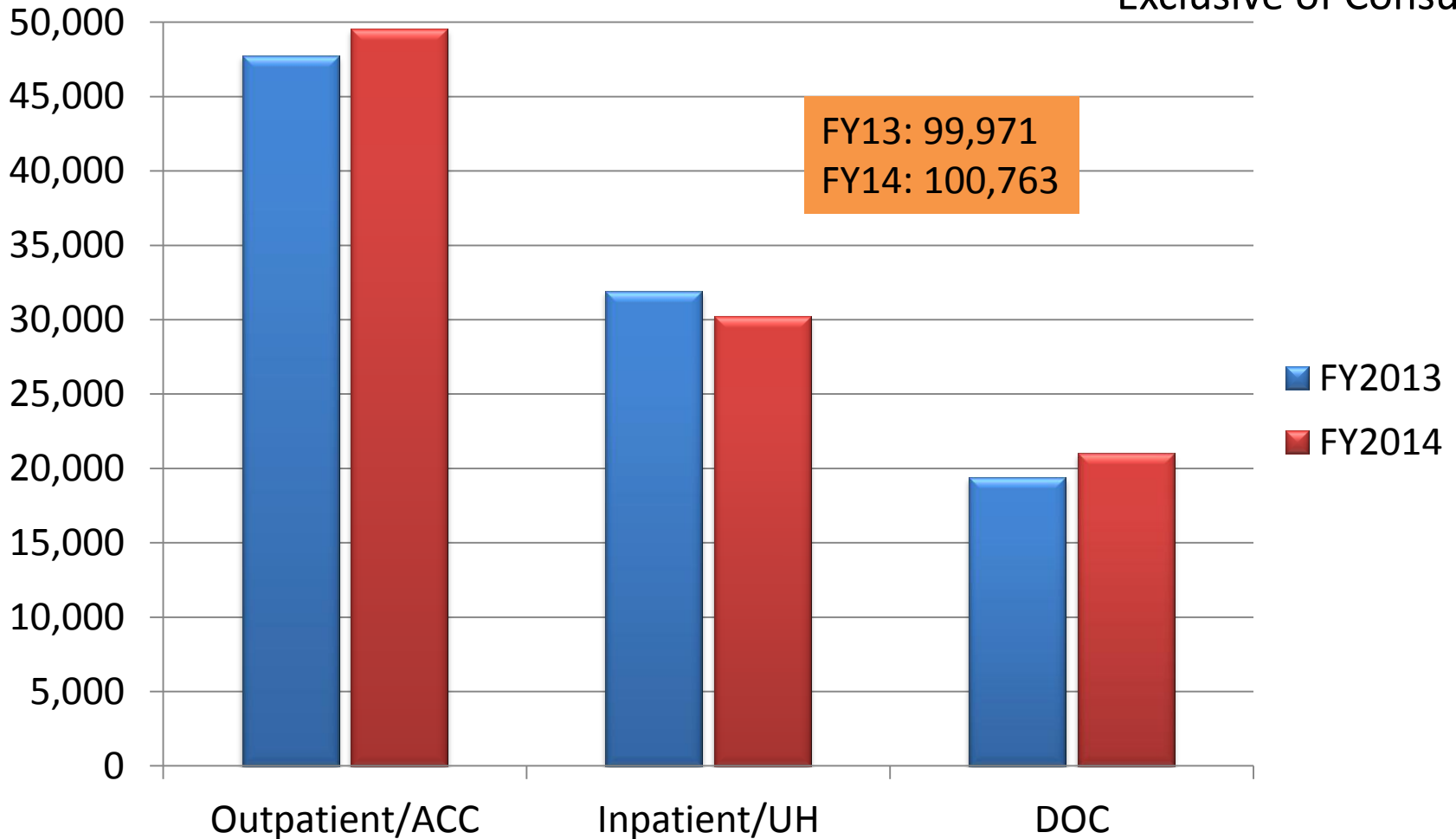




Department of Medicine 2014

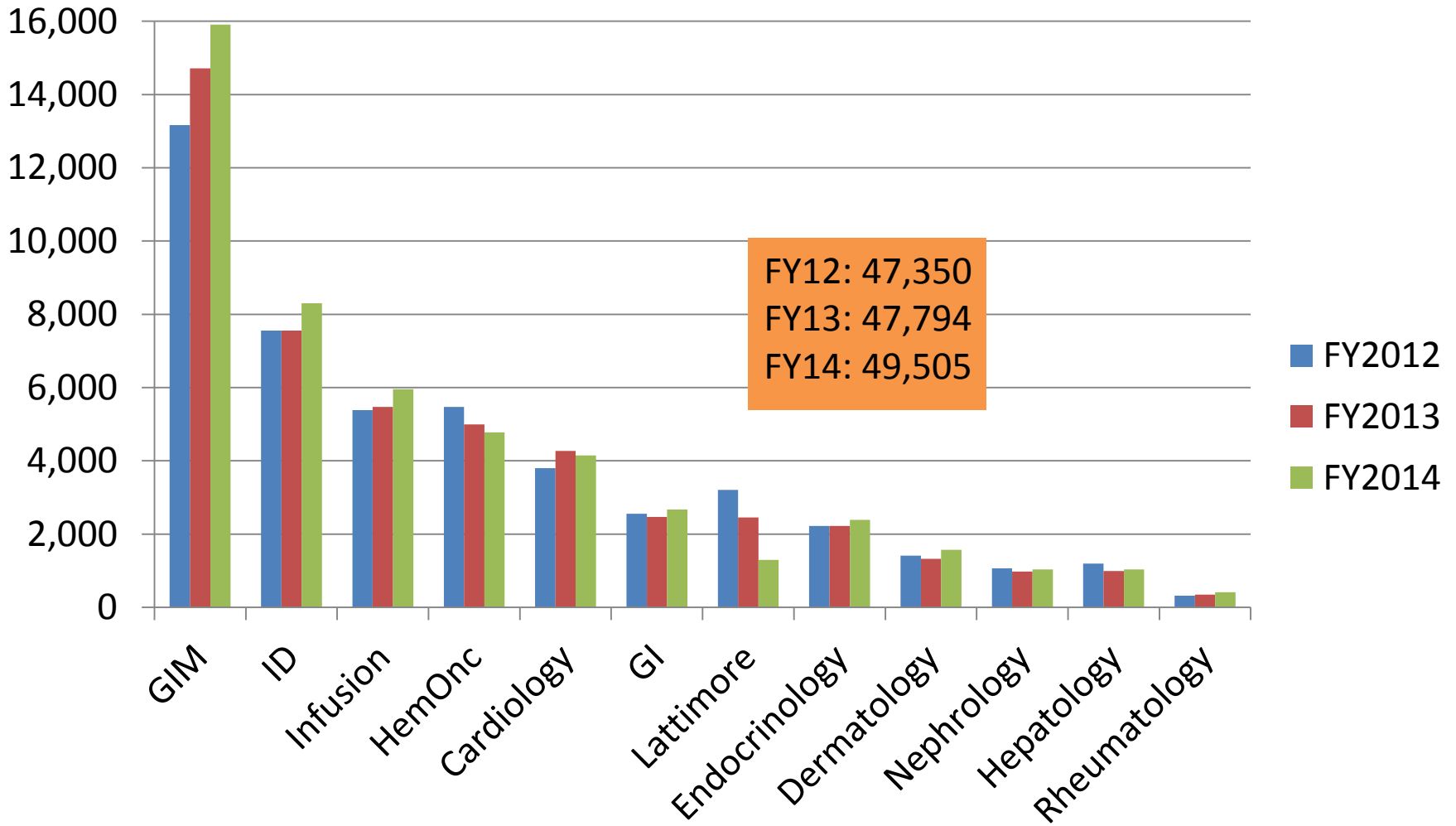
Clinical Activity (E&M Visits): FY 14 vs FY13*

