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Join the SIDM community. Contact info@demconference.org.

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Stay connected with the healthcare community dedicated to improving diagnosis. Visit www.improvediagnosis.org today.

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A Welcome from the Conference Chair

On behalf of the conference planning committee, I welcome you to Boston for the 10th Annual International Conference on Diagnostic Error in Medicine (DEM). This conference is the only meeting specifically devoted to diagnostic error and we are thrilled to have brought together a wide range of experts and stakeholders, including patients, clinicians, nurses, medical administrators, researchers, risk and liability managers, and educators to address this important issue. The conference this year will have a specific focus on the primary recommendation of the landmark report from the Institute of Medicine/National Academies, *Improving Diagnosis in Healthcare*, specifically utilizing more effective teamwork as a means to improve diagnostic safety and reliability.

Teamwork comes in many forms and throughout the conference we hope to emphasize the different aspects of teamwork that can be leveraged to facilitate better diagnosis. We hope to foster improved intra- and interdisciplinary teamwork and to ensure that all members of the team understand both their roles and their unique abilities to contribute to the work of the team. We also hope to stress the importance of including patients and their families as essential and contributory members of the team, working together toward the goal of providing every patient with an accurate and timely diagnosis.

Over the past decade, the Diagnostic Error in Medicine Conference has played a leading role in disseminating and inspiring programs and initiatives designed to decrease the incidence of diagnostic error and mitigate its impact. We are thrilled that you have joined us in Boston and expect you will leave the conference armed with new ways to promote diagnostic excellence and energized to assume a leadership role in improving diagnosis.

This year we would also like to extend a special thanks to the Gordon and Betty Moore Foundation and the Agency for Healthcare Research and Quality for their generous support of the conference. This conference would not be possible without their help and the support of all of our sponsors and grantors.

---

Robert Trowbridge, MD  
Chairman, Diagnostic Error in Medicine  
International Conference, Associate Professor of Medicine, Tufts University School of Medicine, Maine Medical Center

A Message from the SIDM President

Welcome and thanks for sharing our interest in improving diagnosis. This is a special year for us – we are celebrating our 10th conference, a real milestone for our young organization.

At our first conference in 2008, we counted on one hand the number of research investigators in our field, and the number of participating clinicians and patients wasn’t much larger. Although we dreamed about raising awareness around this issue, we were very much at the starting gate. Now, ten years later, we can look back at a remarkable decade of progress. We have a Society to Improve Diagnosis in Medicine (SIDM), a dedicated journal (DIAGNOSIS), and a growing community with representatives from every stakeholder group interested and engaged in addressing the problem of diagnostic error.

The National Academies (formerly the IOM) sponsored a special Implementation Workshop in July to discuss progress since issuing its landmark report in 2015, *Improving Diagnosis in Health Care*. Although none of the 8 recommendations in that report have been fully implemented, there has been progress on every single one, thanks in very large part to the SIDM members and community. We are especially proud of the SIDM-sponsored Coalition to Improve Diagnosis, a group of 30+ major societies and organizations, each of whom has agreed to both collective and individual actions to reduce diagnostic error. The Coalition provides enormous leverage to our mission, allowing us to reach tens of thousands of individuals, the membership of these organizations.

This year’s conference focuses on Recommendation #1 from the National Academies report – improving diagnosis by working in teams. We are just at the start of understanding what this means, but the work begins by integrating into the diagnostic process our patients, our nursing colleagues, our consultants, and the professionals in the clinical laboratory and medical imaging departments.

The National Academies provided an important mandate to us all in calling for urgent action to address diagnostic error: “Improving the diagnostic process is not only possible, but it also represents a moral, professional, and public health imperative.” Thank you for joining this discussion, and in the important work that lies ahead.

---

Mark L. Graber, MD, FACP  
Founder and President, Society to Improve Diagnosis in Medicine, Senior Fellow, RTI International, Professor Emeritus, Stony Brook University
The Society to Improve Diagnosis in Medicine (SIDM) catalyzes and leads change to improve diagnosis and eliminate harm, in partnership with patients, their families, the healthcare community, and every interested stakeholder. SIDM’s goal of improving diagnosis will be accomplished through:

**LEADERSHIP**  Elevating diagnostic error to the forefront of healthcare quality and public awareness

**ACTION**  Driving the priorities and results in research, education, practice improvement and patient engagement

**EXCHANGE**  Providing forums that welcome all stakeholders – from clinicians and other healthcare professionals to patients – to have meaningful dialogue that identifies and promotes new solutions

Our annual conference brings together a rich cross-section of participants: doctors, patients, nurses, researchers, educators, cognitive scientists, payers, insurers, safety and risk professionals, policy makers and organizational leaders.

Join SIDM for the next five years and beyond as we lead the community in addressing one of the most important safety issues in medicine. Your support will not only provide SIDM with the critical resources necessary to continue to promote research and raise awareness, but will also help us develop and disseminate tools for patients and clinicians that will improve diagnosis. Your support of SIDM illustrates your commitment to a community engaged in finding solutions to overcome diagnostic error. When you donate to SIDM, you help lead the way to better healthcare for everyone!

Please stop by the membership table for information on how to help or go to our website at www.improvediagnosis.org.

**DIAGNOSTIC ERROR IN MEDICINE CONFERENCE**

**Conference Objectives**

The goal of the Diagnostic Error in Medicine 10th International Conference is to foster solutions to the problem of diagnostic error. Specific objectives of the conference are to:

» Describe the prevalence, burden, causes and contributing factors of diagnostic error.

» 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; and to remove barriers to full participation in the diagnostic team, with opportunities to speak freely and discuss findings and reflections with other team members.

» Participate in building an interactive and international community of diagnostic safety experts and advocates from the entire healthcare spectrum.

**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.

This conference is funded in part by the Gordon and Betty Moore Foundation. Gordon and Betty Moore Foundation fosters path-breaking scientific discovery, environmental conservation, patient care improvements and preservation of the special character of the Bay Area. Visit Moore.org or follow @MooreFound.
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 22.25 AMA PRA Category 1 Credits™ or a maximum of 22.25 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 7 of this program guide.

MOC Approved

Through the American Board of Medical Specialties (“ABMS”) and Association of American Medical Colleges’ (“AAMC”) joint initiative (ABMS MOC Directory) to create a wide array of Maintenance of Certification (“MOC”) Activities, the 2017 DEM International Conference has met the MOC requirements for up to 22.25 credits as a MOC Part II CME/CNE Activity (apply toward CME/CNE requirement) by the following ABMS Member Boards: Allergy and Immunology, Colon and Rectal Surgery, Family Medicine, Ophthalmology, Preventive Medicine, Physical Medicine and Rehabilitation, Plastic Surgery, Psychiatry and Neurology, Radiology, Thoracic Surgery, 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: 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 22.25 MOC points in the American Board of Anesthesiology (ABA) Maintenance of Certification (MOC) program. It is the CME/CNE activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting ABA MOC credit.

Internal Medicine: Successful completion of this CME/CNE activity enables the participant to earn up to 22.25 MOC points in the American Board of Internal Medicine’s (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME/CNE credits claimed for the activity. It is the CME/CNE activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC points.

Pediatrics: 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 22 MOC points in the American Board of Pediatrics’ (ABP) Maintenance of Certification (MOC) program. It is the CME/CNE activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting ABP MOC credit.

ABIM, ABA 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.

Conference Evaluation

Your feedback is essential for planning future Diagnostic Error in Medicine Conferences. Please complete the daily and overall evaluations 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.

Copyright Information

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Consent to Use of Photographic Images

Registration and attendance at, or participation in, SIDM events including the Diagnostic Error in Medicine Conference, and other activities constitutes an agreement by the registrant to SIDM’s use and distribution (both now and in the future) of the registrant or attendee’s image or voice in photographs, video, electronic reproductions and audio recordings of such events and activities.

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.
COMMITTEE MEMBERS AND BOARD OF DIRECTORS

PLANNING COMMITTEE MEMBERS

Robert Trowbridge, MD  
Chairman, Diagnostic Error in Medicine International Conference,  
Associate Professor of Medicine, Tufts University School of Medicine,  
Maine Medical Center

Dana Siegal, RN, CPHRM, CPPS  
Director of Patient Safety, CRICO Strategies, Co-Chair, Diagnostic Error in Medicine International Conference

Sharon A. Cusanza, MSN, RN, NEA-BC  
LAMMICO/Medical Interactive, CME/CNE Liaison

Paul Epner, MBA, MEd  
Executive Vice President, Society to Improve Diagnosis in Medicine

Robert El-Kareh, MD, MPH, MS  
Associate Clinical Professor of Medicine, University of California, San Diego

Penny Greenberg, MS, RN, CPPS  
Senior Program Director, CRICO Strategies

Janice L. Kwan, MD, MPH  
Assistant Professor of Medicine, University of Toronto

Ashley N. D. Meyer, PhD  
Assistant Professor of Medicine, Michael E. DeBakey VA Medical Center and Baylor College of Medicine

Ruth Ryan, RN, BSN, MSW, CPHRM  
Medical Writer, RiskWriter LLC

William Strull, MD  
Medical Director, Quality and Patient Safety, The Permanente Federation

Peggy Zuckerman, MSEd  
Patient Advocate

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

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Ruth Ryan, RN, BSN, MSW, CPHRM | Secretary  
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Associate Professor in Dermatology and Medical Informatics, University of Rochester School of Medicine, CEO, VisualDx

Susan Sheridan, MBA, MIM, DHL  
Co-Founder and President Emeritus, Consumers Advancing Patient Safety

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

Paul Epner, MBA, MEd  
Executive Vice President, Society to Improve Diagnosis in Medicine

NETWORKING EVENTS

Networking Reception  
Sunday evening’s networking reception, located in the Waterfront Pavilion, offers additional time to network with colleagues and enjoy light appetizers and a cash bar.

