32nd Annual Research Day
Kalamazoo Community Medical Health and Sciences

Tuesday, May 13, 2014
8 a.m. to 3:30 p.m.
The Fetzer Center
Western Michigan University
Kalamazoo, Michigan
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*The complete program including abstracts is available on the Western Michigan University Homer Stryker M.D. School of Medicine website www.med.wmich.edu.

CME CREDIT

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INTRODUCTION

RESEARCH, EDUCATION AND SCHOLARSHIP

On this 32nd anniversary of Research Day, our institutions commemorate their commitment to maintaining the highest quality research and scholarship. Under the leadership and sponsorship of Western Michigan University Homer Stryker M.D. School of Medicine (WMed), we gather today to celebrate the extraordinary work being presented by faculty, residents, and students.

The commitment and participation of WMed faculty and the Kalamazoo scientific community continue with strong support. This year we had an overall submission of 124 abstracts of which 104 were accepted for inclusion in today's program. We appreciate the dedication and hard work of our academic participants.

Each research project was carefully reviewed by a group of seven judges. Several awards are given to the best research studies to celebrate the excellence of research, education, and scholarship that you will witness at this event.

On behalf of WMed, Western Michigan University, and Kalamazoo College, the Kalamazoo Community Medical and Health Sciences Research Committee welcomes you. We hope you enjoy this rewarding day.

Luis H. Toledo, MD, PhD
Chair, 2014 Kalamazoo Community Medical and Health Sciences Research Committee

Members of the 32nd Annual Kalamazoo Community Medical and Health Sciences Research Day Committee:

Leandra Burke
M. Abbigail Childs
Cheryl Dickson, MD
Laura Eller
Sue Jeska
Diane Kiino, PhD (Kalamazoo College)
Shannon Landis (Fetzer Center, WMU)
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Richard Roach, MD
Sandra Sheppard
Lyndsee Smith (Fetzer Center, WMU)
David Spillers
Ruqiya Tareen, MD
David Todd
Luis Toledo, MD, PhD (Chair)
DISCLOSURES

The following oral presenters and group members have no relevant financial relationships to disclose:

Amy Attaway, MD
Shirley Bach
Robert Butkiewicz
Emily Cordes
Ethan Ebner, DO
Andrew Geeslin, MD
Julia Hamilton
Jane Hanneken, MD
Chris Jacob
Ryan Jones, MSU, COM
Nathan Kolderman, MSU, CHM
Catherine Kothari, PhD
Larry Lutwick, MD
Devin Malik, MD
David Prior, MD
Amy Raubenolt, MD
Shaina Riggs, MD
Aaron Roberts, MD
Thomas Rohs, Jr., MD
Andrew Schrotenboer, MSU, COM
Matthew Siuba, DO
Elbert Williams, MSU, CHM

The following oral presenters and group members have financial relationships to disclose:

Mican DeBoer, BSN, RN, CEN – Borgess Foundation
Fetzer Center Floor Plans
SCHEDULE

8:00 - 8:30 am  **Registration**
Refreshments available in Rooms 1035/1045/1055

8:30 - 10:05 am  **Oral Sessions**
Session 1A
Session 1B
Session 1C
Session 1D

10:05 - 11:00 am  **Break**
**Poster Presentations**
**Vendor Display Tables**

11:00 - 11:55 am  **Oral Sessions**
Session 2A
Session 2B
Session 2C
Session 2D

12:00 - 1:15 pm  **Lunch / Keynote Speaker**
2014 Dr. Robert P. Carter Research Lecture
**Making Healthcare as Common as a Coke**
*Eric G. Bing, MD, PhD, MBA*
Director of Global Health, George W. Bush Institute
Professor of Global Health, Southern Methodist University

1:20 - 2:55 pm  **Oral Presentations**
Session 3A
Session 3B
Session 3C
Session 3D

3:00 - 3:30 pm  **Presentation of Awards**
**Hal B. Jenson, MD, MBA**
Founding Dean
Western Michigan University Homer Stryker M.D.
School of Medicine

Kirsch Auditorium
KEYNOTE SPEAKER

The Dr. Robert P. Carter Research Lecture

This is the sixth year of this annual lecture supported by the Board of Western Michigan University Homer Stryker M.D. School of Medicine to celebrate the Research Day activities and to recognize Dr. Carter’s commitment and support of research at our institution.