*Exclusive of Consults



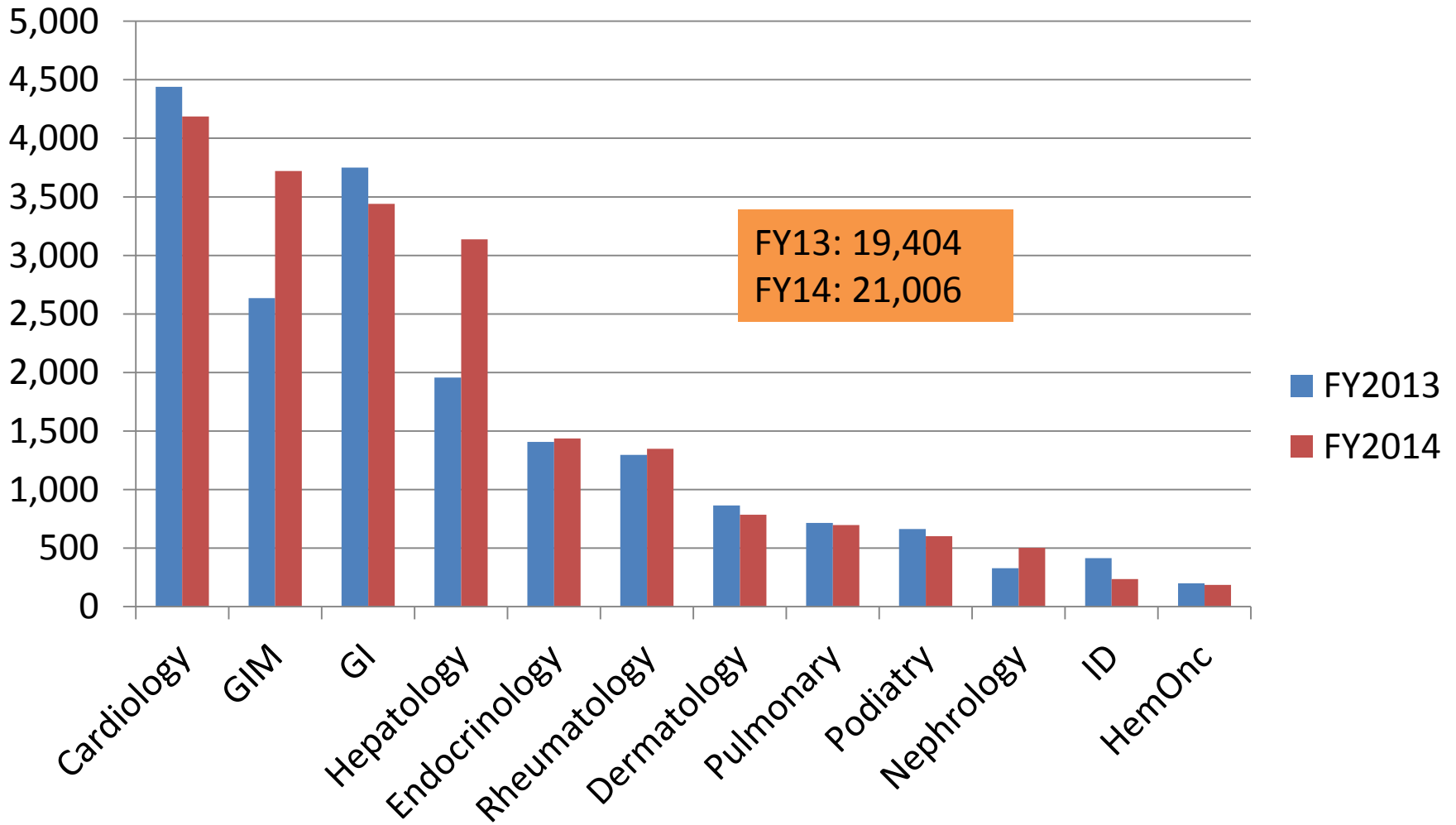


Department of Medicine 2014 Clinical Activity ACC