Meet the Experts Dinner  
Monday evening’s open schedule provides you with the opportunity to attend dinner with DEM Conference Faculty members at a variety of nearby restaurants. You may sign up upon arrival at the registration desk. Reservations have been pre-arranged, but meal costs and transportation are at the attendee’s own expense. Space is only available on a first-come, first-serve basis.
## DISCLOSURE NOTICE

### DISCLOSURE NOTICE TO ATTENDEES OF 2017 DEM 10TH ANNUAL CONFERENCE

CME/CNE 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 CME/CNE 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:

<table>
<thead>
<tr>
<th>Baker, Megan</th>
<th>Hautz, Wolf</th>
<th>Olson, Andrew</th>
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<tbody>
<tr>
<td>Bergle, Paul</td>
<td>Hoar, Ill, Harry</td>
<td>Rea, Kathleen</td>
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<td>Berwick, Don</td>
<td>Jones, Rebecca</td>
<td>Rencic, Joseph</td>
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<td>Conner, Denise</td>
<td>Kanter, Michael</td>
<td>Reynolds, Mark</td>
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<td>Croskerry, Pat</td>
<td>Kenney, Linda</td>
<td>Rusz, Diana</td>
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<tr>
<td>Cusanza, Sharon</td>
<td>Kwan, Janice</td>
<td>Ryan, Ruth</td>
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<tr>
<td>Dhaliwal, Gurpreet</td>
<td>Laposata, Michael</td>
<td>Salvador, Doug</td>
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<tr>
<td>Drill-Mellum, Laurie</td>
<td>Mann, Susan</td>
<td>Sanders, Lisa</td>
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<tr>
<td>El-Kareh, Robert</td>
<td>Martin, Stephen</td>
<td>Schiff, Gordon</td>
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<tr>
<td>Folcarelli, Patricia</td>
<td>Mathews, Benji</td>
<td>Siegal, Dana</td>
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<tr>
<td>Giardina, Traber</td>
<td>Mayer, David</td>
<td>Simpkin, Arabella</td>
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<tr>
<td>Gleason, Kelly</td>
<td>Meyer, Ashley</td>
<td>Slass, Lorie</td>
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<tr>
<td>Gibbs, Michael</td>
<td>Monteiro, Sandra</td>
<td>Strull, William</td>
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<tr>
<td>Graber, Mark</td>
<td>Mort, Liz</td>
<td>Tucker, Leslie</td>
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<tr>
<td>Greenberg, Penny</td>
<td>Mosher, Timothy</td>
<td>Trowbridge, Bob</td>
</tr>
<tr>
<td>Greer-Smith, Regina</td>
<td>Newman-Toker, David</td>
<td>Zwaan, Laura</td>
</tr>
</tbody>
</table>

The following lead abstract and poster presenters have no relevant relationships to disclose:

| Adams, Robert       | Head, Lia                   | Nunnally, Brandon         |
| Abdelrahman, Ahmed  | Hirosawa, Takanobu          | Olson, Andrew             |
| Aggar, Sara         | Hutford, Gary               | Papa, Frank               |
| Baker, Megan        | Ibrahim, Wald               | Pilcher, Charles          |
| Bakradze, Ekaterina | Ikechi, Daisuke             | Popovich, Ivor            |
| Barrera, Terri      | Inam, Zaina                 | Quinn, Martha             |
| Beauchamp, Hilary   | Ingalls, Brandon            | Rao, Goutham              |
| Bennet, Nadia       | Inoue, Kunitzumi            | Rocco, Joseph             |
| Berry, Anand        | Isbell, Linda               | Rogith, Deevakar          |
| Blansit, Kevin      | Ito, Akane                  | Roldan, Paula             |
| Bonifacino, Eliana  | Jones, Melissa              | Sajio, Masaji             |
| Broutman, Laurie    | Kane, Bridget               | Saltzman, Allen           |
| Campione, Joanne    | Kanji, Amjad                | Scaffer, Adam             |
| Cheraghi-Sohi, Sudeh| Kano, Kyio                  | Schifeling, Christopher   |
| Chopra, Vineet      | Kantor, Molly               | Sheehan, Scott            |
| Cifra, Christina    | Maningbe, Keita             | Shizuku, Tatsunori        |
| Coliabao, Lotifia   | Kelly, Michael              | Simacek, Kristina         |
| Crane, Steven       | Kitagawa, Izumi             | Smith, Ben                |
| Danforth, Kim       | Klein, Jill                 | Smith, Kelly              |
| Dawdy, John         | Kodama, Taisuke             | Solano, Joshua            |
| Desai, Sonali       | Kravet, Steven              | Suzuki, Tomoharu          |
| Deshwar, Amar       | Kurihara, Masaru            | Takahashi, Yoko           |
| DiNardo, Deborah    | Lau, Benison                | Tilstra, Sarah            |
| Dore, Kelly         | Lessing, Juan               | Tobe, Shunichi            |
| Elliott, Peter      | Liberman, Ava               | Travers, Eleanor          |
| Faiver, Laura       | Mahajan, Prashant           | Vanstone, Meredith        |
| Filardo, Thomas     | Manesh, Reza                | Varela, Daniel            |
| Fleshner, Michelle  | Marshall, Kyle              | Waheed, Maham             |
| Forman, Jane        | Mathews, Benji              | Walsh, Julianne           |
| Gioradina, Traber   | Maude, Jason                | Wang, Han Yin             |
| Gleason, Kelly      | McCleod Jr., Richard        | Watanuki, Satoshi         |
| Gonzalez, Janae     | Meyer, Ashley               | Watar, Takashi            |
| Grubenhoff, Joseph  | Midgley Jr., A. Rees        | Wijesekera, Thilan        |
| Gupta, Ashwin       | Millenson, Michael          | Winfield-Dial, Ashlea     |
| Gusack, Mark        | Miyoshi, Yukari             | Wofford, James            |
| Hamm, Robert        | Monteiro, Sandra            | Yabushita, Yu             |
| Hamming, Robert     | Munganilinskaya, Nargiz     | Zhou, Mengyu              |
| Hamba, Daniel       | Munoz-Plaza, Corrine        | Zibert, John              |
| Harkless, Gene      | Myers, Sara                 |                            |
| Harrod, Molly       | Nakanishi, Takahiro         |                            |

LAMMICO/Medical Interactive, the CME/CNE provider, has reviewed the relationships below for potential conflict of interest and no conflicts of interest were identified.

- Paul Epner, a planner and speaker, disclosed that he serves on the speakers’ bureau for Sysmex Inc., holds stock in Abbott and Abbvie, and is on the Board of Directors for Silicon Biodevices.

- Peggy Zuckerman, a speaker and planner, disclosed that she serves as a consultant for Prometheus Labs and Roche/Genentech Scientific Ethics Advisory Group.
All sessions take place in Grand Ballroom A-E unless otherwise noted.

### SATURDAY, OCTOBER 7 | PRE-CONFERENCE SUMMITS

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>8:00 a.m. – 3:00 p.m.</td>
<td>Registration Open – Grand Ballroom Foyer</td>
</tr>
<tr>
<td>10:00 a.m. – 5:00 p.m.</td>
<td>Research Summit <em>By Invitation Only</em> – Lexington Room</td>
</tr>
<tr>
<td>9:00 a.m. – 5:00 p.m.</td>
<td>Patient Summit – Charles River Room</td>
</tr>
<tr>
<td>9:00 a.m. – 12:00 p.m.</td>
<td>Patient Summit Morning Session: Patients as Partners in the Diagnostic Process</td>
</tr>
<tr>
<td>1:00 p.m. – 5:00 p.m.</td>
<td>Patient Summit Afternoon Session: Co-Producing Diagnosis: Writing the Illness Script</td>
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### SUNDAY, OCTOBER 8 | PRE-CONFERENCE SHORT COURSES

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration Open – Grand Ballroom Foyer</td>
</tr>
<tr>
<td>8:00 a.m. – 12:00 p.m.</td>
<td>3.5 CME/CNE Credit Introduction to Diagnostic Error – Grand Ballroom A-E</td>
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<tr>
<td></td>
<td>A Workshop on Reducing Diagnostic Error in Clinical Settings – Grand Ballroom F-H</td>
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<tr>
<td></td>
<td>Diagnostic Reasoning: Key Teaching Skills at the Bedside…and How to Fill Out the Evaluation Form – Charles River Room</td>
</tr>
<tr>
<td></td>
<td>The Cognitive Psychology of Diagnostic Error – Lexington Room</td>
</tr>
<tr>
<td>12:00 p.m. – 1:00 p.m.</td>
<td>Lunch on your own – <em>Dining options include a grab-and-go kiosk at Starbucks, the hotel restaurant, and downtown Newton</em></td>
</tr>
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### SUNDAY, OCTOBER 8 | DAY ONE

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>1:00 p.m. – 1:30 p.m.</td>
<td>Opening Remarks</td>
</tr>
<tr>
<td>1:30 p.m. – 2:30 p.m.</td>
<td>1.0 CME/CNE Credit Diagnostic Error and Clinical Reasoning Case Conference</td>
</tr>
<tr>
<td>2:30 p.m. – 3:00 p.m.</td>
<td>0.5 CME/CNE Credit Panel Discussion: Teamwork and the Clinical Reasoning Case Conference</td>
</tr>
<tr>
<td>3:00 p.m. – 3:15 p.m.</td>
<td>Break – Grand Ballroom Foyer</td>
</tr>
<tr>
<td>3:15 p.m. – 5:00 p.m.</td>
<td>1.75 CME/CNE Credit Oral Plenary Abstracts</td>
</tr>
<tr>
<td>5:00 p.m. – 6:00 p.m.</td>
<td>1.0 CME/CNE Credit Poster Session 1: Research and Clinical Vignettes – Waterfront Pavilion</td>
</tr>
<tr>
<td>6:00 p.m. – 7:00 p.m.</td>
<td>Networking Reception – Waterfront Pavilion</td>
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</table>