“Making Healthcare as Common as a Coke®”

Eric G. Bing, MD, PhD, MBA

Director of Global Health
George W. Bush Institute

Professor of Global Health
Southern Methodist University

Millions are dying from diseases that we can easily and inexpensively prevent, diagnose, and treat. Why? Because even though we know exactly what people need, we just can’t get it to them.

In their book, Pharmacy on a Bicycle, Innovative Solutions for Global Health and Poverty, Eric G. Bing and Marc J. Epstein lay out a solution: a new kind of bottom-up health care that is delivered at the source. We need microclinics, micropharmacies, and microentrepreneurs located in the hard-to-reach communities they serve. A new model that “scales down” to train and incentivize all kinds of healthcare providers in their own villages and towns, creates an army of on-site professionals who can prevent tragedy at a fraction of the cost of top-down bureaucratic programs.

Pharmacy on a Bicycle shows how the same forces of innovation and entrepreneurship that work in first-world business cultures can be unleashed to save the lives of millions.

Dr. Bing received his MBA from Duke University’s Fuqua School of Business, his PhD in Epidemiology from the University of California’s School of Public Health, his MD from Harvard Medical School and his BA in Psychology from Dartmouth College.

We welcome Dr. Bing to Research Day and to Western Michigan University Homer Stryker M.D. School of Medicine.
## ORAL PRESENTATIONS

### SESSION 1 A - Emergency Med, Internal Med, Infectious Diseases  
**Putney Lecture Hall**

**Moderator:** David Overton, MD – Emergency Medicine

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| 8:30 – 8:45| **Comparison of Standard CPR Versus CPR with an Intrathoracic Pressure**  
**Regulator Versus Active Compression Decompression CPR Plus an Impedance Threshold Device during Out-of-Hospital Cardiac Arrest.**  
Amy B. Raubenolt, Kevin M. Franklin, William D. Fales |                                                                                               |
| 8:50 – 9:05| **Does Gender Matter? Exploring Mental Health Recovery, Court Health and Legal Outcomes.**  
Catherine L. Kothari, Robert Butkiewicz, Jeff Patton, Emily Williams, Caron Jacobson, Diane Morse, Catherine Cerulli |                                                                                               |
| 9:10 – 9:25| **Benzodiazepines for Prehospital Seizure Management in Michigan.**  
Emily Cordes, Chris Jacob, Lucan Chatterley, Kevin Putman, Benedict Dormitorio, William D. Fales |                                                                                               |
| 9:30 – 9:45| **The Effect of External Beam Radiation upon C4 Cell Levels in HIV-Infected Males with Prostate Cancer.**  
Larry Lutwick, Jana Preis |                                                                                               |
| 9:50 – 10:05| **Compliance of Internal Medicine Clinic with Screening Recommendations for Abdominal Aortic Aneurysm – A Quality Improvement Study.**  
Devin Malik, Sourabh Aggarwal, Yashwant Agrawal, Richard Card, Mark Schauer |                                                                                               |