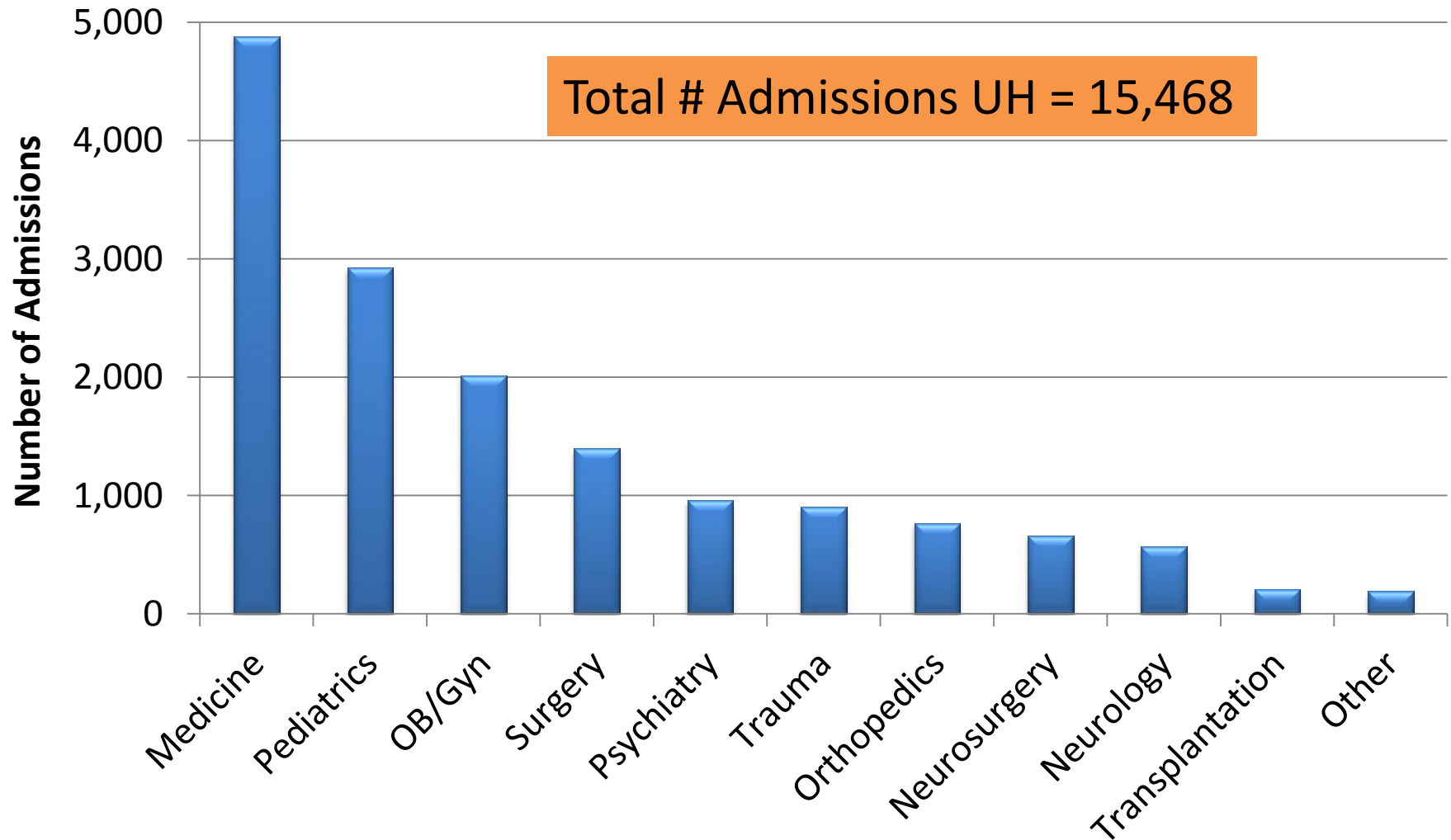
Department of Medicine 2014 Clinical Activity DOC





