INNOVATING TO IMPROVE DIAGNOSIS

Diagnostic Error in Medicine
11th Annual International Conference
November 4-6, 2018 | Hyatt Regency New Orleans
TABLE OF CONTENTS

Welcome Messages 3
General Information 4
Continuing Education Information 5
Disclosure Notice 6
Committee Members 7
Networking Events 8
Schedule at a Glance 9
Hyatt Regency New Orleans Map 11
Conference Schedule 12
Keynote Speakers 22
Faculty 23
Oral Abstracts 24
Poster Sessions 28
Exhibit Information 34
Join the SIDM Community 35

INTERESTED IN JOINING THE CAUSE?
Become a part of the SIDM community. Visit www.improvediagnosis.org/membership for information on joining.

CONNECT WITH US

Join the DEM2018 conversation online by following @ImproveDX. Use the hashtag #DEM2018 for your posts.

Stay connected with the healthcare community dedicated to improving diagnosis. Follow “Society to Improve Diagnosis in Medicine” today!

Follow @ImproveDX for the latest in the SIDM community, the only organization dedicated to reducing diagnostic error.

Receive the most up-to-date information on SIDM’s innovations to improve diagnostic error. Visit www.improvediagnosis.org today.

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THANK YOU TO OUR INSTITUTIONAL MEMBERS

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Intermountain Healthcare
University of Florida College of Medicine
WELCOME

A WELCOME FROM THE CONFERENCE CHAIR

On behalf of the Society to Improve Diagnosis in Medicine (SIDM) and the conference Planning Committee, I welcome you to the 11th Annual International Conference on Diagnostic Error in Medicine (DEM). SIDM is the only organization specifically dedicated to reducing diagnostic error, the most harmful and the most overlooked threat to patient safety.

The theme of the conference this year is **Innovating to Improve Diagnosis**, in response to the IOM/NAM recommendation to “develop and deploy approaches to identify, learn from, and reduce diagnostic errors and near misses in clinical practice” (Institute of Medicine/National Academy of Medicine, *Improving Diagnosis in Health Care*, 2015).

Our conference brings together physicians, patients, nurses, healthcare professionals, researchers, institutional leaders and policymakers to showcase and share recent innovations to improve the diagnostic process. While interventions to improve diagnosis are in the very beginning stages, the first wave is underway and has important lessons for all those interested in improving diagnostic safety.

Conference participants will learn about a new Diagnostic Safety Lab; a new Consensus Curriculum of cross-disciplinary education in diagnosis; a SIDM Fellows Program to match expert mentors with physicians, nurses and others wishing to train as diagnostic safety leaders; a SIDM-IHI collaborative that has piloted interventions to improve the diagnostic process at six hospital sites; the activities of the 40+ organizations that joined together in the Coalition to Improve Diagnosis; the technological advances aiding diagnosis including artificial intelligence; a project to train patients as patient safety thought leaders integrated into research teams; and the formation of an expert group to promote the role of nurses in the diagnostic process — and that is just a sampling of the sessions being offered this year.

We are happy that you have joined us in New Orleans and have chosen to contribute to our mission to improve diagnosis in healthcare. We hope you leave with interesting ideas about everyone’s role in improving the diagnostic process and how together we can affect change by implementing new approaches to healthcare. We would like to thank our sponsors and grantors, without whom this conference would not be possible.

Ruth Ryan, RN, BSN, MSW, CPHRM
Chairperson, Diagnostic Error in Medicine International Conference

A MESSAGE FROM THE SIDM PRESIDENT

Welcome and thanks for sharing our passion to improve diagnosis!

This year’s conference marks a milestone for me, and our society — we are transitioning to having an elected president. I have held this office since our founding, and I’m very proud of what’s been accomplished over the past decade:

Our conference has grown and continues to advance our mission. At our first DEM conference in 2008, we had 18 abstracts; this year will have 10 times that number. Over 3,000 individuals have attended our conferences, and we now have thousands of listserv, blog, newsletter and email viewers.

Research is expanding. In 2008, there were four individuals studying diagnostic error and only two of these were funded. Now, there are probably close to 100, and many of these are or will be funded, thanks to AHRQ, the Gordon and Betty Moore Foundation, CRICO, Coverys and others.

The idea that education can help improve diagnosis is taking hold; new courses are emerging; a consensus curriculum has been created; and trainees and their teachers are starting to use the lingo and consider the cognitive nuances of clinical reasoning.

Awareness of diagnostic error is spreading, and this will accelerate thanks to the coordinated efforts of the Coalition to Improve Diagnosis, a SIDM-sponsored voluntary group of now almost 40 major organizations, with outreach to tens of thousands of their members.

Our Society has evolved. We started with all volunteers, and now have 10+ staff, directed by our full-time CEO extraordinaire, Paul Epner. David Newman-Toker will lead as President for the next two years. We are in good hands, we are growing and we are having an impact.

These are major accomplishments, but they are all ‘process’ measures. What we’d really like to see are reductions in the harm associated with diagnostic error, our ultimate goal. This year’s conference will be an opportunity to continue pursuing that objective, and your participation is by far the most effective way to continue realizing progress in that direction. We need your help, and appreciate it.

Thank you for joining this discussion, and in the important work that lies ahead.

Mark Graber, MD, FACP
Founder and President, Society to Improve Diagnosis in Medicine
THE SOCIETY TO IMPROVE
DIAGNOSIS IN MEDICINE

The Society to Improve Diagnosis in Medicine (SIDM) is the only organization focused exclusively on the problem of diagnostic error. Pervasive, yet poorly understood, diagnostic error — wrong diagnosis, missed diagnosis or unnecessarily delayed diagnosis — affects nearly 12 million adults and causes 40,000 to 80,000 deaths annually in the United States alone. SIDM’s vision is to create a world where no patients are harmed by diagnostic error.

SIDM’S STRATEGIC PRIORITIES

AWARENESS & ENGAGEMENT Make improving diagnosis a priority for healthcare.
RESEARCH Increase research and focus on diagnostic outcomes that matter to patients.
EDUCATION Transform education of health professionals to improve diagnosis and develop new leaders in diagnostic quality and safety.
PRACTICE IMPROVEMENT Engage patients, clinicians and healthcare systems to improve current diagnostic performance and reduce harm from diagnostic error.
PATIENT ENGAGEMENT Integrate patients and their families in all diagnostic improvement efforts.

Join SIDM as we bring together all of those working to address one of the most important safety issues in medicine.

CONFERENCE INFORMATION

CONFERENCE OBJECTIVES
Participants should be able to:
- Describe the innovative projects and initiatives that have been launched to improve diagnosis.
- Participate in the development of research, education, technology and practice improvement strategies that center on teamwork to promote diagnostic excellence.
- Develop and foster methods of collaboration and teamwork in the diagnostic process between patients, physicians, nurses, other healthcare professionals and institutional leadership.
- Participate in building an interactive and international community of diagnostic safety experts and advocates from the entire healthcare spectrum.

CONFERENCE EVALUATION
Your feedback is essential for planning future Diagnostic Error in Medicine Conferences. Please complete the online daily and overall evaluation surveys that will be made available each day of the conference. Receiving CME/CNE and MOC credit is contingent upon completion of the evaluation surveys.

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NOTICE ABOUT ACCURACY OF CONTENT
While these programs are designed to provide accurate information regarding the subject matter presented, the views, opinions and recommendations expressed are those of the authors and speakers, not SIDM. By producing publications and sponsorship of this event, SIDM does not guarantee the accuracy of the information disseminated and is not engaged in rendering professional advice.

SPECIAL THANKS

Funding for this conference was made possible in part by 1R13HS025630-01 from the Agency for Healthcare Research and Quality (AHRQ). The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

On Saturday, November 3, DEM2018 hosted an invitation-only Quality Improvement Summit. The QI Summit was made possible with generous funding from the Gordon and Betty Moore Foundation.
CONTINUING EDUCATION INFORMATION

ACCREDITATION AND CREDIT DESIGNATION STATEMENT
This activity has been planned and implemented in accordance with requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) and the American Nurses Credentialing Center (ANCC) through the joint providership of LAMMICO and the Society to Improve Diagnosis in Medicine (SIDM). LAMMICO is accredited by the ACCME to provide continuing medical education for physicians. LAMMICO is also accredited as a provider of continuing nursing education by the ANCC’s Commission on Accreditation.

LAMMICO designates this live activity for a maximum of 22.5 AMA PRA Category 1 Credits™ or a maximum of 22.5 continuing nursing education credits. Physicians and nurses should claim only the credit commensurate with the extent of their participation in the activity.

CONTINUING MEDICAL AND NURSING EDUCATION DISCLOSURE POLICY
LAMMICO requires planners, speakers, faculty and all those who influence the content of a CME/CNE activity to disclose any financial relationships they have with commercial interests that are relevant to the CME/CNE activity. The disclosures shall be reviewed for any conflict of interest and subjected to a mechanism for resolution of conflict of interest. A disclosure statement of relevant financial relationships is available on page 6 of this program guide.

MOC APPROVED
Through the American Board of Medical Specialties (“ABMS”) ongoing commitment to increase access to practice relevant Maintenance of Certification (“MOC”) Activities through the ABMS Continuing Certification Directory, the Diagnostic Error in Medicine Conference has met the requirements as an MOC Part II CME Activity (apply toward general CME requirement) for up to 22.5 MOC points for the following ABMS Member Boards: Allergy and Immunology, Family Medicine, Nuclear Medicine, Physical Medicine and Rehabilitation, Preventive Medicine, Psychiatry and Neurology, Radiology, Thoracic Surgery, and Urology.

Note: If a Member Board has not deemed this activity for MOC approval as an accredited CME/CNE activity, this activity may count toward an ABMS Member Board’s general CME/CNE requirement. Please refer directly to your Member Board’s MOC Part II Lifelong Learning and Self-Assessment Program Requirements.

Anesthesiology, Internal Medicine, Pediatrics and Pathology: Successful completion of this CME/CNE activity, which includes participation in the activity, with individual assessments of the participant and feedback to the participant, enables the participant to earn up to 22.5 MOC points in the ABA, ABIM, ABP and ABPath’s Maintenance of Certification (MOC) program. It is the CME activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting MOC credit.

ABIM, ABA, ABPath and ABP MOC points can only be submitted if the participant provides his/her member number and date of birth to this provider on the evaluation.

PATIENTS INCLUDED MEETING
DEM2018 is a self-accredited Patients Included Meeting. The conference is committed to upholding the values of Patients Included by incorporating the experience of patients as experts in living with their condition while ensuring they are neither excluded nor exploited.

DON’T FORGET: SET YOUR CLOCKS BACK
Daylight Saving Time will end at 2:00 a.m. on Sunday, November 4. Don’t forget to set your clocks back one hour before you go to bed on Saturday, November 3.
CME Disclosure Policy: LAMMICO/Medical Interactive requires planners, speakers, faculty and all those who influence the content of a CME/CNE activity to disclose any financial relationships they have with commercial interests that are relevant to the activity. The disclosures were reviewed for any conflict of interest and subject to a mechanism for resolution of conflict of interest. This statement of relevant financial relationships is being presented to the audience in their attendance documents prior to the activities.