### SESSION 1 B - Psychiatry, Basic Sciences, Quality Improvement  
**Room 1040/1050**

**Moderator:** Perry Westerman, MD – Psychiatry

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| 8:30 – 8:45| **A Computer Application for Documenting Family Interaction Mapping Interviews.**  
Michael R. Liepman, William G. Naylor, Douglas J. Losey, John A. Kapenga |                                                                                               |
| 8:50 – 9:05| **Developing Curricula to Address Resident Challenges with Difficult Patients in the Psychiatry Outpatient Clinic.**  
David C. Dunstone, Chris A. Karampahtsis, John D. Lindo, Brandon G. Moore, Kathleen A. Gross, Sonia Motin, Maritza E. Lagos, Belal M. Hegazy, Michael R. Liepman, Suzie Suchyta-Haas, Robert D. Strung |                                                                                               |
| 9:10 – 9:25| **A Mental Health Professional Motivational Interviewing Training Study.**  
Justin A. Moore, Scott T. Gaynor |                                                                                               |
| 9:30 – 9:45| **Teaching Quality Improvement: Learn by Doing.**  
Mark Schauer, Aaron Roberts, Shannon McCormack, Christina Lang, Eric Yoder |                                                                                               |
| 9:50 – 10:05| **Postpartum Depression is Not Just a Problem Early On.**  
Catherine L. Kothari, James Wiley, Angie Moe, Michael R. Liepman, R. Shama Tareen, Amy Curtis |                                                                                               |
### SESSION 1 C - Orthopaedics, Basic Sciences  Room 2016/2018

**Moderator:** Dale Rowe, MD – Orthopaedic Surgery

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<td>8:50 – 9:05</td>
<td>Load Transfer in Conventional and Locked Screw-Plate Constructs: A Finite Element Model.</td>
<td>Bipin Patel and Peter A. Gustafson</td>
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<td>9:30 – 9:45</td>
<td>Ability of Surgeons to Optimize Torque During Screw Placement into an Osteoporotic Bone Model and the Effects of Real Time Feedback: Preliminary Results.</td>
<td>David M. Prior, Peter A. Gustafson, Andrew G. Geeslin, Joseph L. Chess</td>
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### SESSION 1 D - Internal Medicine  Room 2020

**Moderator:** Mark Loehrke, MD – Internal Medicine

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<td>8:30 – 8:45</td>
<td>30-Day Readmission Rate for Patients Discharged with Chronic Obstructive Pulmonary Disease (COPD): Analysis of 1,858,618 Admissions. Which Patients Are Most at Risk?</td>
<td>Devin Malik, Sourabh Aggarwal, Andrew Whipple, Yashwant Agrawal</td>
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<td>9:30 – 9:45</td>
<td>Kidney Leaked Urine Into Lung! Urinothorax as a Complication of Percutaneous Nephrolithotomy.</td>
<td>Arani Nanavati, Rachael Harris, Shrey Velani, Susan Bannon</td>
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SESSION 2 A - Internal Medicine, Infectious Diseases  
Putney Lecture Hall

Moderator: Larry Lutwick, MD – Infectious Diseases Clinic

11:00 – 11:15 Compounding to the Rescue: Treatment of Thymidine Kinase Negative Mutants of Herpes Simplex 2 in HIV-Infected Patient. Larry Lutwick, Hector Ojeda, Jana Preiss

11:20 – 11:35 Adrenal Insufficiency as Initial Presentation of Widely Metastatic Stage 4 Cancer. Amy Attaway, Sakshi Vaishnav, Rasha Abdulmassih, Gagan Preet, Ronald Snyder, Lee Bricker

11:40 – 11:55 Rapidly Progressive Intracranial Giant Cell Arteritis: A Rare and Catastrophic Phenomenon. Devin Malik, Sourabh Aggarwal, David Homa, Philip Velderman

SESSION 2 B - Medical Humanities  
Room 1040/1050

Moderator: Donald Greydanus, MD – Pediatric and Adolescent Medicine


11:20 – 11:35 Challenging Issues in Genomic Ethics. Shirley Bach, Elaine Englehardt, Michael Pritchard

11:40 – 11:55 Physician Complicity in Aktion T4; Nazi Germany’s Secret Program to Murder Persons Afflicted with Mental Illness, Serious Chronic Disease and Other ‘Incurable Illnesses’. Robert Brown

SESSION 2 C - Internal Medicine  
Room 2016/2018

Moderator: Mark Schauer, MD – Internal Medicine

11:00 – 11:15 Pott’s Puffy Tumor: A Rare Complication of Frontal Sinusitis. Karthik Kannegolla, Rakshita Chandrashekar, Mark Schauer