Department of Medicine 2014

Admissions by Service at UH

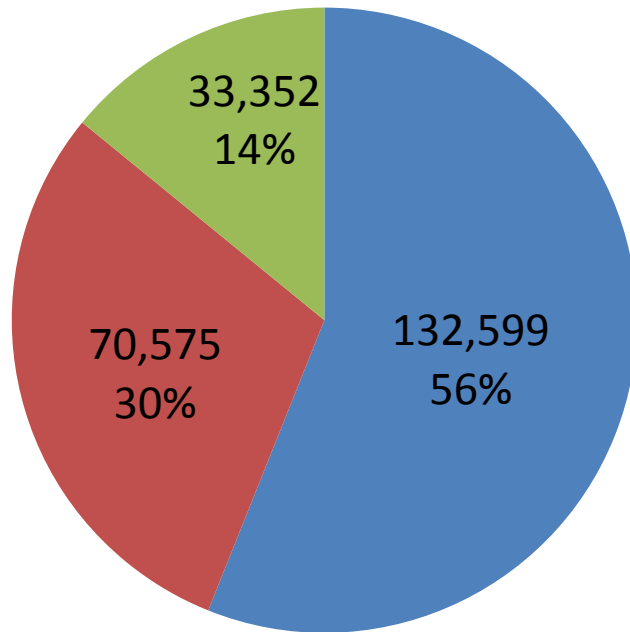




Department of Medicine 2014

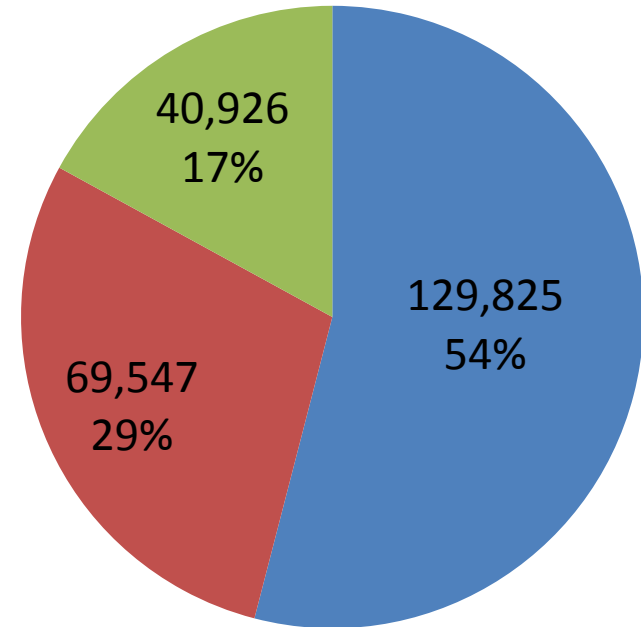
RVUs Reported by UPA/McKesson by Location

FY13



Total = 236,295

FY14



Total = 240,299

- UH
- ACC**
- DOC*

*Includes off-site locations

**Includes UH Outpatient, ACC, ER, and TB Center

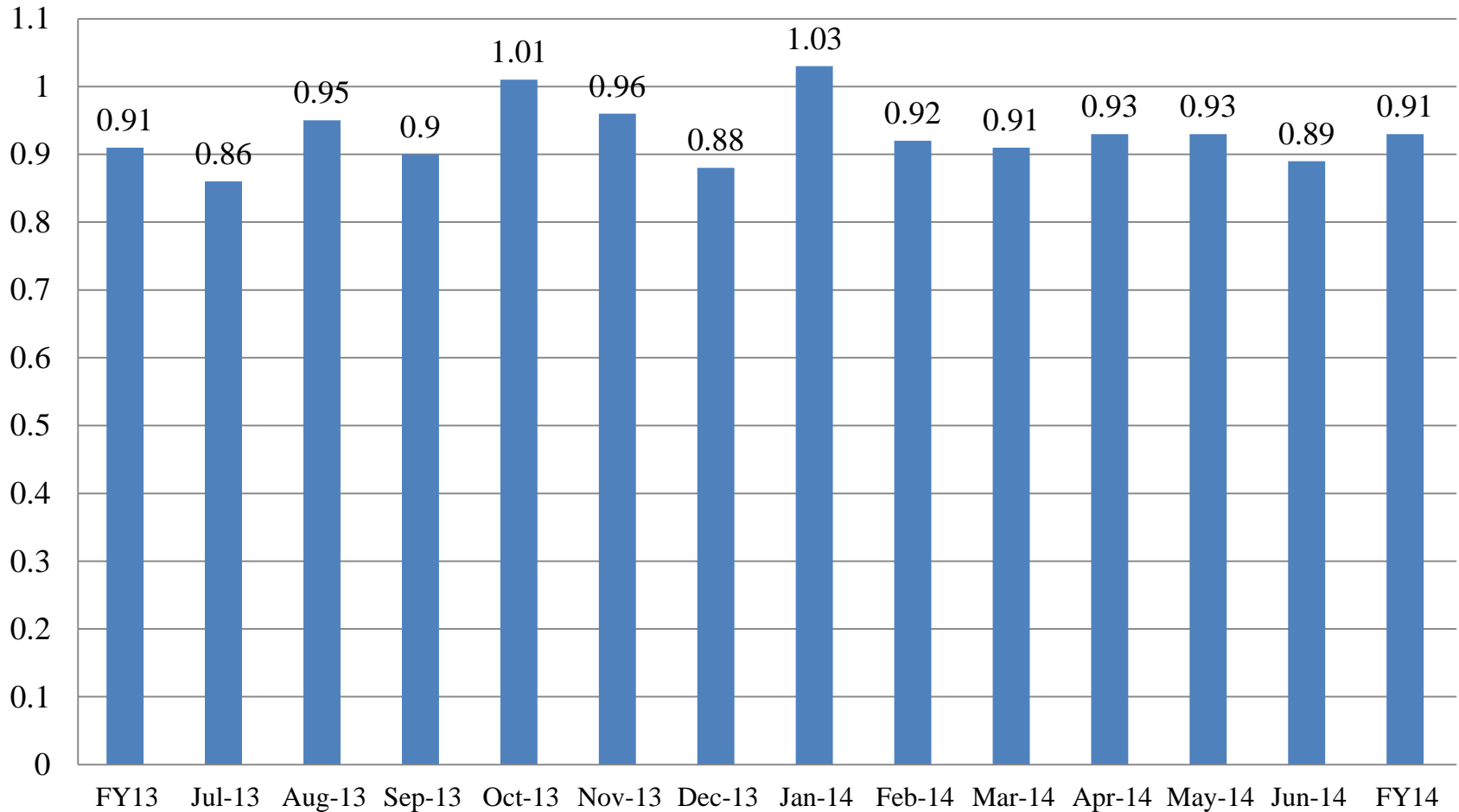
Data provided by the University Physician Associates was used to create the above information.