The following speakers, moderators and planners have no relevant relationships to disclose:
Armstrong, C. Michael
Bard, Amber
Barish, Peter
Berg, Paul
Braun, Pam
Brady, Jeff
Bruno, Michael
Cohen, Elizabeth
Cosby, Karen
Crock, Carmel
Crowe, Virginia
Cusanza, Sharon
Dhalwal, Gurpreet
Dusenberg, Maya
El-Kareh, Robert
Giardina, Traber
Gleason, Kelly
Graber, Mark
Greengen, Penny
Harkless, Gene
Hanscom, Robert
Haskell, Helen
Jones, Rebecca
Kanter, Michael
Keohan, Carol
Krupinski, Elizabeth
Kwan, Janice
Laposata, Michael
Manesh, Reza
Maude, Jason
Meyer, Ashley
Mosher, Timothy
Nassery, Najila
Newman-Toker, David
Olson, Andrew
Opelka, Frank
Papier, Art
Patel, Hetal
Perry, Michael
Peterson, Susan
Powell, Melanie
Prashant, Mahajan
Raffel, Katie
Reynolds, Catherine
Rubenstein, Jack
Ruggiero, William
Rusz, Diana
Ryan, Ruth
Salvador, Doug
Sanders, Lisa
Saria, Suchi
Sato, Luke
Schiff, Gordon
Segal, Dana
Singh, Hardeep
Sheridan, Sue
Skeff, Kelley
Slass, Lorie
Torretti, Dennis
Trowbridge, Bob
Tucker, Leslie
Upadhyay, Divvy
Whalen, Madeleine
Wijesekera, Thilan
Wong, Jay
Yaghi, Omar
Zimmer, Karen
Zwaan, Laura
Godil, Sara
Gold, Daniel
Gonzalez, Victoria
Grubenhoff, Joseph
Gunsolus, Brandy
Gupta, Ashwin
Ham, Robert
Harada, Taku
Hassoon, Ahmed
Hefti, Nousha
Henry, Katharine
Howard-Anderson, Jessica
Imamura, Megumi
Isbell, Linda
Ishiguro, Akira
Johnson, Mark
Kang, Seok Hoon
Kanj, Amjad
Kanter, Michael
Kantor, Molly
Kathi, Pradeep
Kawashigashi, Teiko
Keita, Maningbe
Kimura, Tomohiko
Kitagawa, Izumi
Kotwal, Susrutha
Krowl, Lauren
Liberman, Ava
Litman, Kenny
Lubin, Ira
Mahajan, Prashant
Mathews, Benji
Matsumoto, Tomohiro
Matulis, John
Meyer, Dan
McCurry, Dustin
Meyer, Ashley
Miller, Alexa
Miller, Matthew
Miyagami, Taiju
Monteiro, Sandra
Mooney, Laurin
Mosher, Tim
Muganlinskaya, Nargiz
Murthy, Vivek
Nadimpalli, Gita
Nakano, Koichiro
Nassery, Najila
Neutze, Janet
Newman-Toker, David
Nishinobu, Toshihiro
Ono, Ryohei
Papa, Frank
Peterson, Susan
Pi, Hongyang
Pujara, Miheer
Qamar, Zarmeen
Rabeneck, Demi
Riveros, Toni
Sakamoto, Tetsu
Schaye, Verity
Schifeling, Christopher
Schwartz, Lisa
Senathirajah, Yalini
Seserinac, Jasna
Shafe, Grant
Shahid, Umber
Siegel, Dana
Simonson, Michael
Smith, Sidney
Smith, Brent
Sollemanni, Hossein
Sommers, Lucia
Stunkel, Leanne
Suzuki, Tomoharu
Tabaja, Hussam
Tabor, Peter
Takahashi, Hiromizu
Tobe, Shunichi
Ueberoth, Benjamin
Unoki, Yuto
Upadhyay, Divvy
Wadehra, Anshu
Warner, Dane
Watari, Takashi
Wojcik, Rachel
Yabuki, Taku
Yao, Robert
Yokose, Masashi
Zwaan, Laura

LAMMICO/Medical Interactive, the CME/CNE provider, has reviewed the relationships with commercial interests companies below for potential conflict of interest and all conflicts of interest were resolved.

• Paul Epner, a moderator/speaker, disclosed that he serves on the Board of Directors for Silicon Biodevices.
• Saul Weingart, a speaker, disclosed that he has a research grant through Optum Labs.
• Robert Wachtler, a speaker, disclosed that he is a consultant for PatientSafe Solutions, EarlySense, Smart Patients, Amino.com, and Twine.
• Peggy Zuckerman, a speaker, disclosed that she is a consultant with Roche and has stock in Gilead.
COMMITTEE MEMBERS

PLANNING COMMITTEE MEMBERS

Ruth Ryan, RN, BSN, MSW, CPHRM  
Chair, Diagnostic Error in Medicine International Conference, Medical Writer, RiskWriter LLC

Jeff Brady, MD, MPH  
Director, Center for Quality Improvement and Patient Safety, Agency for Healthcare Research and Quality

Sharon Cusanza, MSN, RN, NEA-BC  
LAMMICO/Medical Interactive, Senior RM Education Specialist

Robert El-Kareh MD, MPH, MS  
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Helen Haskell, MA  
President, Mothers Against Medical Error

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Rebecca Jones, MBA, BSN, RN, CPHRM, CPPS  
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Art Papier, MD  
CEO, VisualDx

Susan Peterson, MD  
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Dana Siegal, RN, CPHRM, CPPS  
Director of Patient Safety, CRICO Strategies

Robert Trowbridge, MD, FACP  
Associate Professor of Medicine, Maine Medical Center

Laura Zwaan, PhD  
Assistant Professor, Institute of Medical Education Research Rotterdam, Erasmus MC

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Dana Siegal, RN, CPHRM, CPPS  
Director of Patient Safety, CRICO Strategies

Paul Epner, MBA, MEd  |  Chief Executive Officer  
Society to Improve Diagnosis in Medicine

November 4-6, 2018, Hyatt Regency New Orleans • 7
NETWORKING EVENTS

MEET THE EXPERTS DINNERS

MONDAY, NOVEMBER 5 | 6:15 P.M.

Monday evening’s open schedule provides you with the opportunity to attend dinner with DEM Conference Faculty members at a variety of nearby restaurants. Sign-up sheets are available at Registration. Reservations have been pre-arranged, but meal costs and transportation are at the attendee’s own expense. Groups will meet in the lobby before leaving for their respective restaurants. Sign-up is available on a first-come, first-serve basis.

NETWORKING RECEPTION HONORING MARK GRABER

SUNDAY, NOVEMBER 4 | 5:30 P.M. – 7:00 P.M.

Mark Graber, MD, FACP, has committed his professional life to improving diagnostic quality and safety worldwide. He is a pioneer who has had a ground-breaking impact on patient safety. Mark recognized the significance of diagnostic error, the most harmful and most overlooked threat to patient safety, and is credited with putting diagnostic error on the patient safety map. Mark is the founder of the Society to Improve Diagnosis in Medicine (SIDM) and will transition from his role as the first President of SIDM in November.

In recognition of his many achievements and his impact on the field of diagnostic quality and safety, the Board of Directors of SIDM is pleased to announce the establishment of an annual award, the Mark Graber Diagnostic Quality and Safety Award. In further recognition of his efforts, his unflagging commitment and his substantial contributions, the Board is delighted to announce that the first recipient of this award will be Dr. Graber himself.

Dr. Graber will receive his award at the Diagnostic Error in Medicine 11th Annual International Conference during the evening networking reception, sponsored by Medical Interactive Community and an anonymous donor, on Sunday, November 4th at the Hyatt Regency Hotel in New Orleans – Empire C at 5:30 p.m. Following Dr. Graber’s acceptance of his award, there will be time to network and mingle with colleagues while you enjoy appetizers and a cash bar.

THANK YOU TO OUR NETWORKING RECEPTION SPONSORS:

Medical Interactive Community

An Anonymous Donor
Daylight Saving Time will end at 2:00 a.m. on Sunday, November 4. Don’t forget to set your clocks back one hour before you go to bed on Saturday, November 3.

### SATURDAY, NOVEMBER 3 | PRE-CONFERENCE SESSIONS

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration</td>
<td>Empire Foyer</td>
</tr>
<tr>
<td>1:00 p.m. – 5:00 p.m.</td>
<td>Patient Summit</td>
<td>Strand 11</td>
</tr>
<tr>
<td>2:00 p.m. – 5:00 p.m.</td>
<td>Research Forum</td>
<td>Strand 10</td>
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</tbody>
</table>

### SUNDAY, NOVEMBER 4 | PRE-CONFERENCE COURSES

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration</td>
<td>Empire Foyer</td>
</tr>
<tr>
<td>8:00 a.m. – 11:30 a.m.</td>
<td>Introduction to Diagnostic Error</td>
<td>Empire B</td>
</tr>
<tr>
<td>8:00 a.m. – 11:30 a.m.</td>
<td>Introduction to Research: The Science of Diagnostic Error</td>
<td>Strand 10</td>
</tr>
<tr>
<td>8:00 a.m. – 11:30 a.m.</td>
<td>Integrating Technology and Decision Support into Medical Education</td>
<td>Strand 11</td>
</tr>
<tr>
<td>8:00 a.m. – 11:30 a.m.</td>
<td>A Workshop on Reducing Diagnostic Error in Clinical Settings</td>
<td>Strand 12</td>
</tr>
<tr>
<td>11:30 a.m. – 12:30 p.m.</td>
<td>Lunch on own - available for purchase at 8 Block Addendum on 3rd floor</td>
<td></td>
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</tbody>
</table>

### SUNDAY, NOVEMBER 4 | DAY ONE

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>12:30 p.m. – 12:45 p.m.</td>
<td>Opening Remarks</td>
<td>Empire B</td>
</tr>
<tr>
<td>12:45 p.m. – 1:45 p.m.</td>
<td>1.00 CME/CNE - KEYNOTE PRESENTATION: KELLEY SKEFF, MD, PHD, MACP</td>
<td>Empire B</td>
</tr>
<tr>
<td>1:45 p.m. – 2:30 p.m.</td>
<td>0.75 CME/CNE - Improving Diagnosis by Improving Education: A New Interprofessional Consensus Curriculum</td>
<td>Empire B</td>
</tr>
<tr>
<td>2:30 p.m. – 2:45 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>2:45 p.m. – 4:15 p.m.</td>
<td>1.50 CME/CNE - Current Performance Improvement (PI) Strategies: The SIDM/IHI Collaborative</td>
<td>Empire B</td>
</tr>
<tr>
<td>4:15 p.m. – 5:45 p.m.</td>
<td>1.50 CME/CNE - Poster Session, Part 1: Research and Clinical Vignettes</td>
<td>Empire D</td>
</tr>
<tr>
<td>5:30 p.m. – 7:00 p.m.</td>
<td>Reception - sponsored by Medical Interactive Community and an anonymous donor</td>
<td>Empire C</td>
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### MONDAY, NOVEMBER 5 | DAY TWO

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00 a.m. – 8:00 a.m.</td>
<td>0.75 CME/CNE - Poster Session, Part 2: Education Innovation, Practice Improvement and Clinical Vignettes</td>
<td>Empire D</td>
</tr>
<tr>
<td>8:00 a.m. – 5:00 p.m.</td>
<td>Registration</td>
<td>Empire Foyer</td>
</tr>
<tr>
<td>8:00 a.m. – 8:20 a.m.</td>
<td>Opening Remarks</td>
<td>Empire B</td>
</tr>
<tr>
<td>8:20 a.m. – 9:00 a.m.</td>
<td>Patients: The Power of Partnerships</td>
<td>Empire B</td>
</tr>
<tr>
<td>9:00 a.m. – 10:00 a.m.</td>
<td>1.00 CME/CNE - KEYNOTE PRESENTATION: ROBERT WACHTER, MD</td>
<td>Empire B</td>
</tr>
<tr>
<td>10:00 a.m. – 10:15 a.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:15 a.m. – 10:30 a.m.</td>
<td>0.25 CME/CNE - Remembering Larry Weed</td>
<td>Empire B</td>
</tr>
<tr>
<td>10:30 a.m. – 12:00 p.m.</td>
<td>1.50 CME/CNE - Coalition in Action: Increasing Awareness, Advocacy and Driving Change</td>
<td>Empire B</td>
</tr>
<tr>
<td>12:00 p.m. – 1:00 p.m.</td>
<td>Lunch provided on-site</td>
<td>Empire C &amp; D</td>
</tr>
<tr>
<td>12:00 p.m. – 1:00 p.m.</td>
<td>Education Committee Showcase - All are welcome to attend</td>
<td>Empire B</td>
</tr>
<tr>
<td>1:00 p.m. – 2:00 p.m.</td>
<td>1.00 CME/CNE - Machine Learning and Artificial Intelligence in Medicine</td>
<td>Empire B</td>
</tr>
<tr>
<td>2:00 p.m. – 3:00 p.m.</td>
<td>1.00 CME/CNE - Clinical Problem-Solving</td>
<td>Empire B</td>
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### MONDAY, NOVEMBER 5 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>3:00 p.m. – 3:15 p.m.</td>
<td>Break</td>
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</tbody>
</table>

**CONCURRENT SESSIONS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:15 p.m. – 4:15 p.m.</td>
<td>1.00 CME/CNE  The Use of Big Data in Improving Diagnosis  Strand 10  Oral Abstracts: Research and Education  Strand 11  How to Balance Preventing Diagnostic Error with Need for Conservative Diagnosis: 10 Principles  Strand 12  Building a Learning Health System to Improve Diagnostic Safety: Setting Sail in Uncharted Waters  Empire B</td>
</tr>
<tr>
<td>4:15 p.m. – 5:15 p.m.</td>
<td>1.00 CME/CNE  The Use of Big Data in Improving Diagnosis  Strand 10  Oral Abstracts: Practice Improvement  Strand 11  How to Balance Preventing Diagnostic Error with Need for Conservative Diagnosis: 10 Principles  Strand 12  Building a Learning Health System to Improve Diagnostic Safety: Setting Sail in Uncharted Waters  Empire B</td>
</tr>
<tr>
<td>6:15 p.m. – 9:00 p.m.</td>
<td>Meet the Experts Dinners <em>(Offered at various off-site locations at your own expense. Groups will meet in lobby before leaving for their respective restaurants.)</em></td>
</tr>
</tbody>
</table>