SESSION 2 D - Sports Med/Orthopaedics, Ortho, Basic Sciences, Trauma  
Room 2020

Moderator: Robert Baker, MD – Family and Community Medicine

11:00 – 11:15 Inpatient Hospitalization and Intimate Partner Violence: Who Are We Treating? Micam I. DeBoer, Rashmikant U. Kothari, Catherine L. Kothari, Amy J. Koestner, Thomas J. Rohs


### SESSION 3 A - Internal Medicine

**Moderator:** Joanne Baker, DO – Osteopathic Medical Education

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<td>1:20 – 1:35</td>
<td><strong>There is More to that Xanthoma than You Think: An Interesting Presentation of Myeloma.</strong></td>
<td>Devin Malik, Sukhpreet Singh</td>
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<tr>
<td>1:40 – 1:55</td>
<td><strong>Splenic Rupture as a Complication of Diagnostic Colonoscopy.</strong></td>
<td>Arani D. Nanavati, Mark Loehrke</td>
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<td>2:00 – 2:15</td>
<td><strong>Lymphoma Trapped in Blood Vessels.</strong></td>
<td>Gagan P. Garcha, Christine Dugan, Sreenivasa Chandana, Eric Feucht</td>
</tr>
<tr>
<td>2:20 – 2:35</td>
<td><strong>Proton Pump Inhibitor Induced Hyperchromograninemia: Is this Carcinoid?</strong></td>
<td>Kwabena O. Adu-Gyamfi, Marcia K. Liepman</td>
</tr>
<tr>
<td>2:40 – 2:55</td>
<td><strong>Lupus Myocarditis Presenting as ST Elevation Myocardial Infarction.</strong></td>
<td>Devin Malik, Sourabh Aggarwal, Sukhpreet Singh</td>
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### SESSION 3 B - Internal Medicine

**Moderator:** Susan Bannon, MD – Internal Medicine

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<td>1:20 – 1:35</td>
<td><strong>PICC Your Poison: Eustachian Valve Endocarditis in a Patient with SLE.</strong></td>
<td>Anne-Marie Edwards, Abishek Seth, Ifeoluwapo Eleyinafe, Thomas Flynn</td>
</tr>
<tr>
<td>1:40 – 1:55</td>
<td><strong>In-Hospital Mortality and Disposition after Endotracheal Intubation Correlate Strongly with Age and Underlying Cause for Critical Illness: Analysis of 128,224 Intubation Procedures.</strong></td>
<td>Amy Attaway, Sourabh Aggarwal, Shrey Velani, Chintan Shah, Jeffrey Wilt</td>
</tr>
<tr>
<td>2:00 – 2:15</td>
<td><strong>Show Me the Money: Can an Interactive Team-Based Conference be an Effective Tool to Promote Cost Conscious Care.</strong></td>
<td>Ross Driscoll, Amy Attaway, Stephen McGinnis, Shrey Velani, Kristin Harjer, Andrew Whipple, Theotonius Gomes, Christine Honor</td>
</tr>
<tr>
<td>2:20 – 2:35</td>
<td><strong>Procalcitonin as a Valuable Marker to Detect Bacterial Infection in ESRD Patients.</strong></td>
<td>Amy Attaway, Rasha Abdulmassih, Thomas Flynn, Anita Charochak, Matthew Zaccheo</td>
</tr>
<tr>
<td>2:40 – 2:55</td>
<td><strong>Drugs Are Bad: Severe Sprue-like Enteropathy Secondary to Olmesartan.</strong></td>
<td>Amy Attaway, Mirjana Stancic, Richard Roach</td>
</tr>
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</table>
SESSION 3 C - General Surgery, Trauma, Basic Sciences

Moderator:  Saad Shebrain, MD – General Surgery

1:20 – 1:35  High Trauma Service Utilization by Victims and Perpetrators of Partner Violence.  Catherine L. Kothari, Rashmi U. Kothari, Thomas Rohs, Scott Davidson, Carrie Klein, Amy Koestner, Mican DeBoer, Rita Cox