Please note that the Carrier Information contained in the RVU data is Primary Billed Carrier.



Department of Medicine FY2014 Length of Stay Index

N= 4818 cases: [Variance = -2,029 Days (excl. outliers); 934 Days incl. outliers]





Department of Medicine 2013 Clinical Initiatives and Successes



- Increase in Primary Care
- Hepatology and Liver Transplant Service
- Hospitalist Program
- Transitions of Care Clinics:
 - Discharge Clinic
 - Heart Failure (Advanced Certification - JC)
 - DSRIP Program (**Delivery System Reform Incentive Payment**)
- Occupational Medicine



Department of Medicine 2014



The American Heart Association proudly recognizes

UNIVERSITY HOSPITAL

On this date, January 1, 2014 as a
Get With The Guidelines – Stroke

GOLD PLUS Achievement Award Hospital

Recognition valid from January 2014 to January 2015

Recognition Time of Compliance from January 2012 – December 2013



The American Heart Association and American Stroke Association recognize this hospital for achieving 85% or higher adherence to all Get With The Guidelines® Stroke Achievement indicators for two or more consecutive 12 month intervals and at least 12 consecutive months of 75% or higher compliance with 5 or more Get With The Guidelines® Stroke Quality measures to improve quality of patient care and outcomes.

Nancy Brown
Chief Executive Officer,
American Heart Association

Deepak L. Bhatt, MD
Chairperson: Get With The Guidelines®
Steering Committee

Mariell Jessup, MD
2013-2014 President,
American Heart Association



Department of Medicine 2014



The American Heart Association proudly recognizes

UNIVERSITY HOSPITAL

On this date, January 1, 2014 as a

Get With The Guidelines – Heart Failure

GOLD PLUS Achievement Award Hospital

Recognition valid from January 2014 to January 2015

Recognition Time of Compliance from January 2012 – December 2013



The American Heart Association recognizes this hospital for achieving 85% or higher adherence to all Get With The Guidelines® Heart Failure Achievement indicators for two or more consecutive 12 month intervals and at least 12 consecutive months of 75% or higher compliance with 5 or more Get With The Guidelines® Heart Failure Quality measures to improve quality of patient care and outcomes.

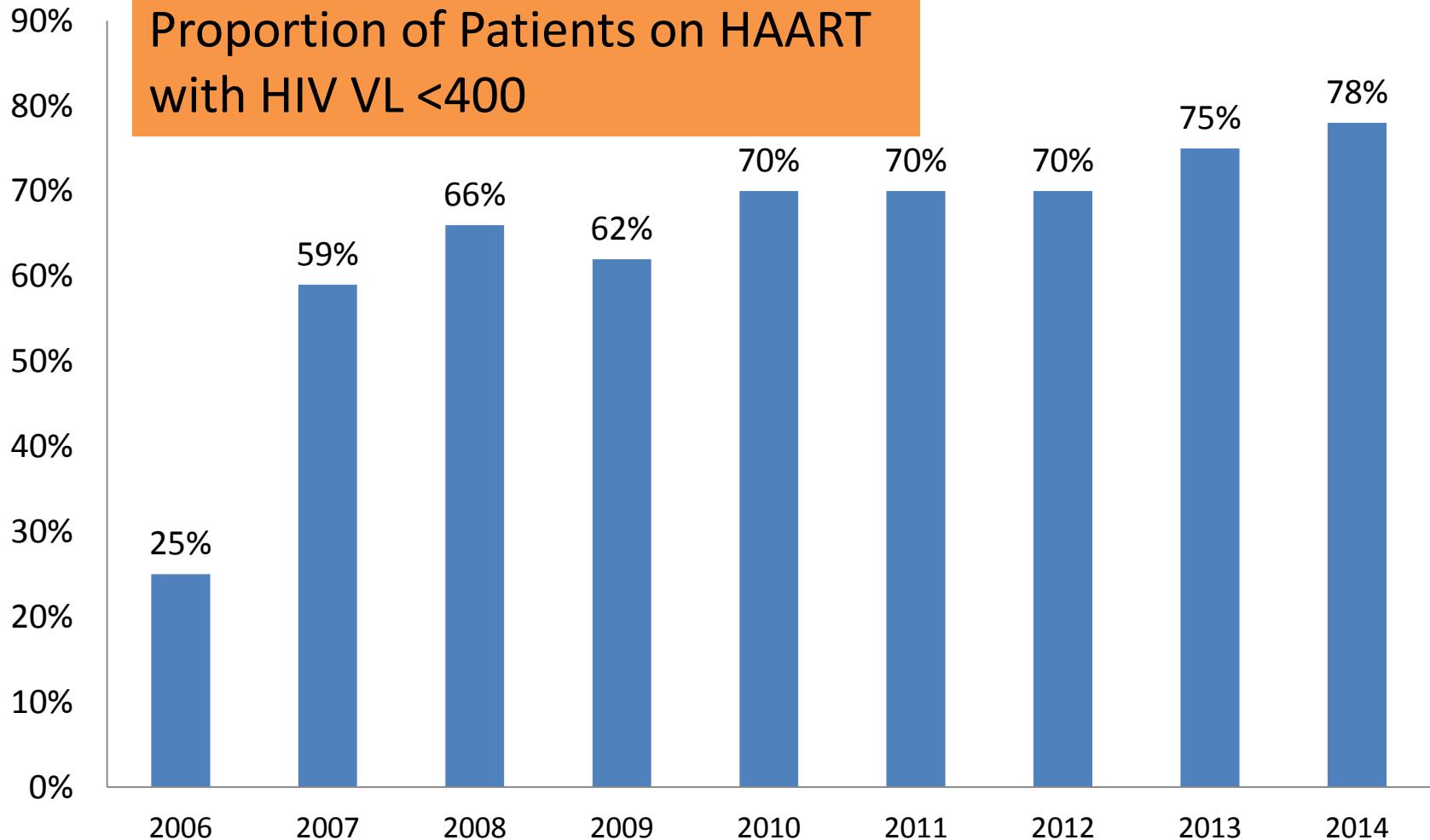
Nancy Brown
Chief Executive Officer,
American Heart Association