### TUESDAY, NOVEMBER 6 | DAY THREE

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 8:00 a.m.</td>
<td>Light breakfast provided on-site  Empire Foyer</td>
</tr>
<tr>
<td>7:00 a.m. – 8:00 a.m.</td>
<td>Improving Diagnosis by Improving Education – Let’s Try This Out!  Strand 12</td>
</tr>
<tr>
<td>8:00 a.m. – 5:00 p.m.</td>
<td>Registration  Empire Foyer</td>
</tr>
<tr>
<td>8:00 a.m. – 8:15 a.m.</td>
<td>Opening Remarks  Empire B</td>
</tr>
<tr>
<td>8:15 a.m. – 9:00 a.m.</td>
<td>0.75 CME/CNE  KEYNOTE PRESENTATION: C. MICHAEL ARMSTRONG  The Patient Story, Changing Institutional Culture  Empire B</td>
</tr>
<tr>
<td>9:00 a.m. – 10:00 a.m.</td>
<td>1.00 CME/CNE  How Gender Bias Contributes to Diagnostic Delay and Error for Women  Empire B</td>
</tr>
<tr>
<td>10:00 a.m. – 10:15 a.m.</td>
<td>Break</td>
</tr>
<tr>
<td>10:15 a.m. – 11:45 a.m.</td>
<td>1.50 CME/CNE  Oral Abstracts: Best of 2018  Empire B</td>
</tr>
<tr>
<td>11:45 a.m. – 12:45 p.m.</td>
<td>Lunch provided on-site  Empire C &amp; D</td>
</tr>
<tr>
<td>11:45 a.m. – 12:45 p.m.</td>
<td>SIDM Annual Business Meeting <em>(all are welcome to attend)</em>  Empire B</td>
</tr>
</tbody>
</table>

**CONCURRENT SESSIONS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:45 p.m. – 2:00 p.m.</td>
<td>1.25 CME/CNE  The Legal &amp; Practical Case for Meaningfully Including Nurses in the Diagnostic Process  Strand 10  Strange Bedfellows: Partnering with your Professional Liability Insurers for Diagnostic Safety  Strand 11  Diagnostic Error in the Post-Surgical Environment: A Second Look at the Lewis Blackman Story  Empire B  SIDM Fellows Present: Latest and Greatest in the Diagnostic Error Literatures  Strand 12</td>
</tr>
<tr>
<td>2:00 p.m. – 2:15 p.m.</td>
<td>Break</td>
</tr>
<tr>
<td>2:15 p.m. – 2:30 p.m.</td>
<td>Presentation of Awards for Best Oral and Poster Abstracts  Empire B</td>
</tr>
<tr>
<td>2:30 p.m. – 4:00 p.m.</td>
<td>1.50 CME/CNE  How Did I Not See This? The Impact of Work Environment on Diagnostic Perceptual Errors in Radiology  Empire B</td>
</tr>
<tr>
<td>4:00 p.m. – 4:45 p.m.</td>
<td>0.75 CME/CNE  The Medical Record of the Future: Imagining an Enhanced Provider-Patient Experience  Empire B</td>
</tr>
<tr>
<td>4:45 p.m. – 5:00 p.m.</td>
<td>0.25 CME/CNE  Summary Remarks  Empire B</td>
</tr>
</tbody>
</table>
HYATT REGENCY NEW ORLEANS MAP

All DEM2018 events, sessions and conference activities are held on level two of the Hyatt Regency New Orleans in the rooms referenced in the map below, unless otherwise noted.
PRE-CONFERENCE SESSIONS

Saturday’s Pre-Conference Sessions, the Patient Summit and Research Forum, are free to attend, but advance registration is required. Please visit Registration for more information.

Saturday, November 3

PATIENT SUMMIT
1:00 p.m. – 5:00 p.m.
Strand 11
MODERATORS:
Carmel Crock, MBBS, FACEM, BLitt, Royal Victorian Eye and Ear Hospital

SPEAKERS:
Maya Dusenbery, author of Doing Harm: The Truth About How Bad Medicine and Lazy Science Leave Women Dismissed, Misdiagnosed, and Sick and Executive Director in charge of editorial at Feministing.com
Lisa Sanders, MD, FACP, Yale University School of Medicine, author of Every Patient Tells a Story: Medical Mysteries and the Art of Diagnosis
Peggy Zuckerman, MSEd, Peggyrc.com

PANELISTS:
Jeanette Averette, MSN, RN, Metropolitan Chicago Breast Cancer Task Force
Helen Haskell, MA, Mothers Against Medical Error
Lorraine Johnson, JD, MBA, LymeDisease.org
Armando Nahum, Center for Engaging Patients as Partners, Medstar Institute for Quality and Safety
Suzanne Schrandt, JD, Arthritis Foundation
Sue Sheridan, MBA, MIM, DHL, Society to Improve Diagnosis in Medicine

The 2018 Patient Summit will highlight some of the pervasive problems that patients face in getting an accurate and timely diagnosis, including the deep systemic issues that underlie the proportionally higher misdiagnosis of women. The summit will showcase innovative work being done by patients and patient organizations to help prevent missed and delayed diagnosis due to systems and cognitive errors. The summit aims to raise awareness of the magnitude and impact of diagnostic error, share concrete examples of patient engagement in diagnostic improvement efforts, and mobilize others to engage in improving diagnosis.

LEARNING OBJECTIVES
• Raise awareness on diagnostic safety and quality and the ways diagnosis may fail in different populations.
• Showcase exemplary patient driven efforts in research, education, policy and practice improvement to improve the diagnostic process.
• Discuss the role future patient innovation should play in reducing diagnostic error.

RESEARCH FORUM
2:00 p.m. – 5:00 p.m.
Strand 10
MODERATORS:
Robert El-Kareh, MD, MPH, MS, University of California, San Diego
Ashley Meyer, PhD, Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine
Laura Zwaan, PhD, Institute of Medical Education Research Rotterdam, Erasmus MC

This is an interactive discussion highlighting current and planned diagnostic safety projects from our SIDM fellows.

LEARNING OBJECTIVES
• Provide SIDM fellows with feedback on their planned diagnostic safety projects.
• Explain the strengths and weaknesses of different research methodologies.

PRE-CONFERENCE COURSES

There is an additional fee to attend Sunday’s Pre-Conference Courses. Please visit Registration for more information.

Sunday, November 4

INTRODUCTION TO DIAGNOSTIC ERROR
8:00 a.m. – 11:30 a.m.
3.25 CME/CNE
Empire B

MODERATOR AND SPEAKER:
Ashley Meyer, PhD, Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine

SPEAKERS:
Karen Cosby, MD, FACEP, CPPS, Rush Medical College
Mark Graber, MD, FACP, Society to Improve Diagnosis in Medicine
Gordon Schiff, MD, Brigham and Women’s Hospital Center for Patient Safety Research
This session is recommended especially for the first-time attendee. Participants will gain an understanding of diagnostic error, including what it is and how it impacts patients and health systems. Internationally recognized experts in the field will share their knowledge and answer questions.

LEARNING OBJECTIVES

- Describe the problem of diagnostic errors in terms of epidemiology, burden and processes involved.
- Participate in an interactive case-based analysis illustrating the complexity of diagnostic error.
- Differentiate systems – and cognitive – related factors contributing to diagnostic error.
- Implement strategies to reduce diagnostic errors.

INTRODUCTION TO RESEARCH: THE SCIENCE OF DIAGNOSTIC ERROR – FROM STUDY DESIGN TO PUBLICATION
8:00 a.m. – 11:30 a.m.
3.25 CME/CNE
Strand 10

MODERATOR AND SPEAKER:
Laura Zwaan, PhD, Institute of Medical Education Research Rotterdam, Erasmus MC

SPEAKERS:
Traber Giardina, PhD, MSW, Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine
Hardeep Singh, MD, MPH, Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine

The number of studies addressing diagnostic errors is increasing, but studying this remains complex. Studies are often interdisciplinary and a large variety of research methods are being used. In this course, the challenges and pitfalls of studying diagnostic error will be addressed. The strengths and limitations of the most common research methods will be discussed.

LEARNING OBJECTIVES

- Understand the challenges of studying diagnostic errors in medicine.
- Describe strengths and weaknesses of research methods used in diagnostic error research.
- Discuss the importance of multidisciplinary research and triangulation of research findings and methods.
Healthcare systems are continually involved in quality improvement, but rarely directed at diagnostic error. We are early in the development of effective interventions. In this workshop, we will share case studies of what works, hear the evolution of a collaborative that sought to test some of these interventions and, in a highly interactive session, determine strategies for implementing diagnostic error quality improvement in your clinical setting now.

**LEARNING OBJECTIVES**
- Implement interventions for reducing diagnostic error in clinical settings.
- Identify and employ techniques critical to the effective implementation of diagnostic error quality improvement.
- Identify and employ ways to overcome common barriers to quality improvement in the diagnostic quality field.

**CONFERENCE SESSIONS**

**Sunday, November 4**

**OPENING REMARKS**
12:30 p.m. – 12:45 p.m.

*Empire B*

**SPEAKERS:**
Ruth Ryan, RN, BSN, MSW, CPHRM, Medical Writer, RiskWriter LLC
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies

**KEYNOTE PRESENTATION: THE POWER OF THE PATIENT NARRATIVE**
12:45 p.m. – 1:45 p.m.

*1.00 CME/CNE*

*Empire B*

**MODERATOR:**
Robert Trowbridge, MD, FACP, Maine Medical Center/Tufts University School of Medicine

This session will focus on the importance of engaging the patient narrative during healthcare encounters with a special focus on health professions education. Dr. Skeff is a renowned medical educator with a passion for improving how clinicians understand and share patient stories, especially during clinical encounters.

**LEARNING OBJECTIVES**
- Discuss the value of sharing patients’ stories using the paradigm of Chronology of Present Illness.
- Identify challenges for learners in sharing patient stories and identify key strategies for improvement.
- Compare and contrast traditional oral presentation formats and formats aimed at relaying patient narrative.

**IMPROVING DIAGNOSIS BY IMPROVING EDUCATION: A NEW INTERPROFESSIONAL CONSENSUS CURRICULUM**
1:45 p.m. – 2:30 p.m.

*0.75 CME/CNE*

*Empire B*

**MODERATOR AND SPEAKER:**
Andrew Olson, MD, FACP, FAAP, University of Minnesota Medical School

**SPEAKERS:**
Mark Graber, MD, FACP, Society to Improve Diagnosis in Medicine
Gene Elizabeth Harkless, DNSc, APRN, FNP-BC, CNL, FAANP, University of New Hampshire

This session will present the Interprofessional Consensus Curriculum, the work of a Macy-funded international collaboration to improve diagnostic performance through education. The progress of the project to date, and competencies necessary for health professionals to be modern diagnosticians will be presented.

**LEARNING OBJECTIVES**
- Describe challenges to teaching about diagnosis in health professions education.
- Identify key competencies for diagnostic performance in individual, team and system domains.
CURRENT PERFORMANCE IMPROVEMENT (PI) STRATEGIES: THE SIDM/IHI COLLABORATIVE
2:45 p.m. – 4:15 p.m.
1.50 CME/CNE
Empire B
MODERATOR:
Doug Salvador, MD, MPH, Baystate Health
SPEAKERS:
Peter Barish, MD, University of California, San Francisco
Prashant Mahajan, MD, MPH, MBA, University of Michigan
Hetal Patel, PMP, LSBB, MedStar Health
Michael Perry, MD, Nationwide Children’s Hospital
Melanie Powell, MD, MPH, MedStar Health
Katie Raffel, MD, University of California, San Francisco
William Ruggiero, MBA, Northwell
Saul Weingart, MD, MPP, PhD, Tufts University
Jay Wong, MD, Northwell
Omar Yaghi, MD, MPH, Tufts University
The field of diagnostic error is in the early days of translating research into interventions shown to be effective in clinical settings. In this session, six pilot sites involved in the SIDM/IHI collaborative share their experience developing and testing interventions aimed at reducing harm from diagnostic error. The QI teams will discuss lessons learned and results obtained over a nine-month testing period.