1:40 – 1:55  Cutaneous Metastases as Initial Manifestation of Lung Cancer.  Shaina L. Riggs, Dwight J. Slater, Leandra H. Burke, Lisa A. Miller

2:00 – 2:15  Equine Related Injuries in Southwestern Michigan.  Scott B. Davidson, Paul A. Blostein, Sheri L. Vandenberg, Andrew J. Schotenboer


SESSION 3 D - Family Medicine, Pediatrics, Internal Medicine

Moderator:  Allan Wilke, MD – Family and Community Medicine

1:20 – 1:35  How Did the 2005 USPSTF Recommendations for Abdominal Aortic Aneurysm Screening Affect Mortality?  Sukhpreet Singh, Devin Malik, Sourabh Aggarwal


2:00 – 2:15  Case Report: Critical Hypercalcemia in a Term Newborn with Subcutaneous Fat Necrosis.  Ifeoluwapo Eleyinafe, E. Ethan Ebner

2:20 – 2:35  Massive Thymolipoma Presenting as Abdominal Pain.  Elbert E. Williams, Sreenivasa R. Chandana, Jerry W. Pratt

POSTER PRESENTATIONS

Rooms 1035/1045/1055


5. Effectiveness of Initiating Targeted Hypothermia in Post-Cardiac Arrest Patients by an Air Medical Team. Joshua G. Rookus, Jonathan J Gochnour, Millind R. Chinoy, Sara K. Sturgeon, DeWayne R. Miller, Glenn S. Ekblad

6. Implication of Missed/Near Missed Foreign Body Ingestions: Case Reports and Review of the Literature. Ranti S. Bolaji, Martin Alswang, Jessica McCoy

7. Comparison of Stroke Time Targets for In-Hospital versus Emergency Department Patients. Deborah Lee-Ekblad, Eugene S. Kim, Nan Meyers, Kelly Becker, Milind Chinoy, Jeffrey Wilt


12. Venous Thromboembolism as Initial Presentation of Philadelphia Chromosome Positive ALL. Kunal Agarwal, Neha Gupta, Sonia Haque

13. A Primary Care Perspective on Male Breast Cancer: A Case Report. Susan E. Jevert, Lizabeth S. Giles, Mark G. Tagett


15. Rhabdomyolysis Caused by Hypothyroidism. Neha Gupta, Sukhpreet Singh, Kristi VanDerKolk

16. Breast Cancer Associated with Rearranged During Transfection Gene (RET Proto-Oncogene); A Coincidence or Novel Finding? Sukhpreet Singh, Devin Malik

17. When Decreased Visceral Fat is a Bad Thing; A Case Superior Mesenteric Artery Syndrome. Sukhpreet Singh, Devin Malik

18. Self-reported Sleep Dysfunction and Medical Errors among Medical Residents. Kunal Agarwal, Benedict Dormitorio, Michael Clarke
19. 'Cry of the Cat': Initial Care and Management of the 5P-Neonate. Randi VanOcker, Adrian A. Villarreal


22. You Tube as a Source of Information for Atrial Fibrillation. Rakshita Chandrashekar, Sourabh Aggarwal, Mark Loehrke

23. Beta Blocker Buzz: Carvedilol Causing Visual Disturbance. Rakshita Chandrashekar, Mark Schauer

24. Erdheim-Chester Disease: Rare Presentation of A Rarer Disease. Rakshita Chandrashekar, Shrey Velani, Richard Roach, Vishal Gupta


27. 30-Day Readmission Rate for Patients Discharged with DM with Complication: Analysis of 1,443,601 Admissions. Gagan Preet, Devin Malik, Sourabh Aggarwal

28. Intracranial Colloid Cyst Leading to Sudden Brain Death. Padma V. Chandika, Kristin N. Harjer, Shrey Velani, Sourabh Aggarwal

29. Hepatocellular Carcinoma Contiguous into the Right Atrium. Rakshita Chandrashekar, Karthik Kannegolla, Sreenivasa Chandana