Deepak L. Bhatt, MD
Chairperson: Get With The Guidelines®
Steering Committee

Mariell Jessup, MD
2013-2014 President,
American Heart Association



Infectious Disease – HIV Program





Infectious Disease – HIV Program



Parameter	2012 (%)	2013(%)	2014 (July 2013- June 2014) (%)
Hepatitis C Virus Screening	97	98	97
Lipid Screening	71	71	74
Substance Abuse Screening	56	80	90
Mental Health Screening	66	81	92
Tobacco Cessation Counseling	65	74	79
Tuberculosis Screening	93	93	93



Department of Medicine

Outpatient Quality: Goals



- Integration of inpatient and outpatient care.
- Improve clinical outcomes and:
 1. Be seen as the providers of choice
 2. Facilitate strategic positioning in 'new' health care models
i.e. ACO's



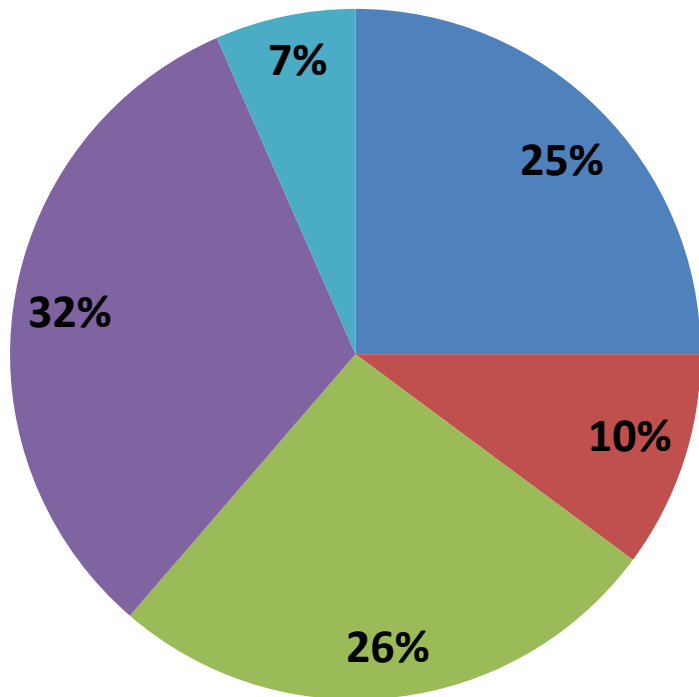
Department of Medicine 2014

DOM Generated Revenue*

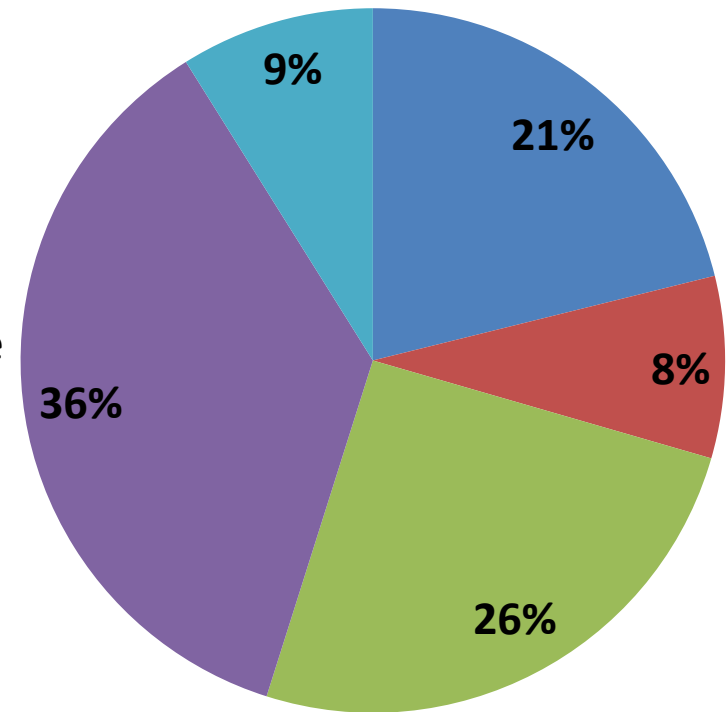


FY 13: Total Budget: \$34,366,566

FY 14: Total Revenue: \$41,013,917



- UH Budget
- MBF Budget
- Clinical Practice
- Directs
- Indirects



*Excludes Public Health Research Institute

*Excludes Occupational Medicine



Department of Medicine 2014 Student Educational Programs



Disease Process Prevention and Therapeutics: David Cennimo, MD - Course Director

Advanced Physical Diagnosis: Alex Tentler, MD – Co-Course Director

Third and Fourth Year Medicine Rotations: Alla Fayngersh, MD - Course Director

Clinical Integration Liaison for Pre-clerkship Curriculum: Alex Tentler, MD - Director