LEARNING OBJECTIVES
• Describe new and innovative quality improvement efforts that have been used to reduce diagnostic error.
• Implement strategies for improving diagnosis in clinical settings.
• Learn common challenges, core elements of diagnostic quality testing and key learning from six pilot sites involved in testing dx error interventions.

POSTER SESSION, PART 1: RESEARCH AND CLINICAL VIGNETTES
4:15 p.m. – 5:45 p.m.
1.50 CME/CNE
Empire D
Posters submitted in the Research and Clinical Vignette categories will be available for viewing. See page 28 for a listing of posters.

LEARNING OBJECTIVES
• Describe new and innovative research related to diagnostic error in medicine.
• Discuss cases and causes of diagnostic error directly with authors.

NETWORKING RECEPTION HONORING MARK GRABER
5:30 p.m. – 7:00 p.m.
Empire C
Celebrate Mark Graber, MD, FACP, SIDM co-founder and outgoing President, at a networking reception honoring Dr. Graber’s incredible contributions to the field of diagnostic quality and safety. The reception will provide time to network and mingle with your colleagues while enjoying appetizers and a cash bar.

Sponsored by & an anonymous donor

Monday, November 5
POSTER SESSION, PART 2: EDUCATION INNOVATION, PRACTICE IMPROVEMENT AND CLINICAL VIGNETTES
7:00 a.m. – 8:00 a.m.
0.75 CME/CNE
Empire D
Posters submitted in the Education, Practice Improvement and Clinical Vignette categories will be available for viewing. See page 30 for a listing of posters.

LEARNING OBJECTIVES
• Identify high quality medical education methodologies to improve clinical reasoning and decrease error.
• Identify potential interventions to reduce diagnostic errors.
• Discuss cases and causes of diagnostic error directly with authors.

OPENING REMARKS
8:00 a.m. – 8:20 a.m.
Empire B
SPEAKERS:
Ruth Ryan, RN, BSN, MSW, CPHRM, Medical Writer, RiskWriter LLC
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies

PATIENTS: THE POWER OF PARTNERSHIPS
8:20 a.m. – 9:00 a.m.
Empire B
SPEAKER:
Sue Sheridan, MIM, MBA, DHL, Society to Improve Diagnosis in Medicine
This presentation will highlight the importance of partnering with patients in diagnostic improvement efforts and will introduce SIDM’s “Patients Improving Research in Diagnosis” (PAIRED) project that
is training Patient Partners to participate in designing research to improve diagnosis. The presentation will feature a novel method of mapping patient stories onto the National Academy of Medicine’s (NAM) Diagnostic Process framework that identifies the multiple possible breakdowns in the diagnostic process as well as the resultant “What Ifs” that can inform future research agendas. Learn about research questions and topics that were identified by the group.

KEYNOTE PRESENTATION: THE IMPACT OF TECHNOLOGY ON DIAGNOSIS: THE IMPLICATIONS...OBVIOUS AND NOT
9:00 a.m. – 10:00 a.m.
1.00 CME/CNE
Empire B

MODERATOR:
Paul Epner, MBA, MEd, Society to Improve Diagnosis in Medicine

SPEAKER:
Robert Wachter, MD, Chair, Department of Medicine, University of California, San Francisco, School of Medicine

Dr. Wachter will address the conquest of medicine by digital technology. X-rays on film, handwritten charts, paper prescriptions, stethoscopes — tools that are fast disappearing and being replaced by digital and virtual alternatives. How does this technological revolution affect diagnosis, for better and for worse?

LEARNING OBJECTIVES
• Describe significant trends in technology that will influence the efficacy and safety of diagnosis in medicine.
• Explain the implications of these technology trends on medical education, physician professionalism, and the relationship between clinicians and healthcare organizations.

REMEMBERING LARRY WEED
10:15 a.m. – 10:30 a.m.
0.25 CME/CNE
Empire B

SPEAKER:
Art Papier, MD, VisualDx

Lawrence Weed, founder of the Problem Oriented Medical Record, the SOAP note format and Problem-Knowledge Couplers should be remembered for his lifelong work to improve medicine and diagnosis.

LEARNING OBJECTIVE:
• Relate Lawrence Weed’s key ideas and innovations in medical decision making to the use of computer-based tools.

COALITION IN ACTION: INCREASING AWARENESS, ADVOCACY AND DRIVING CHANGE
10:30 a.m. – 12:00 p.m.
1.50 CME/CNE
Empire B

MODERATOR:
Paul Epner, MBA, MEd, Society to Improve Diagnosis in Medicine

SPEAKERS:
Diana Rusz, MPH, Society to Improve Diagnosis in Medicine
Lorie Slass, MA, Society to Improve Diagnosis in Medicine
Leslie Tucker, Society to Improve Diagnosis in Medicine

The Coalition to Improve Diagnosis was formed just before the publication of the National Academy of Medicine’s landmark report on Improving Diagnosis in Health Care. The coalition is intent on improving diagnosis through collective and individual actions. In this session, we will provide updates on the national awareness and engagement efforts, current and future directions on the quality improvement collective action, and the coalition’s advocacy work.

LEARNING OBJECTIVES
• Employ language skills for discussion of the problem of diagnostic error that promote constructive dialogue.
• Test quality improvement interventions that might be applicable to your system and where further information can be obtained.
• Teach non-healthcare professionals about the need to improve diagnosis and motivate them to take actions in support of diagnostic improvement.

MACHINE LEARNING & ARTIFICIAL INTELLIGENCE IN MEDICINE
1:00 p.m. – 2:00 p.m.
1.00 CME/CNE Credit
Empire B

MODERATOR:
Kelly Gleason, RN, PhD, Johns Hopkins University School of Nursing

SPEAKERS:
Art Papier, MD, VisualDx
Suchi Saria, PhD, Hopkins AI/Machine Learning and Healthcare Lab, Johns Hopkins University

This session will give an overview of potential of machine learning and artificial intelligence to enable faster, more accurate diagnoses. We will present applications in different areas of healthcare where machine learning and artificial intelligence are improving diagnostic medicine. The need for clinicians to take a leading role in artificial intelligence will be discussed.
LEARNING OBJECTIVES

- Identify three benefits of machine learning and artificial intelligence to diagnostic medicine.
- Discuss one real-world application of machine learning and artificial intelligence to improving the speed and accuracy of diagnosis.
- Name a challenge of implementing machine learning and artificial intelligence solutions in clinical practice, and identify a potential solution.

CLINICAL PROBLEM-SOLVING

2:00 p.m. – 3:00 p.m.
1.00 CME/CNE
Empire B
MODERATOR:
Janice Kwan, MD, MPH, University of Toronto
SPEAKERS:
Karen Cosby, MD, FACEP, CPPS, Rush Medical College
Gurpreet Dhaliwal, MD, University of California, San Francisco and San Francisco Veterans Affairs Medical Center
Sara Godil, MD, University of Pittsburgh Medical Center
Andrew Olson, MD, FACP, FAAP, University of Minnesota Medical School

In this session, a clinician analyzes an unknown case to reach a final diagnosis in real time. In the process, the discussant and audience will utilize clinical reasoning strategies and identify sources of diagnostic error, including cognitive, system, and teamwork factors.

LEARNING OBJECTIVES

- Participate in problem solving by a variety of expert approaches to diagnostic reasoning.
- Understand how technology can support the diagnostic process
- Engage with other professionals to generate new insights into improving the diagnostic process.

CONCURRENT SESSION

THE USE OF BIG DATA IN IMPROVING DIAGNOSIS

3:15 p.m. – 4:15 p.m. & 4:15 p.m. – 5:15 p.m.
1.00 CME/CNE
Strand 10
MODERATOR:
Susan Peterson, MD, Johns Hopkins University School of Medicine
SPEAKER:
David Newman-Toker, MD, PhD, Johns Hopkins University School of Medicine

This session will address the big data theme within a framework for tackling diagnostic error, using data to understand risk. This session will focus on leveraging evidence, data and technology to eliminate harms from diagnostic error using dizziness and stroke misdiagnosis as the exemplar.

LEARNING OBJECTIVES

- Summarize public health burden and financial impact of diagnostic error and misdiagnosis related harms, particularly the big three (vascular, infection, cancer).
- Describe how big data can be used to identify harms, model solutions and create learning loops, using acute dizziness and stroke misdiagnosis exemplar.
- Discuss multi-faceted systems-oriented solutions to capitalize on teamwork, training, technology, and tuning.

CONCURRENT SESSION

ORAL ABSTRACTS: CURRENT RESEARCH AND EDUCATIONAL INNOVATIONS

3:15 p.m. – 4:15 p.m.
1.00 CME/CNE
Strand 11
MODERATORS:
Janice Kwan, MD, MPH, University of Toronto
Ashley Meyer, PhD, Center of Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey VA Medical Center & Baylor College of Medicine

Authors selected by peer review will present submitted abstracts of research and educational interventions, followed by questions from the audience. See page 26 for abstract listings.

LEARNING OBJECTIVES

- Describe new and innovative research related to diagnostic error in medicine.
- Identify high quality medical education methodologies to improve clinical reasoning and decrease error.
CONCURRENT SESSION

ORAL ABSTRACTS: CURRENT PRACTICE IMPROVEMENT STRATEGIES
4:15 p.m. – 5:15 p.m.
1.00 CME/CNE
*Strand 11*

**MODERATORS:**
Michael Kanter, MD, The Permanente Federation and The Southern California Permanente Medical Group
Karen Zimmer, MD, MPH, Health IT, Safety and QI Consulting

In this session, speakers present abstracts selected via peer review, which will be followed by questions from the audience. See page 27 for abstract listings.

**LEARNING OBJECTIVES**
- Describe new and innovative quality improvement efforts that have been used to reduce diagnostic error.
- Implement strategies for improving diagnosis in clinical settings.

CONCURRENT SESSION

HOW TO BALANCE PREVENTING DIAGNOSTIC ERROR WITH NEED FOR CONSERVATIVE DIAGNOSIS: 10 PRINCIPLES
3:15 p.m. – 4:15 p.m. & 4:15 p.m. – 5:15 p.m.
1.00 CME/CNE
*Strand 12*

**MODERATOR:**
Penny Greenberg, RN, MS, CPPS, CRICO Strategies

**SPEAKER:**
Gordon Schiff, MD, Brigham and Women’s Hospital Center for Patient Safety Research

Over- and under-diagnosis are two sides of the same coin with the unifying concept being more appropriate and careful diagnosis. This session will present a new paradigm, 10 Principles of Conservative Diagnosis, and address ways to integrate this into training, decision making and healthcare policy.

**LEARNING OBJECTIVES**
- Describe a new more conservative and appropriate diagnosis paradigm prioritizing careful diagnosis and contrast it with the current linear understanding of over- and under-diagnosis.
- Identify and teach to integrate conservative diagnosis into decision-making techniques.

CONCURRENT SESSION

BUILDING A LEARNING HEALTH SYSTEM TO IMPROVE DIAGNOSTIC SAFETY: SETTING SAIL IN UNCHARTED WATERS
3:15 p.m. – 4:15 p.m. & 4:15 p.m. – 5:15 p.m.
1.00 CME/CNE
*Empire B*

**MODERATOR AND SPEAKER:**
Hardeep Singh, MD, MPH, Center for Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine

**SPEAKERS:**
Dennis Torretti, MD, FACEP, Geisinger Medical Center
Divvy Upadhyay, MD, MPH, Safer Dx Researcher in Residence

This interactive session will discuss early lessons from the Safer Dx Learning Lab, a unique partnership that uses multiple sources of data from the health system (risk management, electronic triggers), providers and patients, to identify and analyze missed opportunities in diagnosis. The lab aims to understand how health systems can enhance the safety and accuracy of the diagnostic process and involves a close partnership between multidisciplinary diagnostic safety researchers, a pioneering health system, and a Safer Dx Researcher in Residence based at the health system.

**LEARNING OBJECTIVES**
- Gain real-world knowledge on how healthcare organizations can become learning health systems for improving diagnosis.
- Implement pragmatic approaches to measure and understand diagnostic errors.
- Engage in development of institutional infrastructure and feedback processes to promote individual and organizational learning.