### MONDAY, OCTOBER 9 | DAY TWO

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00 a.m. – 8:45 a.m.</td>
<td>Poster Session 2: Practice Innovations and Clinical Vignettes – Commonwealth Ballroom Salon 1 (<em>Light breakfast will be served.</em>)</td>
</tr>
<tr>
<td>8:15 a.m. – 6:00 p.m.</td>
<td>Registration Open – Grand Ballroom Foyer</td>
</tr>
<tr>
<td>8:45 a.m. – 9:00 a.m.</td>
<td>Opening Remarks</td>
</tr>
<tr>
<td>9:00 a.m. – 10:00 a.m.</td>
<td>1.0 CME/CNE Credit <strong>KEYNOTE PRESENTATION: DONALD M. BERWICK, MD, MPP, FRCP, INSTITUTE FOR HEALTHCARE IMPROVEMENT</strong> The Role of Diagnostic Error in Patient Safety</td>
</tr>
<tr>
<td>10:00 a.m. – 10:30 a.m.</td>
<td>0.5 CME/CNE Credit Keynote Panel: Discussion of the Role of Diagnostic Error in Patient Safety</td>
</tr>
<tr>
<td>10:30 a.m. – 10:45 a.m.</td>
<td>Break – Grand Ballroom Foyer</td>
</tr>
<tr>
<td>10:45 a.m. – 12:15 p.m.</td>
<td>1.5 CME/CNE Credit The Coalition in Action: Interventions, Advocacy and Driving Change</td>
</tr>
<tr>
<td>12:15 p.m. – 1:00 p.m.</td>
<td>Lunch – Commonwealth Ballroom</td>
</tr>
<tr>
<td>1:00 p.m. – 1:45 p.m.</td>
<td>0.75 CME/CNE Credit What Do We Know About Collaborative Diagnostic Decision Making?</td>
</tr>
<tr>
<td>1:45 p.m. – 2:30 p.m.</td>
<td>0.75 CME/CNE Credit <strong>KEYNOTE PRESENTATION: DAVID MAYER, MD, MEDSTAR HEALTH</strong> Leading a Culture of Teamwork</td>
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*8 DEMConference.org*
### MONDAY, OCTOBER 9 | DAY TWO (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
</table>
| 2:30 p.m. – 3:00 p.m. | 0.5 CME/CNE Credit  
Keynote Panel: Discussion of Collaborative Decision Making and Leading a Teamwork of Culture |
| 3:00 p.m. – 3:15 p.m. | Break – Grand Ballroom Foyer                                         |

**INTERACTIVE WORKSHOPS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 3:15 p.m. – 4:30 p.m.* | 1.25 CME/CNE Credit  
Engaging Nursing in Diagnostic Error: A Practical Workshop – Charles River Room  
Engaging Your Institution in Reducing Diagnostic Error: A Practical Workshop – Grand Ballroom A-E  
Engaging Patients in Research: A Practical Workshop – Lexington Room  
Balancing Diagnostic Errors with Conservative Diagnosis: Developing a New Paradigm for More Appropriate Diagnosis – Grand Ballroom F-H |

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:30 p.m. – 4:45 p.m.</td>
<td>Break – Grand Ballroom Foyer</td>
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</table>

**INTERACTIVE WORKSHOPS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 4:45 p.m. – 6:00 p.m.* | 1.25 CME/CNE Credit  
Engaging Nursing in Diagnostic Error: A Practical Workshop – Charles River Room  
Engaging Your Institution in Reducing Diagnostic Error: A Practical Workshop – Grand Ballroom A-E  
Engaging Patients in Research: A Practical Workshop – Lexington Room  
Balancing Diagnostic Errors with Conservative Diagnosis: Developing a New Paradigm for More Appropriate Diagnosis – Grand Ballroom F-H |

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6:30 p.m.</td>
<td>Meet the Experts Dinner – Various Locations (Sign up in advance at registration)</td>
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### TUESDAY, OCTOBER 10 | DAY THREE

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:45 a.m. – 5:00 p.m.</td>
<td>Information Desk and Registration – Grand Ballroom Foyer</td>
</tr>
<tr>
<td>8:00 a.m. – 8:10 a.m.</td>
<td>Opening Remarks</td>
</tr>
</tbody>
</table>
| 8:10 a.m. – 9:00 a.m. | 0.75 CME/CNE Credit  
KEYNOTE PRESENTATION: AMY C. EDMONDSON, PHD, AM, HARVARD UNIVERSITY  
The End of the Team as We Know It |
| 9:00 a.m. – 9:30 a.m. | 0.5 CME/CNE Credit  
Keynote Panel: Discussion of The End of the Team as We Know It |
| 9:30 a.m. – 9:45 a.m. | Break – Grand Ballroom Foyer |

**CONCURRENT SESSIONS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 9:45 a.m. – 12:30 p.m. | 2.5 CME/CNE Credit  
Oral Abstracts of Current Research and Educational Innovations – Grand Ballroom A-E  
Building and Sustaining Healthy Teams: Improving Communication, Reducing Burnout – Charles River Room |
| 12:30 p.m. – 1:30 p.m. | Lunch/SIDM Business Meeting – Lunch will be available in the Commonwealth Ballroom, SIDM Business Meeting will be in the Grand Ballroom A-E |
| 1:30 p.m. – 2:30 p.m. | 1.0 CME/CNE Credit  
“Remember When”…Envisioning the Future of Diagnostic Safety |
| 2:30 p.m. – 3:30 p.m. | 1.0 CME/CNE Credit  
Embracing Uncertainty in Medicine |
| 3:30 p.m. – 3:45 p.m. | Break – Grand Ballroom Foyer |
| 3:45 p.m. – 4:45 p.m. | 1.0 CME/CNE Credit  
An Interactive Discussion of Pressing Questions in Diagnostic Error |
| 4:45 p.m. – 5:00 p.m. | 0.25 CME/CNE Credit  
Conference Summary |

*Interactive workshops will be repeated to allow attendance at multiple workshops*
**PRE-CONFERENCE SUMMITS AND SHORT COURSES**

**SATURDAY, OCTOBER 7**

### Research Summit – By Invitation Only
10:00 a.m. – 5:00 p.m.  
*Lexington Room*

### Patient Summit
9:00 a.m. – 5:00 p.m.  
*Charles River Room*

**MORNING SESSION | 9:00 a.m. – 12:00 p.m.**

**Patients as Partners in the Diagnostic Process**

**FACILITATOR:**  
Larry Pennings, MA, DMin, Jefferson Center

Participants will learn how partnering with providers in the diagnostic process can improve their experience. Participants will gain an understanding of the problem of diagnostic error and learn specific actions they can take to ensure quality diagnosis. The recommended actions come from a panel of consumers working to determine actions patients could take to improve diagnostic quality as part of the AHRQ-sponsored Using Public Deliberation to Define Patient Roles in Reducing Diagnostic Error.

**AFTERNOON SESSION | 1:00 p.m. – 5:00 p.m.**

**Co-Producing Diagnosis: Writing the Illness Script**

**SPEAKERS AND PANELISTS:**  
Carmel Crock MBBS, FAcEM, BLit, Royal Victorian Eye and Ear Hospital  
Patricia Folcarelli RN, MA, PhD, Beth Israel Deaconess Medical Center  
Alisa Khan, MD, MPH, Boston Children’s Hospital, Harvard Medical School  
Peggy Zuckerman, MSEd, Patient Advocate  
Helen Haskell, MA, Mothers Against Medical Error  
Io Dolka, MSc, GreyZone  
Sue Sheridan, MBA, MIM, DHL, Consumers Advancing Patient Safety  
Kelly Smith, PhD, MedStar Health Research Institute

Engage in a dialogue about tools, strategies, and technology available to help patients and families improve diagnosis. Topics include managing communication problems with the health care system, accessing the medical record, the impact of patient reporting and patients as advocates for policy change.

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**SUNDAY, OCTOBER 8 | DAY ONE**

### Introduction to Diagnostic Error
8:00 a.m. – 12:00 p.m.  
*Grand Ballroom A-E*

**CME/CNE Credit: 3.5**

**SPEAKERS:**  
Karen Cosby, MD, CPPS, Rush Medical College  
Pat Croskerry, MD, PhD, FRCP (Edin), Dalhousie University  
Mark L. Graber, MD, FACP, Society to Improve Diagnosis in Medicine  
Ashley Meyer, MD, FACP, Michael E. DeBakey VA Medical Center and Baylor College of Medicine  
Gordon Schiff, MD, Brigham and Women’s Center for Patient Safety Research

This session is recommended as an overview for the first-time attendee. Participants will gain an understanding of the problem 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

### A Workshop on Reducing Diagnostic Error in Clinical Settings
8:00 a.m. – 12:00 p.m.  
*Grand Ballroom F-H*

**CME/CNE Credit: 3.5**

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

**SPEAKERS:**  
Rebecca Jones, MBA, BSN, RN, CPHRM, CPPS, Pennsylvania Patient Safety Authority  
Michael Kanter, MD, The Permanente Federation & The Southern California Permanente Medical Group  
Michael Laposata, MD, PhD, University of Texas Medical Branch – Galveston  
Diana Rusz, MPH, Society to Improve Diagnosis in Medicine

Health care systems are continually involved in quality improvement, but rarely are those efforts directed to the problem of diagnostic error. Unfortunately, we are still early in the development of effective interventions. However, such interventions do exist. In this workshop, we will share case studies of what works, hear the results of an environmental scan that sought to learn all interventions being attempted, and in a highly interactive environment, determine strategies for implementing diagnostic error quality improvement in the clinical setting now.

**Learning Objectives:**
- Define interventions for reducing diagnostic error in clinical settings
- Identify techniques critical to the effective implementation of diagnostic error quality improvement
Diagnostic Reasoning: Key Teaching Skills at the Bedside...and How to Fill Out the Evaluation Form
8:00 a.m. – 12:00 p.m.
Charles River Room
CME/CNE Credit: 3.5
MODERATORS:
Gurpreet Dhaliwal, MD, University of California, San Francisco
Andrew P.J. Olson, MD, University of Minnesota
SPEAKERS:
Paul Bergl, MD, Medical College of Wisconsin
Denise Connor, MD, University of California, San Francisco
Benji Mathews, MD, FACP, CLHM, HealthPartners and University of Minnesota Medical School
Lisa Sanders, MD, FACP, Yale University School of Medicine
This interactive session will help front-line educators highlight the diagnostic process on inpatient rounds and outpatient encounters. Sessions will focus on using the patient’s story to diagnose, using the physical exam to reduce diagnostic error and increase high value care, and how to fill out the evaluation form with something more meaningful than “really great differentials…continue to read more and see more.”

Learning Objectives:
• Show learners how to use the bedside exam to increase diagnostic reliability
• Name two techniques to use the patient story to improve diagnoses
• Complete accurate and meaningful evaluations of learners’ clinical reasoning abilities

The Cognitive Psychology of Diagnostic Error
8:00 a.m. – 12:00 p.m.
Lexington Room
CME/CNE Credit: 3.5
SPEAKERS:
Sandra Monteiro, PhD, McMaster University
Geoffrey Norman, PhD, McMaster University
Laura Zwaan, PhD, Institute of Medical Education Research, Rotterdam, Erasmus MC
This course will provide a broad overview of the cognitive psychology of diagnostic reasoning, aimed at physicians or researchers who want to learn more about the cognitive psychology of diagnostic decision making. We will discuss the main theories of diagnostic reasoning and decision making (e.g. dual process thinking, the use of heuristics, cognitive biases) and ways to reduce cognitive error. The latest developments and results of recent studies will be reviewed.