Careers in Medicine: Christine Gerula, MD – Director, Assistant Dean. Mentors - Ameer Patrawalla, MD Anabella Moharita, MD and David Cennimo, MD



Department of Medicine 2014 Education



Medical Students

- Clerkship students now receive medical subspecialty inpatient experience
- Improved student didactic curriculum
 - Improvement in NBME Shelf Scores (avg score 78.4, now above the national average)
- 44 NJMS students matched to IM or Med/Peds
- 14 NJMS students matched at NJMS Programs
 - 4 Categorical, 2 Med/Peds,
 - 8 Prelims

AAMC Medical School Graduation Questionnaire (GQ) Internal Medicine Clerkship (Data 2013-14)

Response	Agree/Strongly Agree NJMS	Agree/Strongly Agree All Schools
Faculty provided effective teaching	95.1	92.8
Residents provided effective teaching	90.1	92.8
Clear learning objectives	95.8%	93.3%
Assessed against objectives	92.9%	84.6%
Variety of patients with different medical conditions	97.9%	95.3%
Observed: History	85.3%	91.5%
Observed: Physical exam	91.2%	92.8%



Department of Medicine 2014 Residency Program



Resident Recruitment: 3,598 applicants (record high)

Residency & Fellowship Programs

- New resident rotation focusing on **Community Outreach & Simulation Training (COST)**
- ACP Medicine Weekly Curriculum Program
- Outpatient Medicine:
 - New Outpatient Clinic Schedule (8+2)
 - New Ambulatory Medicine Curriculum
- Core IM and subspecialty programs all maintain full ACGME accreditation
- Milestone Based Evaluation: ABIM/ACGME



Department of Medicine 2014 Resident Scholarship



Regional, National and International Meetings: 116 accepted posters and/or abstracts; 21 papers in peer review journals (all-time program highs).

DOM Research Day: 6 oral presentations delivered, and 84 posters presented

- Oral Presentation: Winner – Atish Mathur, MD, MRCP
- Clinical Case Poster : Winner – Joseph DeRose, DO
- Research Project Poster: Winner – Patrick Buczynski, MD
- People's Choice Poster: Winner: Reenal Patel, MD



Department of Medicine 2013 Faculty Scholarship



Publications

Presentations

Research Programs

Education Programs



HOT TOPICS UPDATE IN INTERNAL MEDICINE

CME/CE Certified Activity

Saturday, September 27, 2014
7:00 am – 4:00 pm

LOCATION:

**Delta Dental Education Conference Center
Rutgers School of Dental Medicine
50 12th Avenue, Newark, NJ 07103**

PROVIDED BY:

**Rutgers New Jersey Medical School
Department of Medicine**

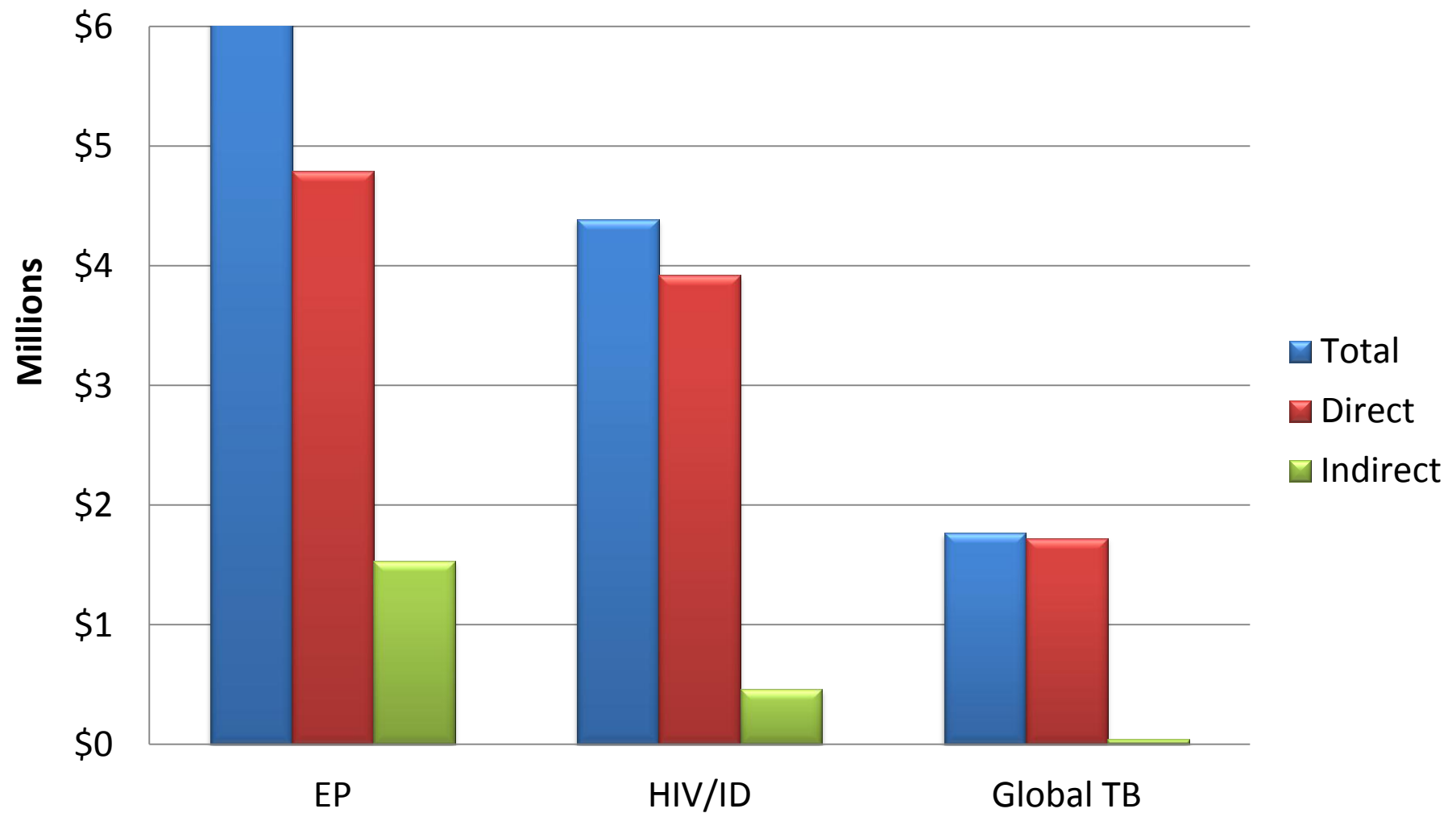
and

**Center for Continuing and Outreach Education
at Rutgers Biomedical and Health Sciences**

RUTGERS



Department of Medicine 2014 Largest Research Funding by Group



Total DOM: \$14,853,655



Department of Medicine 2014 EP Center



David Alland, MD

- Award of Clinical Trial Unit
- Award of Tuberculosis Research Unit.
- Award of CETR grant program (Center of Excellence for Translational Research).
- Identified two entirely new drug-resistance mechanisms in M.tb not seen in any bacteria up until now; Developed new biomarkers that predict TB response to treatment; Identified the first cause of high level fluoroquinolone resistance in TB



Department of Medicine 2014 EP Center



Nancy Connell, PhD

- DARPA ([Defense Advanced Research Projects Agency](#)) award to characterize predatory bacteria as novel therapeutic approach to controlling Gram negative bacterial infections

Padmini Salgame, PhD

- Demonstrated that the absence of matrix metalloproteinase-12 (MMP12) does not affect host resistance against *M. tuberculosis* infection.
- Demonstrated that Toll-like receptor 2 signaling is critical to host resistance against the clinical isolate *M. tuberculosis* HN878.



Department of Medicine 2014 HIV Program Research



Shobha Swaminathan, MD

- Designated clinical research site in new NIH-sponsored sexually-transmitted diseases network
- AIDS Clinical Trials Group Network (ACTG)
- Ryan White Integrated Testing and Primary Care of Persons Living with HIV in Newark, NJ



Department of Medicine 2014 Research



Hepatology – Numerous Clinical Trials in:
Cirrhosis (Including a novel Stem Cell study)
Portal hypertension
Hepatic encephalopathy and
Hepatitis B & C

Hematology – Pranela Rameshwar, PhD (19 BS Publications
/Editorials on Stem Cell and Breast Cancer Biology)
Beta blockade protection of bone marrow following injury: A
critical link between heart rate and immunomodulation: *J Bone
Marrow Res*



Department of Medicine 2014

Heart Failure Research Program



- Study of novel therapies for the treatment of ADHF including: Nitrosyl Donors, Ribose based Compounds, Relaxin and new Natriuretic compounds
- Study of novel therapies for the long term treatment of HF including: Dual Metalloproteinase Inhibitors and Myosin Activators
- Novel therapies for the treatment of pulmonary hypertension including novel oral PDE5 Inhibitors and new delivery technology for chronic administration of inhaled NO
- Study of Wireless, Fully Implantable and Continuous Remote Monitoring of Intra Cardiac Pressure for the Chronic Treatment of Heart Failure



Department of Medicine 2014

Global TB Institute



- Regional Training and Medical Consultation Center (RTMCC) received competitive 5-year renewal
- US Agency for International Development TB Care II Consortium Member
- GTBI in Zimbabwe, Namibia, and Mozambique
- Collaborating with Chemonics International in 5 years USAID Strengthening TB Control in Ukraine (STbCU) project



Department of Medicine 2014 Clinical Service/Research Programs



- The Ambulatory Care Center for Healthcare Outreach, Prevention and Education: The H.O.P.E. Center – HCFNJ Grant: P.I. Natale-Pereira, MD
- SAVE (Screening Access of Value to Essex Women and Men) Breast Cancer Screening Program: P.I. Natale-Pereira, MD
- Sarcoid Center : Interdepartmental Program for the treatment of Sarcoid. Andy Berman MD – Co-Director



Department of Medicine 2012

Current Challenges



- Clinical Challenges
- Recognize, Study and Incorporate New Practice and Financial Models of Medicine. Nationally and Regionally (RFP)
- Maintain the Cutting Edge of Innovation
- Grow and Create New Programs;
- Recruit and Retain Faculty , Trainees and Students.
- Transition from an Academic Medical Center to an Academic Health Center - Driven by Population Based Outcomes
- Recognize that Metrics will be Broadly Applied
- We are Uniquely Situated to Respond



Department of Medicine 2014