MEET THE EXPERTS DINNERS
6:15 p.m.
*Locations vary*

Attend dinner with DEM Conference Faculty members at a nearby restaurant. Sign-up sheets are available at Registration. Reservations have been pre-arranged, but meal costs and transportation at the attendee’s own expense. Groups will meet in the lobby before leaving for their respective restaurants. Sign-up is available on a first-come, first-serve basis.
Tuesday, November 6

IMPROVING DIAGNOSIS BY IMPROVING EDUCATION – LET’S TRY THIS OUT!
7:00 a.m. – 8:00 a.m.
Strand 12

SPEAKERS:
Mark Graber, MD, FACP, Society to Improve Diagnosis in Medicine
Gene Elizabeth Harkless, DNSc, APRN, FNP-BC, CNL, FAANP, University of New Hampshire
Andrew Olson, MD, FACP, FAAP, University of Minnesota Medical School

This will be an informal discussion with educators interested in piloting suggestions from the Macy Foundation project to improve diagnosis by improving education. What new content should be included? How could physicians, nurses and other health professionals participate in team training for diagnosis? How should this be evaluated?

OPENING REMARKS
8:00 a.m. – 8:15 a.m.
Empire B

SPEAKERS:
Ruth Ryan, RN, BSN, MSW, CPHRM, Medical Writer, RiskWriter LLC
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies

KEYNOTE PRESENTATION: THE PATIENT STORY, CHANGING INSTITUTIONAL CULTURE
8:15 a.m. – 9:00 a.m.
0.75 CME/CNE
Empire B

MODERATOR:
Susan Peterson, MD, Johns Hopkins University School of Medicine

SPEAKER:
C. Michael Armstrong, Former CEO, AT&T, Founder, Armstrong Institute for Patient Safety

The speaker will describe his two-layered personal experience with diagnostic error, how it led him to found a Patient Safety Institute to improve diagnosis and what are the strategies of the Institute.

LEARNING OBJECTIVES
• Identify the sources of diagnostic error in Armstrong’s case.
• Implement one strategy from the Institute in your own practice setting.

HOW GENDER BIAS CONTRIBUTES TO DIAGNOSTIC DELAY AND ERROR FOR WOMEN
9:00 a.m. – 10:00 a.m.
1.00 CME/CNE

MODERATOR:
Sue Sheridan, MBA, MIM, DHL, Society to Improve Diagnosis in Medicine

SPEAKER:
Maya Dusenbery, Author and Editor, Feministing.com

This session will bring together scientific research, interviews with physicians and researchers, and personal stories from women across the country to provide an overview of how sexism in medicine has harmed women and especially minority women. The research community has neglected conditions that disproportionately affect women, and studies often fail to analyze or report sex/gender differences in disease risk factors, clinical presentation or response to treatment. Consequently, less is known about diseases more common in women. Combined with a tendency to place less trust in women’s self-reports of their symptoms, this bias has contributed to disproportionate diagnostic delay and medical error for women.

LEARNING OBJECTIVES
• Describe how women have been excluded from biomedical research and how conditions that disproportionately affect them have received less attention and funding.
• Describe the historical and cultural roots of the tendency to psychologize, normalize or minimize women’s complaints, and they will be able to explain how these factors have led to gender disparities in diagnosis and treatment.

ORAL ABSTRACTS, THE BEST OF 2018
10:15 a.m. – 11:45 a.m.
1.50 CME/CNE

MODERATORS:
Janice Kwan, MD, MPH, University of Toronto
Ashley Meyer, PhD, Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine

Authors of top scoring, peer-reviewed abstracts will present, followed by discussion. See page 24 for a listing of abstracts.

LEARNING OBJECTIVES
• Describe new and innovative research related to diagnostic error in medicine.
• Implement strategies for improving diagnosis in clinical settings.
CONCURRENT SESSION
THE LEGAL & PRACTICAL CASE FOR MEANINGFULLY INCLUDING NURSES IN THE DIAGNOSTIC PROCESS
12:45 p.m. – 2:00 p.m.
1.25 CME/CNE
Strand 10
MODERATOR AND SPEAKER:
Kelly Gleason RN, PhD, Johns Hopkins University School of Nursing
SPEAKERS:
Penny Greenberg, MS, RN, CPPS, CRICO Strategies
Rebecca Jones, MBA, BSN, RN, Pennsylvania Patient Safety Authority
Madeleine Whalen, MSN, MPH, RN, CEN, Johns Hopkins Hospital

Historically, medical diagnosis is not considered the responsibility of the nurse. However, significantly contributing to the diagnostic process is very much in line with the nursing professions’ commitments — both operationally and ethically. There is a pressing need for nurses to take part in efforts addressing diagnostic errors. While there are logistical and sociocultural barriers to nurses participating as full members of the diagnostic team that must be addressed, the potential benefits of their full participation are immense. In this workshop, we address why contributing to diagnosis is a nurse’s responsibility, real-world examples of nurses leading efforts to improve diagnostic accuracy, and what can be done at your institution.

LEARNING OBJECTIVES
• Participants will describe why it is within nurses’ role and scope of practice to contribute to the diagnostic process.
• Participants will identify two methods to facilitate increased nurse participation in diagnosis at their institution.

CONCURRENT SESSION
STRANGE BEDFELLOWS: PARTNERSHIP WITH YOUR PROFESSIONAL LIABILITY INSURERS FOR DIAGNOSTIC SAFETY
12:45 p.m. – 2:00 p.m.
1.25 CME/CNE
Strand 11
MODERATOR AND SPEAKER:
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
SPEAKERS:
Robert Hanscom, JD, Coverys
Carol Keohane, MS, RN, CRICO Strategies

This session will explore IOM recommendations regarding providers partnering with professional liability insurance carriers and captive insurers on opportunities to improve diagnostic performance. The presentation includes case studies from both a captive and commercial insurer including specific collaborative efforts that use data on diagnostic liabilities and an ambulatory initiative focus on improved referral management.

LEARNING OBJECTIVES
• Explain the specific IOM/NAM recommendation as they relate to the MPL industry.
• Describe uses for the data available from professional liability claims to reduce diagnostic error.
• Describe several features of a referral management system permitting the reduction of diagnostic error.

CONCURRENT SESSION
DIAGNOSTIC ERROR IN THE POST-SURGICAL ENVIRONMENT: A SECOND LOOK AT THE LEWIS BLACKMAN STORY
12:45 p.m. – 2:00 p.m.
1.25 CME/CNE
Empire B
SPEAKERS:
Helen Haskell, MA, Mothers Against Medical Error
Frank Opelka, MD, FACS, Quality and Health Policy, American College of Surgeons

Failure to recognize post-operative complications is a significant cause of surgical malpractice claims. This session uses a case study to examine systems and cognitive issues underlying post-surgical misdiagnoses from two perspectives, surgeon and family member, involving failure to diagnose catastrophic complications.

LEARNING OBJECTIVES
• Identify aspects of surgical training and environment that may contribute to misdiagnosis of post-operative complications.
• Promote the role of the patient and family in helping prevent post-surgical diagnostic error.
• Describe ways to create an environment that protects patients and permits surgeons to learn from their mistakes.

CONCURRENT SESSION
SIDM FELLOWS PRESENT: LATEST AND GREATEST IN THE DIAGNOSTIC ERROR LITERATURE
12:45 p.m. – 2:00 p.m.
1.25 CME/CNE
Strand 12
SCHEDULE continued
MODERATOR:
Karen Cosby, MD, FACEP, CPPS, Rush Medical College

FELLOWS:
Paul Bergl, MD, Medical College of Wisconsin
Najila Nassery, MD, MPH, Johns Hopkins University School of Medicine
Thilan Wijesekera, MD, Yale University School of Medicine

This session will discuss the most important published works in improving diagnostic performance over the last year, giving attendees a state-of-the-art look into emerging trends.

LEARNING OBJECTIVES
• Critique important papers in improving diagnosis from the last year.
• Identify challenges in improving diagnostic performance.

PRESENTATION OF AWARDS FOR BEST ORAL AND POSTER ABSTRACTS
2:15 p.m. – 2:30 p.m.
_Empire B_

HOW DID I NOT SEE THAT? THE IMPACT OF WORK ENVIRONMENT ON DIAGNOSTIC PERCEPTUAL ERRORS IN RADIOLOGY
2:30 p.m. – 4:00 p.m.
1.50 CME/CNE
_Empire B_

MODERATOR AND SPEAKER:
Tim Mosher, MD, Penn State University College of Medicine

SPEAKERS:
Michael Bruno, MD, MS, FACR, Penn State Milton S. Hershey Medical Center
Elizabeth Krupinski, PhD, FSIM, FSPIE, FATA, FAIMBE, Emory University
Peggy Zuckerman, MSEd, SmartPatients, LLC

This session will address perception error as a test model for understanding the impact of system factors on cognitive errors. The impact of perception error on diagnostic error in radiology and how system factors influence the risk of perception error will be discussed by panel with audience participation.

LEARNING OBJECTIVES
• Define perception errors.
• Review data on prevalence and patient harm of perception error in radiology.
• Trend data – Have these errors changed over time? If so what are potential contributing system/work environment factors?
• Review the neurocognitive basis for radiology perception.
• Define types of perception errors.
• Identify system factors that have been shown to impact the risk of perception errors.
• Identify potential system factors that could be targets for intervention to reduce perception error.
• Review data on interventions that have been shown effective in reducing perception error in radiology.
• Introduce emerging technologies such as AI that could reduce the risk of perception error.

THE MEDICAL RECORD OF THE FUTURE: IMAGINING ON ENHANCED PROVIDER – PATIENT EXPERIENCE
4:00 p.m. – 4:45 p.m.
0.75 CME/CNE
_Empire B_

MODERATOR:
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies

SPEAKER:
Luke Sato, MD, CRICO Strategies

This session will draw a vivid picture of how the EHR can and should operate in the future with reduced clerical load and better clinical organization for the physician and increased participation by the patient.

LEARNING OBJECTIVES
• Identify three ways the EHR can be re-imagined and to better support and serve clinical needs.
• Describe two ways the EHR can enhance the provider — patient experience.

SUMMARY REMARKS
4:45 p.m. – 5:00 p.m.
0.25 CME/CNE
_Empire B_

SPEAKERS:
Ruth Ryan, RN, BSN, MSW, CPHRM, Medical Writer, RiskWriter LLC
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
KEYNOTE SPEAKERS

C. MICHAEL ARMSTRONG
Former CEO, AT&T, Founder, Armstrong Institute for Patient Safety

Mike Armstrong is the retired Chairman of the Board of Trustees, Johns Hopkins Medicine, Health System Corporation and Hospital, retired Chairman and Director Emeritus of Comcast Corporation, and former Chairman and CEO of AT&T and Hughes Electronics. Prior to these positions, he spent more than three decades with IBM. Beginning as a systems engineer, he rose through the ranks to become Chairman of the Board of the IBM World Trade Corporation.

KELLEY SKEFF, MD, PHD, MACP
Professor in Medicine, Stanford University School of Medicine

Kelley Skeff, MD, PhD, MACP, is the George DeForest Barnett Professor in the Department of Internal Medicine at Stanford University and Co-Director of the Stanford Faculty Development Center for Medical Teachers. Dr. Skeff was the internal medicine residency program director at Stanford for two decades. He received his MD from the University of Colorado and his PhD from the Stanford School of Education. Dr. Skeff’s academic career has focused on methods to assist medical teachers internationally to improve their teaching effectiveness, resulting in the Stanford Faculty Development Center (SFDC).

ROBERT WACHTER, MD
Chair, Department of Medicine, University of California, San Francisco School of Medicine

Robert M. Wachter, MD, is Professor and Chair of the Department of Medicine at the University of California, San Francisco. The department leads the nation in National Institutes of Health grants and is generally ranked as one of the nation’s best.

Dr. Wachter is author of 250 articles and six books and is a frequent contributor to the New York Times and Wall Street Journal. He coined the term “hospitalist” in 1996 and is often considered the “father” of the hospitalist field, the fastest growing specialty in the history of modern medicine. He is past president of the Society of Hospital Medicine and past chair of the American Board of Internal Medicine.