30. A Comparison of Surgical Care Improvement Project (SCIP) Measure Compliance Before and After Prospective Pharmacist and Nurse Interventions. Andrew P. Henderson, Jeanne M. Anderson, Mark P. Herriman, Kaitlyn M. Priniski

31. Left Main Coronary Artery Aneurysm Complicated with Thrombus. Sourabh Aggarwal, Soundos Moualla

32. A Case of Post Surgical Massive Bilateral Chylothoax. Yashwant Agrawal, Sourabh Aggarwal, Gagan Preet, Mark Schauer

33. Correlation between Insurance Status and ICU Outcomes in Critically Ill Patients Requiring Tracheostomy. Glenn G. Carlson, Paul Rigby, Ravikanth Papani, Eric C. Feucht

34. Demographic Parameters in Compliance with Pain Contract. Sourabh Aggarwal, Ravikanth Papani, Mazen Roumia, Susan Bannon

35. Water is Good for Health? Not in all Patients: A Single Center Quality Improvement Prospective Study to Identify Impact of Intensive Patient Education. Sourabh Aggarwal, Jagadeesh Kalavakunta, Vishal Gupta

36. Progressive Multifocal Leukoencephalopathy from JC Virus Infection as a Complication of Natalizumab! Shrey Velani, Sourabh Aggarwal, Arani Nanawati

37. Hematopoietic Cell Transplantation Complicated By Human Herpesvirus-6 Reactivation. Shrey Velani, Sourabh Aggarwal, Arani Nanawati
38. Pericardial Effusion as a Complication of Transcatheter Aortic Valve Replacement. Sourabh Aggarwal, Gagan Preet, Shrey Velani, Arani Nanawati


40. Malignant Degeneration of a Pulmonary Hamartoma into a Chondrosarcoma. Elbert E. Williams, Jerry W. Pratt


42. A Case of Linear IgA Bullous Dermatosis in a Toddler. Geneva A. Sagun, Racquel A. Sanchez, Aaron L. Lane-Davies

43. Effects of Anti-Smoking Legislation on Hospital Admissions for Common Lower Respiratory Illnesses in the Pediatric Population. Megan Sikkema, Geneva Sagun, Alison Agnetta, Tom Melgar, Colleen Dodich

44. Parental Perspectives on Vaccines in Southwest Michigan: Delay, Refusal and Sources of Information. Megan C. Brown, Colleen Dodich


49. Untreated Mania Complicated by Antidepressants. Priya Mahajan, Mark Kanzawa, Michael R. Liepman

50. Toxoplasmosis Infection Presenting as Severe Behavior Disturbances in a Pre-Pubescent Child. John D. Lindo, Ruqiya S. Tareen

51. Cardiac Clearance of Collegiate Athlete Following Surgical Cardiac Correction. Jeffrey P. Levenda, Robert J. Baker
ACKNOWLEDGEMENTS

The Steering Committee for the 32nd Annual Kalamazoo Community Medical and Health Sciences Research Day would like to thank the following WMed professionals who dedicated their time to participate as abstract reviewers, judges, and/or session moderators for today’s event.

Joanne Baker, DO
Director, Osteopathic Medical Education

Robert Baker, MD
Faculty, Department of Family and Community Medicine

Susan Bannon, MD
Medical Director, Department of Medicine

Craig Beam, PhD
Division Director, Epidemiology and Biostatistics
Department of Biomedical Sciences

Joseph Calles, MD
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Chair and Program Director, Department of Emergency Medicine

Philip Pazderka, MD
Associate Program Director, Department of Emergency Medicine

Vinay Reddy, MD
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Richard Roach, MD
Faculty, Department of Medicine

Dale Rowe, MD
Chair and Program Director, Department of Orthopaedic Surgery

Mark Schauer, MD
Medical Director, Department of Medicine

Saad Shebrain, MD
Faculty, Department of Surgery

Ruqiya Tareen, MD
Faculty, Department of Psychiatry

Perry Westerman, MD
Faculty, Department of Psychiatry

Alan Wilke, MD
Chair and Program Director, Department of Family and Community Medicine
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