Learning Objectives:
• Describe the main psychological models that apply to the diagnostic reasoning process
• Explain the strengths and vulnerabilities of human reasoning and the effects on the diagnostic reasoning process
• Identify how recent research findings from the field of cognitive psychology can help improve diagnostic reasoning

CONFERENCE SESSIONS
All sessions will be held in Grand Ballroom A-E unless otherwise noted.

SUNDAY, OCTOBER 8  |  DAY ONE
Opening Remarks
1:00 p.m. – 1:30 p.m.
SPEAKERS:
Mark L. Graber, MD, FACP, Society to Improve Diagnosis in Medicine
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
Robert Trowbridge, MD, Tufts University School of Medicine and Maine Medical Center

Diagnostic Error and Clinical Reasoning Case Conference
1:30 p.m. – 2:30 p.m.
CME/CNE Credit: 1.0
MODERATOR:
Karen Cosby, MP, CPPS, Rush Medical College
CASE PRESENTER:
Megan Baker, Wayne State University School of Medicine
CASE DISCUSSANT:
Gurpreet Dhaliwal, MD, University of California, San Francisco
CASE COMMENTATORS:
Andrew P. J. Olson, MD, University of Minnesota
Joe Rencic, MD, Tufts University School of Medicine
In this session, an expert clinician will review and discuss a case previously unknown to him as it is presented in the way it unfolded in the clinical setting. He will share his thought processes and how he approaches such cases. Two experts in clinical reasoning will contemporaneously comment on his thought processes, specifically concentrating on what others can learn from expert clinicians. An emphasis will be placed on common sources of error, potential means of avoiding error, and the interaction between systems factors and cognition.

Learning Objectives:
• Describe how an expert clinician approaches a complex case and expert approaches to problem solving
• Gain a nuanced appreciation of the complexity of the diagnostic process and potential sources of diagnostic error
• Describe the importance of teamwork in diagnosis and how effective teamwork can improve the diagnostic process
Panel Discussion: Teamwork and the Clinical Reasoning Case Conference
2:30 p.m. – 3:00 p.m.
CME/CNE Credit: 0.5
MODERATOR:
Karen Cosby, MD, CPPS, Rush Medical College
SPEAKERS:
Gurpreet Dhaliwal, MD, University of California, San Francisco
Penny Greenberg, MS, RN, CPPS, CRICO Strategies
Linda Kenney, MITSS Medically Induced Trauma Support Services, Inc.
The case presentation will be followed by a multi-disciplinary panel discussion centered on the role of teamwork in the diagnostic process. The case will be used to exemplify how multi-disciplinary collaboration and teamwork can make diagnosis more reliable, accurate and timely.
Learning Objectives:
• Describe how an expert clinician approaches a complex case and expert approaches to problem solving
• Gain a nuanced appreciation of the complexity of the diagnostic process and potential sources of diagnostic error
• Describe the importance of teamwork in diagnosis and how effective teamwork can improve the diagnostic process

Oral Plenary Abstracts
3:15 p.m. – 5:00 p.m.
CME/CNE Credit: 1.75
See pages 20-22 for more information.
MODERATOR:
Robert El-Kareh, MD, MS, MPH, University of California, San Diego
Submitted abstracts went through peer review and the top ranked abstracts will be presented by their authors.
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

Poster Session 1: Research and Clinical Vignettes
5:00 p.m. – 6:00 p.m.
Waterfront Pavilion
CME/CNE Credit: 1.0
See pages 25-27 for more information.
Posters submitted in the Research and Clinical Vignette categories will be available for viewing and participate in a judged competition.
Learning Objectives:
• Describe new and innovative research related to diagnostic error in medicine
• Identify potential interventions to reduce diagnostic errors
• Discuss cases and causes of diagnostic error directly with authors

Networking Reception
6:00 p.m. – 7:00 p.m.
Waterfront Pavilion

MONDAY, OCTOBER 9 | DAY TWO

Poster Session 2: Practice Innovations and Clinical Vignettes
7:00 a.m. – 8:45 a.m.
See pages 28-29 for more information.
Commonwealth Ballroom Salon 1
Posters submitted in the Practice Innovations and Clinical Vignette categories will be available for viewing and participate in a judged competition.
Learning Objectives:
• Describe new and innovative research related to diagnostic error in medicine
• Identify potential interventions to reduce diagnostic errors
• Discuss cases and causes of diagnostic error directly with authors

Opening Remarks
8:45 a.m. – 9:00 a.m.
SPEAKERS:
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
Robert Trowbridge, MD, Tufts University School of Medicine and Maine Medical Center
Keynote Presentation: The Role of Diagnostic Error in Patient Safety
9:00 a.m. – 10:00 a.m.
CME/CNE Credit: 1.0
SPEAKER:
Donald M. Berwick, MD, MPP, FRCP, Institute for Healthcare Improvement
Despite being the subject of increasing attention, diagnostic error remains a significant risk to patient safety. Factors underlying the unacceptable rates of diagnostic error are complex and stem from the intricacy and uncertainty inherent to the diagnostic process and the structure of health care system. Improvements in diagnostic reliability, however, are likely to lead to significant gains in all domains of the quadruple aim, including improved patient experience, lower costs, better patient outcomes, and higher clinician satisfaction. A priority must be placed on improving diagnostic safety as a means of providing safe and patient-centered care.
Learning Objectives:
• Understand the role of diagnostic reliability in delivering safe and effective patient care and its importance within the greater context of patient safety
• Describe the actions that patients, clinicians, institutions and health care systems must consider to meaningfully increase diagnostic reliability
Keynote Panel: Discussion of The Role of Diagnostic Error in Patient Safety
10:00 a.m. – 10:30 a.m.
CME/CNE Credit: 0.5

SPEAKERS:
Donald M. Berwick, MD, MPP, FRCP, Institute for Healthcare Improvement
Patricia Folcarelli, RN, MA, PhD, Beth Israel Deaconess Medical Center
Helen Haskell, MA, President, Mothers Against Medical Error
Timothy J. Mosher, MD, Penn State University College of Medicine

A panel of experts from various healthcare domains will add context, building on the comments of the keynote speaker. Discussion and audience interaction will follow as the concepts presented are examined from the perspective of multiple different members of the healthcare community.

Learning Objectives:
• Describe a variety of perspectives on the role of diagnostic reliability in patient safety
• Apply these perspectives in determining how to improve diagnostic reliability

The Coalition in Action: Interventions, Advocacy and Driving Change
10:45 a.m. – 12:15 p.m.
CME/CNE Credit: 1.5

SPEAKERS:
Paul Epner, MBA, MEd, Society to Improve Diagnosis in Medicine
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 Academies (formerly IOM) landmark report on Improving Diagnosis in Health Care. With more than 30 leading healthcare organizations as members, the Coalition is intent on improving diagnosis through collective and individual actions. Collective actions are focused on inventorying quality improvement interventions, advocating for increased research funding, and developing a campaign to drive change among patient and healthcare professionals. In this session, we will provide updates which will include the results of the environmental scan of quality improvement interventions and the market research results on beliefs about diagnostic error. We will also share some of the work of Coalition members.

Learning Objectives:
• Discuss important ecological limitations of vignette studies
• Identify modes of collaboration in diagnostic decision making suitable for one's own environment
• Ponder one of the many open research questions related to this topic

What Do We Know About Collaborative Diagnostic Decision Making?
1:00 p.m. – 1:45 p.m.
CME/CNE Credit: 0.75

SPEAKER:
Wolf Hautz, MD, MME, Inselspital University Hospital Berne

Modern healthcare is highly fragmented and many more than one person commonly contributes to a patient's care. Still, diagnosing a patient's condition is all too often conceptualized as a "lone wolf's endeavor." Consequently, much of what we know about diagnostic decision making may not be ecologically valid. In this presentation, what is generally known about collaborative decision making will be introduced followed by a discussion of diagnostic decision making by more than one individual. A specific focus will be placed on when, if, and how diagnostic decision making benefits from this collaboration. Although many of the studies cited are experimental and thus commonly removed from real clinical settings, an attempt will be made to closely link their findings to the workplace and elaborate on their clinical implications, supported by real-world data wherever possible. Because working in a team is different from simply working alongside one another, forms of collaboration in healthcare and their differences and implications will also be discussed. The presentation will end with a number of open questions on collaborative diagnostic decision making, providing a starting point for reflection and discussion.

Keynote Presentation: Leading a Culture of Teamwork
1:45 p.m. – 2:30 p.m.
CME/CNE Credit: 0.75

SPEAKER:
David Mayer, MD, MedStar Health

Dr. Mayer, vice president of Quality and Safety for MedStar Health and recipient of the 2016 Humanitarian Award from the Patient Safety Movement Foundation, will discuss the critical role of leadership in creating an institution-wide culture of patient safety, with a specific focus on building teams for diagnostic safety and the importance of including patients and their families in every step of the process.

Learning Objectives:
• Understand the role of senior leadership in establishing an organizational wide culture of patient safety
• Describe how organizations can embrace patients and their families in a culture of diagnostic excellence
• Articulate the importance of "Educating the Young" as a core competency towards creating a multi-professional culture of safety and resilience
Keynote Panel: Discussion of Collaborative Decision Making and a Culture of Teamwork
2:30 p.m. – 3:00 p.m.
CME/CNE Credit: 0.5

SPEAKERS:
Michael Gibbs MD, Carolinas Medical Center
Wolf Hautz, MD, MME, Inselspital University Hospital Berne
David Mayer, MD, MedStar Health
Ruth Ryan, RN, BSN, MSW, RiskWriter LLC

A panel of experts from various healthcare domains will add context, building on the comments of the speakers. Discussion and audience interaction will follow as the concepts presented are examined from the perspective of multiple different members of the healthcare community.