In 2004, he received the John M. Eisenberg Award, the nation’s top honor in patient safety. Twelve times, Modern Healthcare magazine has ranked him as one of the 50 most influential physician-executives in the U.S., and he was No. 1 on the list in 2015. His 2015 book, The Digital Doctor: Hope, Hype and Harm at the Dawn of Medicine’s Computer Age, was a New York Times science bestseller.
FACULTY

Jeanette Averette, MSN, RN, Metropolitan Chicago Breast Cancer Task Force
Amber Bard, MD, University of Chicago Hospitals
Peter Barish, MD, University of California, San Francisco
Paul Bergl, MD, Medical College of Wisconsin
Pamela Braun, BSN, MSN, Health Care Improvement Foundation
Michael Bruno, MS, MD, FACP, Penn State Milton S. Hershey Medical Center
Karen Cosby, MD, FACEP, CPPS, Rush Medical College
Carmel Crock, MBBS, FACEM, BLitt, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, AU
Virginia Hamilton Crowe, RN, BA, MS, EdD, Hamilton Consulting, LLC
Gurpreet Dhaliwal, MD, University of California, San Francisco, San Francisco Veterans Affairs Medical Center
Maya Dusenbery, Feministing.com
Robert El-Kareh, MD, MPH, MS, University of California, San Diego
Paul Epner, MBA, MEd, Society to Improve Diagnosis in Medicine
Traber Giardina, PhD, MSW, Center for Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine
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Sara Godil, MD, University of Pittsburgh Medical Center
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Robert Hanscom, JD, Coverys
Gene Elizabeth Harkless, DNSc, APRN, FNP-BC, CNL, FAANP, University of New Hampshire
Helen Haskell, MA, Mothers Against Medical Error
Lorraine Johnson, JD, MBA, LymeDisease.org
Rebecca Jones, MBA, BSN, RN, CPHRM, CPPS, Pennsylvania Patient Safety Authority
Michael Kanter, MD, The Permanente Federation & The Southern California Permanente Medical Group
Carol Keohane, MS, RN, CRICO Strategies
Elizabeth Krupinski, PhD, FSIM, FSPIE, FATA, FAIMBE, Emory University
Janice Kwan, MD, MPH, University of Toronto
Michael Laposata, MD, PhD, University of Texas Medical Branch-Galveston
Prashant Mahajan, MD, MPH, MBA, University of Michigan
Reza Manesh, MD, Johns Hopkins Hospital
Jason Maude, Isabel Healthcare
Ashley Meyer, PhD, Center for Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey VA Medical Center, Baylor College of Medicine
Timothy Mosher, MD, Penn State University College of Medicine
Armando Nahum, Center for Engaging Patients as Partners, Medstar Institute for Quality and Safety
Najla Nassery, MD, MPH, Johns Hopkins University School of Medicine
David Newman-Toker, MD, PhD, Johns Hopkins University School of Medicine
Andrew Olson, MD, FACP, FAAP, University of Minnesota Medical School
Frank Opelka, MD, FACS, Quality and Health Policy, American College of Surgeons
Art Papier, MD, VisualDx
Hetal Patel, PMP, LSSBB, MedStar Health
Michael Perry, MD, Nationwide Children’s Hospital
Susan Peterson, MD, Johns Hopkins University School of Medicine
Melanie Powell, MD, MPH, MedStar Health
Katie Raffel, MD, University of California, San Francisco
Catherine Reynolds, RN, BSN, MJ, DL, Pennsylvania Patient Safety Authority
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Diana Rusz, MPH, Society to Improve Diagnosis in Medicine
Ruth Ryan, RN, BSN, MSW, CPHRM, Medical Writer, RiskWriter LLC
Doug Salvador, MD, MPH, Baystate Health
Lisa Sanders, MD, FACP, Yale University School of Medicine
Suchi Saria, PhD, Johns Hopkins University
Luke Sato, MD, CRICO/Risk Management Foundation
Gordon Schiff, MD, Brigham and Women’s Hospital Center for Patient Safety Research
Suzanne Schrandt, JD, Arthritis Foundation
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Lorie Slass, MA, Society to Improve Diagnosis in Medicine
Dennis Torretti, MD, FACP, Geisinger Medical Center
Robert Trowbridge, MD, FACP, Maine Medical Center/Tufts University School of Medicine
Leslie Tucker, Society to Improve Diagnosis in Medicine
Divvy Upadhyay, MD, MPH, Safer Dx Researcher-In-Residence
Saul Weingart, MD, MPH, PhD, Tufts University
Madeleine Whalen, MSN, MPH, RN, CEN, Johns Hopkins Hospital
Thilan Wijesekera, MD, Yale University School of Medicine
Jay Wong, MD, Northwell
Omar Yaghi, PhD, Tufts University
Karen Zimmer, MD, MPH, Health IT, Patient Safety and QI Consulting
Peggy Zuckerman, MSEd, SmartPatients, LLC
Implementation of a Diagnostics Consultation Program Reduces Costs and Improves Health Outcomes: Case Studies from a Tertiary Academic Medical Center

B. D. Gunsolus
Augusta University Medical Center, Augusta, GA

Statement of problem: A knowledge and communication gap exists between physicians and the clinical laboratory leading to inappropriate utilization of laboratory testing, inappropriate interpretation of laboratory test results, and incorrect patient diagnosis and treatment.

Description of the intervention or program: Doctorate clinical laboratory science (DCLS) is a new advanced laboratory practitioner specializing in providing physician consultation on all aspects of the clinical laboratory. This practitioner is a member of the interdisciplinary healthcare team and provides guidance in appropriate test utilization, appropriate timing of testing, and interpretation of test results within the clinical context of a specific patient. Consultations were provided by the DCLS practitioner in both patient care rounding teams and in conjunction with pathologists. The initiation of DCLS practitioner consultations were documented to assess improvements in health outcomes and cost reductions in various healthcare service delivery areas.

Findings to date: The impact of consultations will be demonstrated by the discussion of case examples. Details of four cases referred to the DCLS, an unknown cause of hyperkalemia, a drug-resistant tracheal aspirate culture, a hypoglycemia fasting admission, and a case of possible non-accidental trauma in a newborn, will demonstrate both significant direct cost savings as well as improved patient health outcomes. Data collection over a one-year period of DCLS diagnostic consultation resulted in direct cost savings of $697,643.12 relating directly from these consultations. This included cancellation of inappropriate tests, cancellation of inappropriate therapy from incorrect test result interpretation, and reduced patient length of stay from decreased time-to-diagnosis and appropriate treatment.

Lessons learned: These findings predict cost savings and patient health outcome improvements are adequate to justify implementing diagnostic consultation services.

Patients As Partners for Improved Diagnoses: A ‘How to’ Guide

K. Litman¹, M. Hugh¹, L. J. Fahey², S. Becken²

¹Southern California Permanente Medical Group, Pasadena, CA
²Kaiser Permanente, Southern California, Pasadena, CA

Background: Diagnostic error reduction frequently focuses on improving systems from a practitioner/organizational ‘expert’ perspective. The Patient and Family Centered Care movement has shown that patients are ‘experts’ in their own experience and can improve systems to reduce diagnostic errors. However, many diagnostic error reduction researchers are unaware of this great potential resource and how to partner with patients. We will share successful experiences which can be used by researchers and others to bring the patient voice into their diagnostic accuracy work.

Methods: Kaiser Permanente Southern California (KPSC) region and its affiliated Southern California Permanente Medical Group is an integrated healthcare system with 7,000 physicians and 72,000 employees providing healthcare to 4.5 million patients. In July 2017 we began a program to improve diagnostic reliability. Patients were sought for the development of
a variety of patient facing tools to reduce the risk of diagnostic errors. The group reached out to leaders of the KPSC Regional Patient Advisory Council, a group of 18 engaged KPSC patients who volunteer to assist our organization in improving care and safety in collaboration with improvement leaders. This partnership led to the successful development of tools to reduce diagnostic error from a patient perspective, including tools to be used before, during, and after a medical appointment to encourage patients to better partner with their providers to improve diagnostic accuracy. The group also assisted in creating a patient video and other materials to empower patients to better partner with providers to increase successful diagnoses.

Results: According to recent surveys Patient Advisory Council are present in the majority of U.S. medical centers. These are an effective tool to bring patient input to work on diagnostic error reduction. Our efforts benefited from over 150 hours of volunteer patient advisor time resulting in a much more patient centered approach that engages patients and families in improving diagnostic reliability. Feedback from patients was an integral part of our work and informed the creation of educational materials for physicians (to allow them to expect and encourage patient questions) and for patients (to know what questions to ask). We have created several useful tools that will be shared with attendees.

Conclusion: Our existing Patient Advisory Council greatly informed and improved efforts to reduce diagnostic error by bringing engaged patient perspective to this work. Similar successful partnerships are possible at the majority of U.S. medical centers utilizing their existing Patient Advisory Councils and other types of patient engagement programs.

Burden of Serious Misdiagnosis-Related Harms in the United States—Population-Based Estimate Using the “Big Three” (Vascular Events, Infections, and Cancers)


1Johns Hopkins University School of Medicine, Baltimore, MD
2Johns Hopkins University, Baltimore, MD
3Brigham and Women’s Hospital, Boston, MA
4CRICO, Boston, MA
5Massachusetts Eye & Ear Infirmary/Harvard University, Boston, MA
6The Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
7Johns Hopkins University School of Public Health, Baltimore, MD
8Center for Diagnostic Excellence, Armstrong Institute for Patient Safety and Quality, Johns Hopkins University School of Medicine, Baltimore, MD
9CRICO Strategies, Boston, MA

EMBARGOED

Improvements in Team-Based Diagnostic Performance Following Training in the Identification and Use of ‘High Yield’ Signs and Symptoms to Diagnose Serial Cue-Based Case Vignettes

F. J. Papa

University of North Texas, Fort Worth, TX

Purpose/Problem: Research into the cognitive factors contributing to expert/novice performance differences have demonstrated that: 1) experts correctly diagnose a higher percentage of cases than non-experts, despite 2) gathering fewer signs/symptoms (S/S), largely because 3) experts ‘know what S/S to gather.’ That is, the experts’ higher levels of diagnostic accuracy and efficiency are achieved because they know which S/S best differentiate the diseases associated with the problem at hand. Such S/S are called ‘high yield’ findings. This study sought to determine if teams of year two medical students could be taught to identify and utilize high yield S/S, and thereby outperform a cohort, when diagnosing a panel of Acute Chest Pain case vignettes.

Description of program, assessment, or study: The author utilized Dual Processing Theory (DPT) as a framework for developing an instructional methodology by which students would be trained in how to extract high yield S/S from a matrix of conditional probability estimates representing the strength of associations between nine common/important differentials and fifty S/S useful for diagnosing case presentations of Acute Chest Pain. The treatment cohort was trained via this DPT-based instructional methodology while the control cohort received our institution’s traditional approach to the development of team-based diagnostic capabilities. Ten serial cue-based case vignettes were used to assess both cohorts’ diagnostic performance along three diagnostic performance measures.

Outcomes: Diagnostic accuracy: The treatment teams correctly diagnosed 18% more cases (M=63.8, SD=12.6, N=13 teams) than control teams (M=53.9, SD=23.3, N=38 teams). Levene’s test indicated unequal variance (F=7.64, p=0.008), thus degrees of freedom were adjusted from 49 to 39; t(39) one-tailed, p <0.031, Cohen’s d=0.53. Efficiency of diagnostic workup: For cases correctly diagnosed, the treatment group collectively gathered 44% fewer S/S per case (M=7.93, SD=2.80, N=83 cases) than the control group (M=11.38, SD=5.47, N=205); t(286), p=0.001*, Cohen’s d=0.79. Use of high yield signs/symptoms: For cases correctly diagnosed, the treatment group collectively gathered 15% more high yield S/S per case (M=7.93, SD=2.80, N=83 cases) than the control group (M=5.51, SD=14.53, N=205); t(286), p=.001*, Cohen’s d=0.57 * Bonferroni adjusted p values; alpha of p=0.05 was divided by 2 (number of family related trials), with significance established as p =0.025.

Discussion: A DPT based instructional activity enabled teams of year two medical students to exhibit three performance outcomes commonly associated with the development of expertise.

Significance of findings: DPT represents a robust framework for designing and launching instructional activities intended to improve diagnostic capabilities.

User Control of Electronic Health Record Design and Diagnostic Reasoning

Y. Senathirajah1, E. Borycki2, A. Kushniruk2, K. Cato3

1University of Pittsburgh, Pittsburgh, PA
2University of Victoria, Victoria, BC, Canada
3Columbia University School of Nursing, New York, NY

Background: Diagnostic errors and clinical reasoning are known to be affected by the manner of information presentation, including presentation in the electronic health record (EHR). A known cause of cognitive load and potential error is ‘display fragmentation’ – the common problem that the data in an EHR is typically presented by information type, across many different screens, requiring navigation by the user and usually, integration by the user in his/her working memory. Display fragmentation results in related information not being presented together, inducing cognitive load and possibly making it more difficult for the user to make essential connections. EHR design has also been
Learning to diagnose X-rays: Seeing many examples is more effective than receiving extensive feedback on few examples.

L. Zwaan¹, B. Hussain¹, A. Devos¹, W. W. Van den Broek¹, S. Mamede¹, H. Schmidt²
¹Erasmus MC, Rotterdam, Netherlands
²Erasmus University, Rotterdam, Netherlands

Background: Improving the diagnostic skills of medical students is considered as an effective way to reduce diagnostic errors. Many educational strategies have been studied to improve students’ ability to distinguish one disease from another. However, the one strategy that distinguishes experienced physicians—seeing many patients—has not been applied in medical education. In the undergraduate curriculum, generally only few typical examples of diseases are discussed. This study examines whether it would be more effective to practice with many cases while receiving little feedback, compared to few cases with extensive feedback.

Methods: We set up a two-phased experimental study. To study the diagnostic process in a realistic setting while allowing to diagnose many cases, we studied X-ray diagnosis. Two hundred twenty-one first-year medical students were randomly assigned to one of the two conditions (i.e. practice with 46 images with little feedback or 8 images with extensive feedback). See Figure 1. After an introduction, participants practiced with diagnosing two similar looking abnormalities (i.e. either atelectasis versus pleural effusion, or pneumothorax versus skin folds) and images without abnormalities. One week later all participants diagnosed 50 images of abnormalities they practiced with and abnormalities they did not practice with. Additionally, the amount of time they needed to diagnose the images was recorded.

Results: The students who practiced with many images with little feedback performed better in the test phase than the participants who had diagnosed few images with extensive feedback (p<0.05). Additionally, the students who practiced with many cases were significantly faster to diagnose the images in the test phase than the participants who practiced with few cases (p<0.001). There was an overall learning effect regardless of experimental condition, thus students performed better on the abnormalities they practiced with compared to the abnormalities that had not been exposed to in the learning phase (p<0.001).

Conclusion: Being exposed to many cases and therefore many different presentations of abnormalities leads to better performance on new cases of the same abnormality as well as a faster diagnostic process. Exposing medical students to more cases early in medical school may be an effective way to improve their diagnostic skills. Further research is required to show the effect at different levels of expertise and for a larger variety of diseases in the educational module.

ORAL ABSTRACTS OF CURRENT RESEARCH AND EDUCATIONAL INNOVATIONS
MONDAY, NOVEMBER 5 | 3:15 P.M. – 4:15 P.M.
Strand 11
Big Data Dashboards to Measure Misdiagnosis-Related Harms – Visual Analytics to Identify Hospital Crossovers within and across Health Systems in Regional Health Information Exchange Datasets
¹Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
²Johns Hopkins School of Medicine, Baltimore, MD
³Center for Diagnostic Excellence, Armstrong Institute for Patient Safety and Quality, Johns Hopkins University School of Medicine, Baltimore, MD
⁴Johns Hopkins Hospital, Baltimore, MD
⁵Albert Einstein College of Medicine, New York, NY
⁶Johns Hopkins University School of Public Health, Baltimore, MD
⁷Johns Hopkins University School of Medicine, Baltimore, MD

Real-World Virtual Patients: Case-Based Simulation Using Actual History and Physical Exam Data to Improve Diagnosis
S. Kotwal¹, M. Fanai³, A. Bery², R. Omron¹, B. Garibaldi¹, Z. Wang³, D. E. Newman-Toker¹
¹Center for Diagnostic Excellence, Armstrong Institute for Patient Safety and Quality, Johns Hopkins University School of Medicine, Baltimore, MD
²University of Ottawa, Ottawa, ON, Canada
³Johns Hopkins University School of Public Health, Baltimore, MD
An Inquiry into the Early Careers of Master Clinicians

V. K. Murthy1, G. Dhaliwal2, B. O’Brien3
1Johns Hopkins Hospital, Baltimore, MD
2San Francisco VA Medical Center and University of California San Francisco, San Francisco, CA
3University of California San Francisco

What Misdiagnosed Patients Can Tell Us about Types and Origins of Diagnostic Errors

Center for Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX

Direct-to-Patient Technology-Enabled Communication Improves Adherence to Diagnostic Laboratory Testing Regimens for High-Risk Medications

1Kaiser Permanente Colorado, Aurora, CO
2Kaiser Permanente Colorado
3Paul Epner LLC, Evanston, IL
4Kaiser Permanente Northwest
5Centers for Disease Control and Prevention, Atlanta, GA

Early Intervention to Reduce Need for Mechanical Ventilation in Sepsis Patients with Respiratory Failure in the Emergency Department

H. Soleimani1, K. E. Henry1, A. Zhan1, Y. Ahmad1, T. Wang1, N. Rawat1, D. Hager2, D. R. Thiemann2, A. Markowski4, A. Sridharan5, S. Saria6
1Johns Hopkins University, Baltimore, MD
2The Johns Hopkins University, Baltimore, MD
3Armstrong Institute for Patient Safety and Quality
4The Johns Hopkins Medical Institutions, Bethesda, MD
5The Johns Hopkins Medical Institutions, Columbia, MD
6Johns Hopkins School of Public Health

A Novel Tele-Dizzy Consultation Program in the Emergency Department Using Portable Video-Ocugraphy to Improve Peripheral Vestibular and Stroke Diagnosis

1Johns Hopkins Medicine, Baltimore, MD
2Johns Hopkins, Baltimore, MD
3Center for Diagnostic Excellence, Armstrong Institute for Patient Safety and Quality, Johns Hopkins University School of Medicine, Baltimore, MD
4University of Michigan
5Johns Hopkins University, Baltimore, MD
6Johns Hopkins
7Johns Hopkins School of Medicine, Baltimore, MD

Does Limiting Unnecessary Testing Improve the Diagnosis of UTI?

J. Howard-Anderson1, S. Ashraf2, E. Overton2, J. T. Jacob3
1Emory University, Atlanta, GA
2Emory Healthcare
3Emory University
POSTER SESSIONS

POSTER SESSION 1: SCIENTIFIC ABSTRACTS
SUNDAY, NOVEMBER 4 | 4:15 P.M. – 5:45 P.M.

Empire D

1-1. Diagnostic Pitfalls: A New Construct to Understand Diagnosis Errors
S. D. Agarwal, E. Ruan, H. Reyes Nieva and G. D. Schiff

1-2. Emergency Department Diagnostic Accuracy in ACUTE Dizziness and Vertigo: Results from the Avert Logistical PILOT Trial

1-3. Understanding Diagnostic Practices of Physicians Treating Non-Specific Abdominal Pain
V. Bauer, A. Solomonides, K. Kirley, P. Epner and G. Rao

1-4. Frequency of Diagnostic Errors and Associated Risk Factors in the ICU – a Retrospective Cohort Study
P. A. Bergl, A. Taneja, R. El-Kareh, H. Singh and R. S. Nanchal

1-5. Stroke Risk after Diagnosis of “Benign Vertigo” Is Lower in Specialty Care Than General Practice

1-6. A Skill-Based Clinical Reasoning Curriculum for Clerkship-Level Medical Students: A Randomized and Controlled Study
E. Bonifacino, W. Follansbee, A. H. Farkas, M. McNeil and D. DiNardo

J. Brush, R. Dreyer, G. Norman, R. Lamichhane, B. McMichael and H. Krumholz

J. R. Campione, R. E. Mardon and K. M. McDonald

1-9. Piloting Methods to Determine Factors Associated with Diagnostic Error on Admission to a Pediatric Intensive Care Unit (PICU)

1-10. Missed Diagnosis of Pediatric Sepsis: Analysis of a Large Population-Based Sample

1-11. Interruptions to Clinical Reasoning during in-Situ Observations of Medical Students
C. Clancy

1-12. Actual Diagnoses and Patient Outcomes in the Misdiagnosis of Inpatient Opioid Overdose
J. B. Cohen, D. Bruscino, D. Craig, K. Gonzalvo, P. Sahadeo, A. Sandberg, C. Vonnes and D. Wolf

1-13. "Mere Exposure" Bias: Comparing Cognitive Biases Reported in DEM Conferences and the Published Literature
S. Constantine, M. Saijo, U. Nakagawa and M. Imamura

1-14. Discrete Choice Experiment to Assess Variation in Sepsis Definition
J. B. Corboy, D. Woods, and D. Pinto

1-15. The Importance of Diagnostics in Cause of Death Reporting and Mortality Statistics: Alzheimer Disease as a Case Study
L. A. Flagg and R. Anderson

1-16. Utility of Point-of-Care Ultrasound As a Tool for Medical Decision Making in a Resource-Limited Setting
M. Fleshner, A. W. Fujita, D. Bhamidipati, S. Tilstra and T. Bui

1-17. Measuring Diagnostic Errors in Psychiatry through Electronic Medical Record Reviews
T. Fletcher, M. Stanley, M. Kunik, H. Singh, A. Helm and V. Vag hani

J. W. Fox, S. Cohen, R. Ruf and A. Naughton

1-19. Close the Loop: A Pilot Study of Diagnostic Feedback Among Pediatric Physicians
J. W. Fox, S. Cohen, R. Ruf and A. Naughton

1-20. Exploring the Use of Patient Experience Surveys As Indicators of Diagnostic Safety

1-21. Learning from Patient Experiences Related to Diagnostic Errors is Essential for Improving Patient Safety

1-22. Comparison of Pediatrician Comfort Discussing System Versus Diagnostic Errors in Morbidity and Mortality Conference
J. A. Grubenhoff, S. I. Zniel, G. Singhal, T. L. Cifra, R. E. McClead Jr. and H. Singh
<table>
<thead>
<tr>
<th>Paper Number</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>1-23</td>
<td>Understanding Diagnostic Reasoning Using a Case-Based Approach</td>
<td>A. Gupta, M. Quinn, R. Lewis, S. Winter, S. Saint and V. Chopra</td>
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<tr>
<td>1-24</td>
<td>Understanding Systems-Based and Cognitive Contributions to Diagnosis</td>
<td>A. Gupta, M. Harrod, M. Quinn, K. Fowler, S. Saint and V. Chopra</td>
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<td>1-25</td>
<td>Changes in Symptom Sensitivity and Specificity When Other Symptoms Are Already Known: Exceptions to the Simple Application of Bayes’ Theorem.</td>
<td>R. M. Hamm, J. Van Den Ende, and E. Botteau</td>
</tr>
<tr>
<td>1-26</td>
<td>Automatically Identifying Sepsis in Retrospective Data with a Clinical Phenotyping Algorithm</td>
<td>K. E. Henry, H. Soleimani, N. Rawat and S. Saria</td>
</tr>
<tr>
<td>1-27</td>
<td>Influence of Comorbid Depression on Diagnostic Accuracy in Physical Illness: A Randomized Experiment</td>
<td>L. M. Isbell, M. Graber, D. R. Rovenpor, G. Liu and D. J. Pallin</td>
</tr>
<tr>
<td>1-31</td>
<td>Factors of Unexpected Early Readmissions within 7 Days after Prior Discharge at an Acute Care Hospital in Japan</td>
<td>I. Kitagawa, N. Harada, R. Hara, T. Kumagae and J. Branch</td>
</tr>
<tr>
<td>1-32</td>
<td>Leveraging Medical Malpractice Claims to Evaluate Diagnostic Error in Ischemic Stroke Care</td>
<td>A. L. Liberman, J. Skillings, P. Greenberg and D. Siegal</td>
</tr>
<tr>
<td>1-34</td>
<td>Think Globally, Act Locally: Utilizing a Survey of Internal Medicine Provider Perceptions of Diagnostic Error to Inform Future Quality Improvement Efforts</td>
<td>J. C. Matulis III, S. Kok and A. Majka</td>
</tr>
<tr>
<td>1-35</td>
<td>Patients’ Use of an Online Symptom-Checker and Impact on Diagnosis-Related Outcomes</td>
<td>A. N. Meyer, T. Giardina, C. Spitzmueller and H. Singh</td>
</tr>
<tr>
<td>1-43</td>
<td>Clinical Reasoning: How Should We Teach It?</td>
<td>V. Schaye, K. Eliasz, M. Janjigian and D. Stern</td>
</tr>
</tbody>
</table>
1-45. Examining Referral Patterns to Improve Diagnosis of Neuro-Ophthalmologic Conditions.  
L. Stunkel, B. Bruce, D. D. Mackay, N. J. Newman and V. Biousse

1-46. Evaluation of a Mobile Diagnostic Support Tool  
P. Taber, D. Borbolla, F. Dews, H. Kramer, T. Taft, P. Ghani and C. Weir

1-47. Potential Usefulness of Virtual Reality Simulation for Learning Clinical Reasoning in Japan  
T. Watari, Y. Tokuda, M. Owada, H. Kanda, S. Okazaki and K. Onigata