Learning Objectives:
• Describe a variety of perspectives on the role of collaborative decision-making and a culture of teamwork in improving diagnostic reliability
• Apply these perspectives in determining how to improve diagnostic reliability

INTERACTIVE WORKSHOPS

Engaging Nursing in Diagnostic Error: A Practical Workshop
3:15 p.m. – 4:30 p.m. and 4:45 p.m. – 6:00 p.m.*
Charles River Room
CME/CNE Credit: 1.25

SPEAKERS:
Kelly Gleason, RN, BSN, Johns Hopkins University School of Nursing
Kathleen Rea, DNP, RN, ACNS-BC, PCCN, CNL, UVA Health System

Historically, diagnosis is considered solely a physician responsibility, and teamwork in diagnosis generally refers to physicians working together across medical specialties. There is a pressing need to adjust this view and for nurses to take part in efforts addressing diagnostic errors. While there are logistical, regulatory, and sociocultural barriers to nurses participating as full members of the diagnostic team that must be addressed, the potential benefits of their participation are immense. In this workshop, we address how to formalize and expand nurses’ engagement in the diagnostic process and how to maximize effectiveness of interprofessional teamwork and communication.

Learning Objectives:
• Recognize bidirectional biases in nurses engaging in the diagnostic process, and identify at least one strategy to address these biases
• Identify two methods to facilitate interprofessional teamwork in diagnosis at their institution

Engaging Your Institution in Reducing Diagnostic Error: A Practical Workshop
3:15 p.m. – 4:30 p.m. and 4:45 p.m. – 6:00 p.m.*
Grand Ballroom A-E
CME/CNE Credit: 1.25

SPEAKERS:
Harry Hoar III, MD, Baystate Health
Doug Salvador, MD, MPH, Baystate Health

Although there has been increasing focus on diagnostic error, many healthcare organizations may still be unsure of how to implement effective methods of reducing diagnostic error. This workshop will discuss barriers to engaging local decision makers and propose means of overcoming them. Participants will leave the workshop with an action plan to reduce diagnostic error in their own institution.

Learning Objectives:
• Describe barriers to engaging local decision makers in the prevention and mitigation of diagnostic errors
• Implement methods to engage local administrative leaders in promoting and supporting local responses to the problem of diagnostic error
• Develop an action plan to reduce diagnostic error in your institution

Engaging Patients in Research: A Practical Workshop
3:15 p.m. – 4:30 p.m. and 4:45 p.m. – 6:00 p.m.*
Lexington Room
CME/CNE Credit: 1.25

SPEAKERS:
Traber Davis Giardina, PhD, MSW, Michael E. DeBakey Veterans Affairs Medical Center
Regina Greer-Smith, MPH – Fellow, American College of Healthcare Executives, Healthcare Research Associates, LLC

Despite the growing recognition of the prevalence and consequences of diagnostic errors, patient perspectives are seldom taken into consideration when researching diagnostic error causes or solutions. In this workshop, we will present data on patients’ perspectives of diagnostic error and why these perspectives are important for improving health outcomes. Additionally, we will present methods for engaging patients in research from beginning to end, providing researchers with the tools to successfully engage patients in research.

Learning Objectives:
• Understand patient perspectives on diagnostic error
• Determine the importance of engaging patients in research to improve diagnosis
• Employ strategies aimed at engaging patients in research to improve diagnosis

*Interactive Workshops will be repeated to allow attendance at multiple workshops.
Balancing Diagnostic Errors with Conservative Diagnosis: Developing a New Paradigm for More Appropriate Diagnosis

3:15 p.m. – 4:30 p.m. and 4:45 p.m. – 6:00 p.m.*

Grand Ballroom F-H

CME/CNE Credit: 1.25

SPEAKERS:
Stephen Martin, MD, EdM, Barre Family Health Center | University of Massachusetts Medical School
Gordon Schiff, MD, Brigham and Women’s Hospital Center for Patient Safety Research

There is a need for a more nuanced understanding of diagnosis that goes beyond merely “balancing tradeoffs” between under-diagnosis (diagnosis errors and delays) and over-diagnosis and wasteful over-testing. We must instead treat these problems as two sides of the same coin, with the unifying concept being more appropriate and careful diagnosis. Some diagnoses are pursued and treated that have little impact on patients’ health and well-being, with diagnostic interventions causing harm that outweigh any benefits; yet other diagnoses that would help relieve suffering are being missed entirely. To reframe and better approach this core challenge in diagnosis science, we have developed a new diagnosis paradigm built around 10 Key Principles of Conservative Diagnosis.

Learning Objectives:
• Illustrate a new, more conservative/appropriate diagnosis paradigm that prioritizes careful diagnosis, instead of the current linear understanding of balancing over-diagnosis and over-testing with under-diagnosis and missed diagnoses
• Brainstorm clinical and policy strategies for developing a conservative diagnosis paradigm and contribute to an evolving vision of “10 Key Principles of Conservative Diagnosis”
• Identify techniques to convey to trainees, practicing clinicians, patients, and policymakers ways to integrate conservative diagnosis into training, decision-making, and health policy

TUESDAY, OCTOBER 10  |  DAY THREE

Opening Remarks
8:00 a.m. – 8:10 a.m.
SPEAKERS:
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
Robert Trowbridge, MD, Tufts University School of Medicine and Maine Medical Center

Keynote Presentation: The End of the Team as We Know It
8:10 a.m. – 9:00 a.m.
CME/CNE Credit: 0.75
SPEAKER:
Amy C. Edmondson, PhD, AM, Harvard University

As healthcare changes at an ever faster rate, we find ourselves moving from stable, bounded, clearly defined teams to a form of dynamic “teaming” across siloes, requiring a set of organizational and interpersonal skills that can be learned. Teaming means quickly building trust with others who are not always like you via self-disclosure and systematic inquiry. It involves coordinating care with other providers and disciplines across varied settings in an environment of uncertainty and unfamiliarity, and doing so without a script.

Learning Objectives:
• Articulate the difference between teamwork and teaming
• Understand the important of psychological safety in teaming
• Lead, inspire and motivate teams across silos
• Learn the art of the good question

Keynote Panel: Discussion of The End of the Team as We Know It
9:00 a.m. – 9:30 a.m.
CME/CNE Credit: 0.5
SPEAKERS:
Amy C. Edmondson, PhD, AM, Harvard University
Mark Reynolds, President & CEO, RMF/CRICO Strategies
William Strull, MD, The Permanente Federation
Peggy Zuckerman, MSED, Patient Advocate

A panel of experts from various healthcare domains will add context, building on the comments of the speaker. Discussion and audience interaction will follow as the concepts presented are examined from the perspective of multiple different members of the healthcare community.

Learning Objectives:
• Describe a variety of perspectives on role of the team and teaming in improving diagnostic reliability
• Apply these perspectives in determining how to improve diagnostic reliability
CONCURRENT SESSIONS

Oral Abstracts of Current Research and Educational Innovations
9:45 a.m. – 12:30 p.m.
See pages 22-23 for more information.
Grand Ballroom A-E
CME/CNE Credit: 2.5
MODERATOR:
Laura Zwaan, PhD, Institute of Medical Education Research, Rotterdam, Erasmus MC
EXPERT DISCUSSANTS:
Robert El-Kareh, MD, MS, MPH, University of California, San Diego
David E. Newman-Toker, MD, PhD, Johns Hopkins University School of Medicine
Andrew P.J. Olson, MD, University of Minnesota
Authors selected by peer review will present submitted abstracts of research and educational interventions, followed by an interactive discussion with the presenters and experts.
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

Building and Sustaining Healthy Teams: Improving Communication, Reducing Burnout
9:45 a.m. – 12:30 p.m.
Charles River Room
CME/CNE Credit: 2.5
SPEAKERS:
Penny Greenberg, MS, RN, CPPS, CRICO Strategies
Laurie C. Drill-Mellum, MD, MPH, Constellation
Susan Mann, MD, Beth Israel Deaconess Medical Center, QualBridge Institute
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
Risk management, patient safety leaders and clinicians have long understood the value of teamwork in acute care/task-oriented settings such as ED, OB and the OR. But building teams across multiple clinical specialties and locations, and over longer timelines is a newer concept of “teaming.” Using success stories from real clinical settings, this session will explore how we build, support and sustain successful teams for diagnostic safety including coordination of roles and responsibilities, the critical role of communication in diagnostic teamwork, and the ever growing concern of provider burnout and its impact on successful teaming.
Learning Objectives:
• Articulate the process for ensuring clarity of roles and responsibilities in diagnostic teams
• Identify solutions to key communication gaps that drive diagnostic failure
• Discuss steps for supporting a team member demonstrating signs of burnout

“Remember When”...Envisioning the Future of Diagnostic Safety
1:30 p.m. – 2:30 p.m.
CME/CNE Credit: 1.0
SPEAKER:
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
This is a dramatized look-back at the evolution of hospital culture, from the 1970’s where crisp white uniforms, hand-written notes and smoking in the nurses station prevailed, to today’s colorful scrubs, electronics everywhere, and entire non-smoking campuses. Other significant social and healthcare changes are also reviewed, highlighting how persistence and dedication has made for great strides in safety and patient-centeredness. The session concludes by asking the audience, “what changes will you make now, that will create similar “can you remember when we (did...did not..)” stories, 20 years from now. (e.g. Do you remember when we did surgery without a time-out... did not share medical record with patients.... made needless diagnostic errors?)
Learning Objectives:
• Recognize the influence of culture on evolution of healthcare safety
• Identify specific cultural changes that have improved healthcare
• Articulate current safety issues that can be improved through continued attention to cultural evolution

Oral Abstracts of Current Practice Improvement Strategies
9:45 a.m. – 12:30 p.m.
See pages 23-24 for more information.
Grand Ballroom F-H
CME/CNE Credit: 2.5
MODERATOR:
Michael Kanter, MD, The Permanente Federation and The Southern California Permanente Medical Group
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 researchers present submitted abstracts selected via peer review. During the second part of this session, there will be an interactive discussion with the presenters and experts on strategies for making a difference for patients today.
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
Embracing Uncertainty in Medicine
2:30 p.m. – 3:30 p.m.
CME/CNE Credit: 1.0

SPEAKER:
Arabella Simpkin, MA (Oxon), BMBCh, MRCPCH, MMSc, Massachusetts General Hospital

Although physicians are rationally aware when uncertainty exists, the culture of medicine evinces a deep-rooted unwillingness to acknowledge and embrace it. This session will explore the presence of uncertainty in medicine, identifying the impact it has on learners, clinicians, educators, and patients and how this effects the diagnostic process. It will discuss key implications for the future of medical education, and identify ways to embrace and find strength in uncertainty.

Learning Objectives:
• Recognize the presence of uncertainty in medicine
• Understand the impact uncertainty has on professionals, patients, and on the diagnostic process
• Appreciate ways to embrace uncertainty and discuss implications for the future of medical education

An Interactive Discussion of Pressing Questions in Diagnostic Error
3:45 p.m. – 4:45 p.m.
CME/CNE Credit: 1.0

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

SPEAKERS:
Mark L. Graber, MD, FACP, Society to Improve Diagnosis in Medicine
Linda Kenney, ADME, MITSS Medically Induced Trauma Support Services, Inc.
Elizabeth Mort, MD, MPH, Mass General, Partners HealthCare
Gordon Schiff, MD, Brigham and Women’s Hospital and Harvard Medical School
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies

Using audience participation technology, the audience will be polled on important questions regarding diagnostic error that have arisen over the course of the conference. A moderated discussion will follow with a multi-disciplinary panel of experts weighing in on the audience’s answers and providing their own opinions.

Learning Objectives:
• Describe the breadth of opinions that exist regarding some of the most important questions in the field of diagnostic error
• Identify key areas within the realm of diagnostic error that are in need of greater clarity and further research

Conference Summary
4:45 p.m. – 5:00 p.m.
CME/CNE Credit: .25

SPEAKERS:
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
Robert Trowbridge, MD, Tufts University School of Medicine and Maine Medical Center
DONALD M. BERWICK, MD, MPP, FRCP, INSTITUTE FOR HEALTHCARE IMPROVEMENT

Donald M. Berwick, MD, MPP, FRCP is President Emeritus and Senior Fellow, Institute for Healthcare Improvement and former Administrator of the Centers for Medicare & Medicaid Services. A pediatrician by background, Dr. Berwick has served on the faculty of the Harvard Medical School and Harvard School of Public Health, and on the staffs of Boston’s Children’s Hospital Medical Center, Massachusetts General Hospital, and the Brigham and Women’s Hospital. He currently serves as Lecturer in the Department of Health Care Policy at Harvard Medical School.

AMY C. EDMONDSON, PHD, AM, HARVARD UNIVERSITY

Amy C. Edmondson is the Novartis Professor of Leadership and Management and Senior Associate Dean, Culture & Community at Harvard Business School. Dr. Edmondson is an expert on organizational behavior, including how leadership, team formation and a culture of psychological safety affects team outcomes. She holds a PhD in organizational behavior, AM in psychology, and AB in engineering and design, all from Harvard University. She has written extensively on the effect of teamwork in healthcare including: Building the Future: Big Teaming for Audacious Innovation (Berrett-Koehler, 2016) and Teaming: How Organizations Learn, Innovate and Compete in the Knowledge Economy (JosseyBass, 2012).

DAVID MAYER, MD, MEDSTAR HEALTH

David Mayer, MD, is Vice President of Quality and Safety for MedStar Health. He is responsible for overseeing the infrastructure for clinical quality and its operational efficiency for MedStar and each of its entities. Dr. Mayer also designs and directs system wide activity for patient safety and risk reduction programs. Dr. Mayer was presented with the 2017 Humanitarian Award from the Patient Safety Movement Foundation for his lifesaving achievements in patient safety, and most recently, Dr. Mayer was named by Becker’s Hospital Review as one of 50 Experts Leading the Patient Safety Field.
ADDITIONAL FACULTY

Megan Baker, Wayne State University School of Medicine
Paul Bergl, MD, Medical College of Wisconsin
Denise Connor, MD, University of California, San Francisco
Karen Cosby, MD, CPPS, Rush Medical College
Carmel Crock, MBBS, FACEM, BLitt, Royal Victorian Eye and Ear Hospital
Pat Croskerry, MD, FRCP (Edin), Dalhousie University
Gurpreet Dhaliwal, MD, University of California, San Francisco
Io Dolka, MSc, GreyZone
Laurie Drill-Mellum, MD, MPH, Constellation
Robert El-Kareh, MD, MPH, MS, University of California, San Diego
Paul Epner, MBA, MEd, Society to Improve Diagnosis in Medicine
Patricia Folcarelli, RN, MA, PhD, Beth Israel Deaconess Medical Center
Traber Giardina, PhD, MSW, Michael E. DeBakey Veterans Affairs Medical Center
Michael Gibbs, MD, Carolinas Medical Center
Kelly Gleason, RN, BSN, Johns Hopkins University School of Nursing
Mark L. Graber, MD, FACP, Society to Improve Diagnosis in Medicine
Penny Greenberg, MS, RN, CPPS, CRICO Strategies
Regina Greer-Smith, MPH – Fellow, American College of Healthcare Executives, Healthcare Research Associates, LLC
Helen Haskell, MA, President, Mothers Against Medical Error
Wolf Hautz, MD, MME, Inselspital University Hospital Berne
Harry Hoar Ill, MD, Baystate Health
Rebecca Jones, MBA, BSN, RN, CPHRM, CPPS, Pennsylvania Patient Safety Authority
Michael Kanter, MD, The Permanente Federation & The Southern California Permanente Medical Group
Linda Kenney, MITSS Medically Induced Trauma Support Services, Inc.
Alisa Khan, MD, MPH, Boston Children’s Hospital, Harvard Medical School
Michael Laposata, MD, PhD, University of Texas Medical Branch-Galveston
Susan Mann, MD, Beth Israel Deaconess Medical Center/QualBridge Institute
Stephen Martin, MD, EdM, Barre Family Health Center | University of Massachusetts Medical School
Benji Mathews, MD, FACP, CLHM, HealthPartners and University of Minnesota Medical School
Ashley N. D. Meyer, PhD, Michael E. DeBakey VA Medical Center and Baylor College of Medicine
Sandra Monteiro, PhD, McMaster University
Elizabeth Mort, MD, MPH, Mass General, Partners HealthCare
Timothy J. Mosher, MD, Penn State University College of Medicine
David E. Newman-Toker, MD, PhD, Johns Hopkins University School of Medicine
Geoffrey Norman, PhD, McMaster University
Larry Pennings, MA, DMin, Jefferson Center
Andrew P.J. Olson, MD, University of Minnesota
Kathleen Rea, DNP, RN, ACNS-BC, PCCN, CNL, UVA Health System
Joseph Rencic, MD, Tufts University School of Medicine
Mark E. Reynolds, President & CEO, RMF/CRICO Strategies
Diana Rusz, MPh, Society to Improve Diagnosis in Medicine
Ruth Ryan, RN, BSN, MSW, CPHRM, RiskWriter LLC
Doug Salvador, MD, MPH, Baystate Health
Lisa Sanders, MD, FACP, Yale University School of Medicine
Gordon Schiff, MD, Brigham and Women’s Hospital Center for Patient Safety Research
Sue Sheridan, MBA, MIM, DHL, Consumers Advancing Patient Safety
Dana Siegal, RN, CPHRM, CPPS, CRICO Strategies
Arabella Simpkin, MA (Oxon), BMBCh, MRCPCH, MMSc, Massachusetts General Hospital
Lorie Slass, MA, Society to Improve Diagnosis in Medicine
Kelly Smith, PhD, MedStar Health Research Institute
William Strull, MD, The Permanente Federation
Robert Trowbridge, MD, Tufts University School of Medicine and Maine Medical Center
Leslie Tucker, Society to Improve Diagnosis in Medicine
Peggy Zuckerman, MSEd, Patient Advocate
Laura Zwaan, PhD, Institute of Medical Education Research Rotterdam, Erasmus MC
Use of Targeted Lab Monitoring to Reduce Undiagnosed Hyponatremia and Preventable Hospitalizations


1Kaiser Permanente Southern California, Pasadena, CA
2Kaiser Permanente Southern California, Tustin, CA
3Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX
4Kaiser Permanente Southern California, Los Angeles, CA
5Kaiser Permanente Southern California, Anaheim, CA
6Southern California Permanente Medical Group, Pasadena, CA

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Statement of problem: Lab monitoring of outpatients on certain chronic medications allows potentially serious side effects to be promptly diagnosed before they cause harm. Thiazide diuretics and non-thiazide sulfonamides are commonly prescribed medications but can cause hyponatremia alone or in combination with ACE inhibitors or ARBs. Delayed hyponatremia diagnosis is harmful and may result in unnecessary hospitalization or emergency department (ED) visits.

Description of the intervention or program: Kaiser Permanente Southern California (KPSC) is an integrated delivery system serving >4 million members. KPSC routinely conducts audits of adverse drug-related events and identified undiagnosed hyponatremia as a cause of potentially preventable hospitalizations and ED visits. An outpatient safety program was implemented to monitor sodium levels at shorter intervals than what’s measured for HEDIS guidelines. Electronic clinical surveillance algorithms scanned sodium lab results in the EHR data warehouse to triage patients into 3 risk-based follow-up groups, with repeat labs scheduled at closer intervals for lower sodium levels. Lab orders were created centrally and routed to the prescribing physician with information on patient’s prior sodium value. When the sodium level was too low, an order for medication discontinuation was attached. The program goal was to facilitate prompt diagnosis of hyponatremia and medication discontinuation if needed.

Findings to date: To assess the impact of the outpatient safety program, we examined the combined all-cause hospitalization and ED rate among 504,673 patients on thiazide diuretics or non-thiazide sulfonamides from 2010-2015, divided into 3 phases: pre-implementation of the outpatient safety program (2010-2011), implementation (2012-2013), and post-implementation (2014-2015). The hospitalization/ED rate was 17.8, 17.3, and 16.7%, respectively (χ²-p-value <.0001). Logistic regression was used to estimate the per-year hospitalization/ED rate and found a significant decline, OR=0.980 (95% CI: 0.978-0.982). The per-phase decrease was OR=0.961 (95% CI: 0.956-0.965). Nevertheless, in this observational study, it is possible that other factors explain these reduced hospitalizations. Because hyponatremia and adverse drug codes were under- and variably-utilized, associations could not be reliably estimated for hyponatremia-related outcomes alone. Future analyses will incorporate sodium values.