1-48. Malpractice Claims Related to Diagnostic Errors in Japan  

1-49. Debiassing Versus Knowledge Retrieval Checklists to Reduce Diagnostic Error  

1-50. Do Not Miss This Diagnosis: Discitis  
S. M. Ahmed, Z. Qamar, S. Godil and J. Akhtar

1-51. Misdiagnosis of Excited Catatonia in an Adolescent with Autism  
N. Bihani, R. Klisz-Hulbert and D. L. Levine

1-52. The Digital Rectal Examination Still Matters  
A. Elder

1-53. Neurogenic Pulmonary Edema: A Diagnostic Challenge  

1-54. A Case of Missed Diagnosis of Acute Abdomen at Various Levels of Care  
P. R. Kathi, N. Thammineni, S. Mangat and K. Bazzy

1-55. Delay in the Diagnosis of Vasculitis  

1-56. Case of Missed Puerperal Sepsis  
D. Mayer

1-57. Case of Chest Pain and Missed Coronary Artery Laceration  
D. Mayer

1-58. Affective Bias Can Have a Big Effect: A Delayed Diagnosis of Malignant Catatonia  
H. Pi, M. Fleshner and S. Tilstra

1-59. Pyuria, Diagnostic Momentum, and Intra-Abdominal Sepsis in the Elder  
M. Pujara, L. Bettner and J. N. Lessing

1-60. Missed Aortic Root Dissection in a 44-Year-Old Male  
T. Riveros, T. Hedayati and K. Cosby

1-61. Misdiagnosis of an Aortic Dissection  
T. Sakamoto, Y. Harada, S. Kakimoto, H. Yamamoto and T. Shimizu

1-62. Missed Coarctation of the Aorta in a Neonate with Multiple Congenital Abnormalities  
G. J. D. C. Shafer and G. K. Suresh

T. Suzuki and Y. Tokuda

1-64. Ockham’s Razor Is Still Sharp  
S. Tobe, K. Nakano and K. Akazawa

1-65. What Do You Think When You See Hyperamylasemia?  
Y. Unoki

1-66. Does This Antibiotics Truly Effective?  
T. Yabuki, R. Ozawa and Y. Tokuda

1-67. “Common Diseases”  
M. Yokose, Y. Harada and T. Shimizu

POSTER SESSION 2:  
SCIENTIFIC ABSTRACTS
MONDAY, NOVEMBER 5 | 7:00 A.M. – 8:00 A.M.

2-1. Electronic Health Record Data Versus Patient-Reported Data  
POSTER SESSION 2: EDUCATION ABSTRACTS
MONDAY, NOVEMBER 5 | 7:00 A.M. – 8:00 A.M.

Empire D

R. C. Augustin and S. Tilstra

2-3. The Effect of a Multi-Level Curriculum on Use of Clinical Reasoning Terminology in Residents’ Nationally Presented Clinical Abstracts
E. Bonifacino, W. Follansbee, M. McNeil and D. DiNardo

2-4. Assessing Clinical Reasoning in Medical Student Soap Notes: Validating Three Instruments Using Messick’s Criteria
Y. Covin, N. Wick, K. Gavinski, J. Wagner and P. Longo

P. Foster

2-6. Can North Korean Doctors Settle Down South Korea after the Union of the Korean Peninsula?  
S. H. Kang

2-7. Applying Tools of Great Diagnosis to Healthcare Leadership
A. Miller

2-8. S.A.F.E.: A Scaffold Curriculum to Teach Safe, Appropriate, Timely and Value Based Imaging to Medical Students

2-9. Analysis of Radiology Reporting: Where Can Errors be Eliminated?
G. A. Wright, S. Piedra Abusharar, J. A. Holbert, J. Beatty-Chadha, T. J. Mosher and J. A. Neutze

2-10. A Medical Student Elective to Improve Diagnosis in Health Care: Developing Solutions to Reduce Patient Harm
J. A. Neutze, J. Beatty-Chadha and T. J. Mosher

2-11. Improving Feedback Sharing Culture in Radiology
S. H. Lee, J. A. Neutze, T. J. Mosher and J. Beatty-Chadha

2-12. Use of Learning Sciences-Derived Research Frameworks and Methodologies to Analyze the Cognitive Factors Enabling the Diagnosis of a Complex Patient Presentation: A Case Report
F. J. Papa, S. Dar, J. McKenzie and R. Bais

2-13. Partnered (Patients Assigned to Research Teams with Nurses and ER providers to Enhance Diagnosis)

2-14. Thinking Fast and Slow: Training Faculty to Teach Clinical Reasoning
V. Schaye, M. Janjigian, K. Hauck, N. Shapiro, D. Becker, P. Lusk, S. Zabar and A. Dembitzer

2-15. Improving Diagnostic Thinking in Pediatric Residency
J. Seserinac and J. Lau

POSTER SESSION 2: PRACTICE IMPROVEMENT ABSTRACTS
MONDAY, NOVEMBER 5 | 7:00 A.M. – 8:00 A.M.

Empire D

2-16. Cognitive Huddles As Safety Nets to Minimize Risks of Nocturnal Diagnosis in the Emergency Department
C. Crock and H. Singh

2-17. Error Reduction Strategy through Error Analysis
C. Y. DiDonato

L. Glaser, M. Bulley, K. Eller, K. Hendricks and I. Nachamkin

2-19. Two-Physician Case Review to Identify and Characterize Diagnostic Error in Seven-Day Readmissions for General Medical Patients
M. A. Kantor, K. E. Raffel, P. Barish, A. M. Esmaili, H. Lim, F. Xue and S. Ranji

2-20. Integrating Genetic Testing into a Clinical Workflow for Long QT Syndrome: Challenges and Opportunities to Improve the Diagnostic Process
I. M. Lubin, E. R. Lockhart, J. E. Frank, V. Y. See, S. Vashist and C. Greene

2-21. Structured Case Reviews for Organizational Learning about Diagnostic Vulnerabilities: Initial Experiences from Two Medical Centers
B. K. Mathews and R. El-Kareh

2-22. Analysis of Delayed Admissions to an Intensive Care Unit – How Can We Avoid Delayed Admissions to an Intensive Care Unit?
T. Matsumoto, T. Nakanishi, T. Hiroe, S. Watanuki and S. Kosaka
2-23. Get Rid of the Phrase "Speak up" and Improve Outcomes through the Power of Diverse Perspectives!
L. B. Mooney

2-24. Program to Improve Identification of Diagnostic Discrepancies in Preliminary Overnight Radiology Resident Reports on Trauma Patients
T. J. Mosher, M. Bruno, M. Moore and W. Murray

G. Nadimpalli and L. Maragakis

2-26. Teleradiograph Interpretation to Reduce Missed Abnormalities of CT Scans
K. Nakano and K. Akazawa

2-27. How Distracting Are Distractions?
K. M. Lessner, R. Kalayanamitra, R. Wu, J. Beatty-Chadha, J. A. Neutze and T. J. Mosher

2-28. A Comparison of Baws (Brief Alcohol Withdrawal Scale) and Ciwa-Ar to Diagnose the Severity of Alcohol Withdrawal in Hospitalized Medical Patients
L. Schwartz and A. Renson

2-29. Institutional Learning from Diagnostic Safety Events – a Pilot Program
B. Smith, J. Wright, M. Woodruff and E. McKnight

2-30. Delayed Diagnostic Process Related Claim Exposure Solved with Communication Tracking Numbers.
S. Smith

2-31. Learning about Missed Opportunities in Diagnosis from Institutional Risk-Management Data

2-32. Identification and Communication of Uncertain Diagnosis in Hospitalized Children

2-33. Epifinder: Helping to Improve Epilepsy Diagnosis

POSTER SESSION 2: CLINICAL VIGNETTES
MONDAY, NOVEMBER 5 | 7:00 A.M. – 8:00 A.M.
Empire D

2-34. Pain in the Neck
A. Salim, K. Atiq and J. Akhtar

2-35. Superior Vena Cava Syndrome Misdiagnosed As Allergic Reaction
O. Chehab, A. Kanj, H. Tabaja, N. Abdallah and S. El Zein

2-36. Triage-Based Physician Anchoring: How Patient Rooming Decisions May Affect Patient Outcomes
J. B. Corboy

M. Daley

2-38. The Fallacy of “TB Rule-out”: Negative Afb Smear/Culture and Bayesian Reasoning Error
A. M. Esmaili and K. E. Raffel

2-39. Delayed Diagnosis of Meningoencephalitis
K. A. Godil and S. Godil

2-40. The "Patient Zero" Challenge
V. Gonzalez, J. Lu, M. Mycyk, S. Aks and K. Cosby

2-41. A Diagnostic Delay Case of Nonconvulsive Status Epilepticus with Acute Behavioral Changes in Elderly
T. Harada

2-42. Listen to Your Patient, He Is Telling You the Diagnosis: Delayed Legionella Diagnosis in the Setting of a Known Outbreak

2-43. Diagnostic Challenges When Taking Care of Tourists: A Case in Point
M. Imamura, M. Sajo, K. Moroi, U. Nakagawa and S. Constantine

2-44. Vertbral Osteomyelitis Misdiagnosed As Urinary Tract Infection.
A. Ishiguro, S. Miyawaga, S. Nagasaki and I. Kitagawa

2-45. True Diagnosis of Transient Disturbances of Consciousness
T. Kawahigashi, M. Tokura and I. Kitagawa
| 2-46. | An Axillary Schwannoma Mimicking a Malignant Lymphoma – a Case of Anchoring to a Diagnosis?  
I. Kitagawa and J. Branch |
| 2-47. | Anchor Aweigh! A Diagnostic Error Calling for Standardized Chest-Ultrasonography Training for Internal Medicine Residents  
L. E. Krowl and A. S. Dhamoon |
| 2-48. | “out of Sight, out of Mind”: Delayed Diagnosis of a Necrotizing Soft Tissue Infection  
D. McCurry and D. DiNardo |
| 2-49. | Fool Me Twice, Shame on Me: Prescription Errors Causing Adverse Events  
M. J. Miller, K. J. McCollum, N. Hefzi, K. Beydoun, C. Denholm and D. L. Levine |
| 2-50. | Careful Language at Handoffs: Noticing How Labels Impact Thinking  
A. Miller |
T. Miyagami and T. Abe |
| 2-52. | Take a Second Look: Diagnostic Reasoning and the Consequences of Anchoring  
S. Grewal, S. Bano, C. Sittambalam and N. Muganlinskaya |
T. Nishinobu, Y. Harada and T. Shimizu |
| 2-54. | The True Diagnosis of Nonspecific Symptoms Mimicking Aging Process  
R. Ono and I. Kitagawa |
| 2-55. | Missing the Forest for the Trees  
Z. Qamar and J. Akhtar |
| 2-56. | Missing a Beat: The Delayed Diagnosis of the Need for Palliative Care in a Patient with End-Stage Heart Failure  
C. Schifeling and J. N. Lessing |
| 2-57. | Persistent Fever in a Medically Complex Child  
J. Seserinac and J. Lau |
| 2-58. | Diagnostic Errors in Neonatal Intensive Care: A Case Series  
G. J. D. C. Shafer and G. K. Suresh |
| 2-59. | An Adolescent with Acute Anaphylaxis Secondary to Clostridium Difficile  
D. R. Siegel and D. D. Hanba |
| 2-60. | Failing to Consider a Fall: Anchoring on Recent Procedures  
M. G. Simonson |
| 2-61. | Cystocerebral Syndrome: A Confusing Presentation of Encephalopathy.  
H. Tabaja, A. Kanj and D. L. Levine |
| 2-62. | Geography & Sick Contacts: How a Tiered Approach to the Diagnosis of Meningitis Can Save Time, Money and Unnecessary Treatment  
B. E. Uebroth |
| 2-63. | 18 Intubations and 1 Missed Diagnosis  
A. Wadehra, C. Kraus, D. L. Levine and A. R. Peralta |
| 2-64. | No Doubt!! Certainly Pneumothorax!! Diagnostic Error By Intuitive Visual Diagnosis.  
T. Watari, K. Kishimoto, S. Okazaki and K. Onigata |
| 2-65. | Poor Follow-up Leads to a Delay in Diagnosis of Malignant Otitis Externa  
R. Wojcik and D. DiNardo |
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MISSION: The Society to Improve Diagnosis in Medicine catalyzes and leads change to improve diagnosis and eliminate harm from diagnostic error, in partnership with patients, their families, the healthcare community and every interested stakeholder.

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