Lessons learned: KPSC leveraged knowledge from clinical audits and electronic health data to create a novel safety surveillance program to address under-diagnosis of a potentially serious condition. This program could likely be implemented in any system with electronic lab data. For maximum effectiveness, the health system should have the capability to centrally create follow-up lab orders and route them to the prescribing physician with the prior sodium result. This requires institutional leadership’s interest and support.

The Diagnostic Error Index: A Tool for Measuring Diagnostic Errors

R. E. McClead Jr.1, R. J. Gajarski2, G. Noritz2, R. T. Kasick1, K. Kersey1, I. Hill1 and M. K. Kamboji1

1Nationwide Children’s Hospital, Columbus, OH
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Statement of problem: Published literature suggests that diagnostic errors (DE) account for 6-17% of hospital adverse events. Major barriers to reducing DE are the difficulty in detecting these errors in clinical practice and the lack of effective measurement of DE. (NASEM, Improving diagnosis in health care, 2015.)

Description of the intervention or program: We developed a new tool to monitor DE, the DE Index. It is a proxy measure for major DE and a useful tool for evaluating the effectiveness of interventions to reduce DE. The DE Index is modeled after the preventable harm index (Brilli, McClead, Davis, et al., 2010). It consists of 5 elements: 1) non-forensic autopsy reports with class I findings, 2) root cause analyses (RCA) of adverse events with individual and system-related failures consistent with DE, 3) medical record triggers (e.g. missed appendicitis), 4) Morbidity and Mortality cases of DE, 5) other adverse event reports of DE. Potential errors are identified, and a multidisciplinary team meets monthly to adjudicate each case. The DEs are then totaled monthly.

Findings to date: The DE Index plotted on a C-chart from 1/2016-3/2017 revealed 5.8 major DE per month (UCL 11 DE/month). A G-chart showed 5.2 patient days per major DE. A U-chart indicated a major DE rate of 4.37 per 1000 hospital admissions (figure). In 2016, there were 84 DE (13 class I autopsy findings; 8 RCAs; 25 adverse event reports; 14 M&M cases; and 24 DE triggers. Interventions evaluated to date include pan-ophthalmoscope for improved detection of retinal hemorrhages/child abuse; “Vitamin CDE” differential diagnosis mnemonic; clinical decision support software; and “Take 2, Think Do” (Walker & Clarke, 2015).

Lessons learned: The DE Index shows promise in capturing and categorizing DE. While it does not currently capture all DE, it identifies the most serious ones and provides a means for assessing the impact of interventions that might reduce DE. Quality improvement teams can use the DE Index to establish the incidence of DE and evaluate interventions designed to mitigate diagnostic errors using statistical process control charting. DE data is often 3 months delayed to permit completion of non-forensic autopsies and RCAs. Our institutional non-forensic autopsy rate is only 32%. Thus, we established a separate OI team to increase the autopsy rate. Discharged emergency patients with non-specific abdominal pain who return within 10 days has proven to be a reliable trigger for missed appendicitis.
Indicate It – Feedback Loops to Improve Patients’ Understanding of Their Medications

B. K. Mathews¹, R. G. Mahr², S. Wewerka³, B. Brown², L. Volk³ and G. D. Schiff⁴

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³Partners Healthcare, Somerville, MA
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Statement of problem: Since the NAM definition of error includes “explanation of the health problem to the patient,” activities helping patients better understand their diagnosis and related treatments represent a key component of health problem diagnosis education/explanation and are important to advance. Accurate understanding of medication indications can both explain as well as aid patients’ understanding of their diagnosis. This opportunity to take advantage of a key communication channel needs to be leveraged to maximize safety and improve communication in the diagnostic process. This pilot project aims to explore patients’ understanding of their diagnosis and treatment indications and to build evidence examining incorporation of indications into the prescribing process, targeting a vulnerable venue for drug use today—transitions home from hospital admission.

Description of the intervention or program: This is a study taking advantage of a natural experiment comparing 2 hospitals (Brigham and Women’s Hospital/Partners HealthCare and Regions Hospital/Health Partners), one not placing vs. other placing indications on discharge medication prescriptions. The primary aim of this study is to evaluate patient’s knowledge of their medications by comparing medications with and without indications on the discharge prescriptions.

Findings to date: We reviewed 20 eligible patients recently discharged who consented to be called at home (out of 21 patients approached), 20 phone interviews were completed querying patients on their medications (average 9.2/patient), half of which (4.5 meds/patient) were new or changed. Of the medications reviewed during the calls, 95% of the new or changed medication had indications on the prescription, and 58% of resumed medications had indications. Of the new and changed medications with indications (medications targeted for our study), patients knew on their own the reasons they were taking a medication for only 32.5% of these medications. However, patients were able to report the reason for taking their medication for an additional 65.3% of their medications by comparing medications with and without indications on the discharge prescriptions.

Lessons learned: Treatment, indications, and communication of the health problem are all interwoven in the diagnostic process. Medication indications represent an opportunity to improve communication of diagnosis to patients. Adding indications to medication labels can help ensure patients understand their medications and their link to diagnoses. Indications are a powerful lever to improve patients’ understanding of their medications, and thereby potentially improve their understanding of their health problem and overall outcomes in the diagnostic process.

Nursing Diagnosis: An Introduction to Its History and Current Status

G. Harkless

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Background: According to Improving diagnosis in health care (NASEM, 2015), getting the right diagnosis is central to providing safe, high quality care. The definition of diagnosis is the identification of the nature of an illness or other problem by examination of the symptoms or the distinctive characterization in precise terms of a phenomenon. This process is not solely a medical act. Registered nurses, across all levels of education, engage in clinical reasoning and information gathering so as to systematically understand the needs of the patient, family, or community. The process and product of nursing diagnosis has been in place, beginning in 1953 and is sustained through the work of the North American Nursing Diagnosis Association (NANDA-I). Notably, the NASEM report is silent on this important work. To bridge this gap, this literature review highlights key achievements and challenges in the development of nursing diagnoses, and related nursing classification systems, and the status of nursing diagnosis in states’ nurse practice acts.

Methods: CINAHL and MEDLINE were searched for historical articles using the terms nursing diagnosis, NANDA or nomenclature, English, and limited to U.S publications. Further, the UNH library catalogue was searched for the subject heading “nursing diagnosis.”

Results: In 1953, Fry first proposed the idea of using the term diagnosis in nursing practice. In arguing that the act of diagnosing was required for individualized care, Fry noted that “it is estimated that one third to two thirds of all medical practice…consists of treating patients whose symptoms are, to a great extent, the results of emotional stress,” and that the categorization and treatment of these symptoms is nursing practice. Chambers followed this up in 1962 with the first publication that answered, “What is a nursing diagnosis? How is it made and who makes it? What does it accomplish?” and clearly viewed nursing diagnosis as an independent nursing function. In 1973, the North American Nursing Diagnosis Association standardized language was introduced and focused on phenomenon that nurses independently diagnose and treat. Other nursing classification systems followed such as the Omaha System in 1981, Nursing Minimum Data Set in 1988, and the Nursing Outcomes Classification in 1996. This presentation will review the above history and report an updated review of state nurse practice acts’ inclusion of diagnosis language.

Conclusion: Bridging the knowledge gap in the NASEM report regarding nursing diagnosis may help facilitate interprofessional collaboration on efforts to improved diagnosis in healthcare.

Missed Diagnosis of Cerebral Vein Thrombosis in the Emergency Department

A. L. Liberman¹, G. Gialdini², E. Bakradze³ and A. E. Merkler⁴

¹Albert Einstein College of Medicine, New York, NY
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Background: Up to 165,000 cerebrovascular events are misdiagnosed annually in US emergency departments (ED). Cerebrovascular diseases that present with non-specific symptoms are particularly difficult to accurately
ORAL ABSTRACTS (CONTINUED)

In the Face of Uncertainty: Diagnostic Collaboration and Error Evaluation of Physicians in Internal Medicine Training Programs

T. P. Wijesekera, L. Sanders and D. Windish
Yale School of Medicine, New Haven, CT

Methods: We performed a retrospective cohort study using administrative claims data provided to the Agency for Healthcare Research and Quality for its Healthcare Cost and Utilization Project (HCUP). We used data from all ED visits and nonfederal hospitalizations in New York from 2006-2013, California from 2005-2011, and Florida from 2005-2013. We identified a cohort of patients hospitalized for CVT using previously validated International Classification of Diseases, Ninth Revision, Clinical Modification codes. Missed diagnosis of CVT was defined as having an ED discharged diagnosis of ‘benign’ headache or seizure in the 14 days prior to inpatient hospitalization for CVT. Multivariable logistic regression was used to evaluate for patient factors associated with CVT missed diagnosis and determine whether missed diagnosis was associated with adverse patient outcomes (intracerebral hemorrhage, discharge destination, and death). The threshold for statistical significance allowed for an alpha error of 0.05.

Results: We identified 5,966 patients with a hospital discharge diagnosis of CVT using administrative data. Mean patient age was 44 years old (SD 18) and 73% were female. A total of 216 patients (3.6%) had a missed diagnosis of CVT; most missed patients were hospitalized within 7 days of index ED visit (81.5%) and were initially diagnosed with ‘benign’ headache (97%). We did not identify any patient demographic or clinical factors that were associated with a significantly increased risk of CVT missed diagnosis. No pregnant CVT patients (n=758) had a missed diagnosis. Missed diagnosis of CVT was not associated with an increased risk of any pre-defined adverse clinical outcomes.

Conclusion: In a large cohort of CVT patients, missed diagnosis of CVT occurred in nearly 1 out of 30 patients. Future research is needed to improve the accuracy of CVT diagnosis in the ED, particularly among non-pregnant patients.

Diagnosis (time limitations, electronic health system, and patient factors); where diagnostic errors most frequently occur (access/presentation, history collection, physical exam, testing, assessment, referral, follow up). From June 2016 to March 2017, surveys were administered anonymously via e-mail or by paper during educational conferences. We targeted residents and faculty in Traditional Internal-Medicine, Primary Care Internal Medicine, and Internal Medicine-Pediatrics at nine community and University-based training programs in Connecticut. Comparison testing across institution, experience, and self-reported gender was performed using Pearson’s chi-squared test on STATA© software.

Results: Of 484 physicians (87 attendings, 397 residents) targeted, 266 (70 attendings, 196 residents) responded. 158 (59.3%) surveys were in-person and 196 (73.7%) were from residents. Physicians reported collaborating at least weekly with radiologists (70.5% inpatient v. 13.2% outpatient) and pathologists (12.1% inpatient v. 2.6% outpatient) and at least daily in interdisciplinary teams (83.9% inpatient v. 50.4% outpatient). 45.4% of physicians reported explaining their diagnostic thinking and 14.2% of physicians reported using teach back with every patient. Physicians reported at least daily uncertainty of a diagnosis (49.0% inpatient, 40.6% outpatient). Time limitation was reported by 70.1% of physicians as most negatively impacting ability to make a diagnosis. Physicians reported at least weekly occurrence of a diagnostic error (46.0% inpatient, 40.2% outpatient). Physicians most often attributed diagnostic errors to history collection (38.3%).

Conclusion: In this multi-center survey study on diagnostic error, we found varying rates of collaboration with radiologists, pathologists, interdisciplinary teams, and patients, but usually less in the outpatient setting. Physicians regularly reported being uncertain of a diagnosis with time limitations playing a key role. When diagnostic errors did occur, history collection was the most likely etiology.

ORAL ABSTRACTS OF CURRENT RESEARCH AND EDUCATIONAL INNOVATIONS

Tuesday, October 10 | 9:45 a.m. – 12:30 p.m.
Grand Ballroom A-E

2.5 CME/CNE Credit

Diagnostic Discordance in Anxiety and Trauma-Related Psychiatric Disorders

T. Barrera¹, M. Kunik1, H. Singh² and M. Stanley³
¹Michael E. DeBakey VA Medical Center, Houston, TX
²Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX

Background: In September 2015, the Institute of Medicine (IOM) released “Improving Diagnosis in Health Care,” a landmark study on diagnostic error. The report described the epidemiology of, provided a formal definition for, and suggested improvement goals for diagnostic error. Based on the goals of the IOM report, we aimed to assess how Internal Medicine residents and faculty collaborate in the diagnostic process and approach diagnostic errors.

Methods: This is a multicenter, cross-sectional, mixed methods, survey study. Survey content was derived from the IOM’s first and fourth goals for a total of 19 multiple choice questions. Some representative topics and respective answer choices include: frequency of collaboration (with radiologists, pathologists, interdisciplinary teams and patients) uncertainty, and occurrence of errors when making a diagnosis; factors that most negatively affect the
Detecting Patient Misidentification Errors in Diagnostic Radiology Exam Ordering
S. E. Sheehan¹,², M. Brunner¹,², M. Bruno³, N. Safdar¹,² and H. Singh⁴
¹William S. Middleton Memorial Veterans Hospital, Madison, WI
²University of Wisconsin Hospital and Clinics, Madison, WI
³Penn State Hershey Radiology, Hershey, PA
⁴Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX

Video-Oculography-Guided Workups Vs. MRI-First for Stroke Diagnosis in Emergency Department Vertigo and Dizziness Presentations: A Model-Based Cost-Effectiveness Analysis
M. Keita¹, W. Padula² and D. E. Newman-Toker³
¹Johns Hopkins School of Medicine, Baltimore, MD
²Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
³Johns Hopkins University School of Medicine, Baltimore, MD

Medical Diagnosis through Action: Evaluating a Point-of-Care Cognitive Aid for Junior Residents
M. Kilian¹, S. Monteiro², J. Sherbino² and C. Hicks¹
¹University of Toronto, Toronto, ON, Canada
²McMaster University, Hamilton, ON, Canada

Providers’ Emotional Reactions to Patients in the Emergency Department: A Qualitative Investigation of Emotional Experiences, Effects on Diagnostic Reasoning, and Strategies to Reduce Error
L. M. Isbell¹, E. Kimball¹ and E. D. Boudreaux²
¹University of Massachusetts Amherst, Amherst, MA
²University of Massachusetts Medical School, Worcester, MA

Framing of Clinical Information Affects Physicians’ Diagnostic Accuracy
I. Popovich¹, N. Szecket² and A. Nahill²
¹Waitakura DHB, Auckland, New Zealand
²Auckland Hospital, Auckland, New Zealand

ORAL ABSTRACTS OF CURRENT PRACTICE IMPROVEMENT STRATEGIES
Tuesday, October 10 | 9:45 a.m. – 12:30 p.m.
Grand Ballroom F-H
2.5 CME/CNE Credit

Opportunities to Improve Diagnosis in Acute Care – Findings from a Multi-Disciplinary Expert Panel
¹University of Michigan, Ann Arbor, MI
²Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL
³C.S. Mott Children’s Hospital, Ann Arbor, MI
⁴Children’s National Health System, Washington, DC
⁵Cook County Hospital (Stroger) and Rush Medical School, Chicago, IL
⁶University of Michigan, Ann Arbor, MI
⁷Brightpoint Health, Brooklyn, NY
⁸Morristown Medical Center and Goryeb Children’s Hospital, Morristown, NJ
⁹Center for Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX
¹⁰Children’s Hospital of Michigan, Detroit, MI
¹¹Children’s Hospital of Philadelphia, Philadelphia, PA
¹²The New York Academy of Medicine, New York, NY
¹³Kaiser Permanente NW, Clackamas, OR
¹⁴Cincinnati Children’s Medical Center, Cincinnati, OH
¹⁵University of Louisville, Louisville, KY
¹⁶The Children’s Hospital of Philadelphia, Philadelphia, PA
¹⁷University of Texas Health Science Center at Houston, Houston, TX
¹⁸Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX

Improving Diagnostic Skills with Real-Time Feedback through the Human Dx Technology System
R. S. Manesh¹, S. Chatterjee², S. Nundy³ and A. P. J. Olson⁴
¹Johns Hopkins, Baltimore, MD
²NIH, Bethesda, DC
³The Human Diagnosis Project, Dunn Loring, VA
⁴University of Minnesota, Minneapolis, MN
Improving Diagnostic Reliability By Obtaining Radiology Consultation Prior to Ordering a Diagnostic Exam
G. L. Hufford¹, M. L. Bruse¹ and M. H. Kanter²
¹Southern California Permanente Medical Group, Woodland Hills, CA
²Southern California Permanente Medical Group, Pasadena, CA

Prioritizing Diagnostic Safety Efforts in the Physician Office Practice Setting
S. Kravet¹, M. Bhatnagar², M. Dwyer³ and H. Singh⁴
¹Johns Hopkins Medicine, Baltimore, MD
²MCIC Vermont LLC, New York, NY
³MCIC, Vermont LLC, New York, NY
⁴Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, TX

The LOOP Study: A Multi-Center, Interdisciplinary Initiative to Improve Diagnostic Reasoning and Patient Safety through Consistent, Rapid Feedback
J. N. Lessing¹, E. M. Caruso², J. Clemons³, C. J. DeMott⁴, K. P. Lane⁵, B. K. Mathews⁶, J. K. Schaefer⁷, G. A. Turner⁸, B. Wheeler⁹ and A. P. J. Olson⁵
¹University of Colorado, Denver, CO
²Thomas Jefferson University Hospital, Philadelphia, PA
³University of Colorado, Aurora, CO
⁴Virginia Tech Carilion School of Medicine, Roanoke, VA
⁵University of Minnesota, Minneapolis, MN
⁶HealthPartners and University of Minnesota Medical School, St. Paul, MN
⁷University of Colorado, Colorado Children’s Hospital, Aurora, CO

Initial Results from the Kaiser Permanente Gross Hematuria SureNet Screening Program
P. Elliott¹, R. Loo², C. Ng³, R. Timmins⁴, M. H. Kanter⁵ and E. Rhee⁶
¹Kaiser Permanente, Los Angeles, CA
²Kaiser Permanente, Oakland, CA
³Kaiser Permanente, Panorama City, CA
⁴Kaiser Permanente, Pasadena, CA
⁵Southern California Permanente Medical Group, Pasadena, CA
⁶Kaiser Permanente, San Diego, CA

Ambulatory Safety Nets for Lung and Colon Cancer to Prevent Missed and Delayed Diagnosis
S. Desai¹, L. Holtz¹ and T. Sequist²
¹Brigham and Women’s Hospital, Boston, MA
²Partners HealthCare, Boston, MA

Capturing Diagnostic Errors in Incident Reporting Systems
K. T. Gleason¹, S. Peterson¹, E. Kasda¹ and D. Newman-Toker²
¹Johns Hopkins University, Baltimore, MD
²Johns Hopkins University School of Medicine, Baltimore, MD
POSTER SESSION 1: SCIENTIFIC ABSTRACTS

Sunday, October 8 | 5:00 p.m. – 6:00 p.m.
Waterfront Pavilion

1-1. Accuracy of a Machine Learning Based Ddx Generator
   J. Maude

1-2. Inter-Rater Agreement for the Diagnosis of Stroke Versus Stroke Mimic after Thrombolysis

1-3. Dissecting Choosing Wisely Recommendations for More Prudent Diagnostic Decisions
   G. D. Schiff, L. Volk and S. Myers

1-4. Diagnostic Errors: The Complex Relationship between Cognitive and System-Related Factors
   M. Harrod, M. Quinn, M. Manojlovich, K. Fowler, A. Gupta, S. Saint and V. Chopra

1-5. Trends in Incidence and Liability Costs from Diagnostic Error in Inpatient Settings: Insights from the National Practitioner Data Bank
   A. Gupta, A. Kachalia, A. Synder, S. Flanders, K. Fowler, S. Saint and V. Chopra

1-6. Diagnosis in the Hospital: The Intern’s Environment
   J. Forman, R. Sankaran, M. Quinn, M. Harrod, S. Winter, K. Fowler, S. Saint and V. Chopra

1-7. Physician Perspectives on System-Level Changes to Improve the Process of Diagnosis
   M. Quinn, J. Forman, M. Harrod, S. Winter, K. Fowler, S. Saint and V. Chopra

1-8. Focused Ethnography to Improve Diagnosis in Teaching Hospitals: Introducing the Michigan Model of Diagnosis
   V. Chopra, M. Harrod, S. Winter, J. Forman, M. Quinn, S. Krein, K. Fowler, H. Singh and S. Saint

1-9. Using Ethnography to Understand the Diagnostic Process in a Pediatric Intensive Care Unit

1-10. Erreur De Diagnostic: Comparing Malpractice Claims in France and the U.S.
     F. Fuz and A. R. Hamming

1-11. Experienced Nurse Know so Many Patients, so Many PRN Orders
     T. Watari, Y. Tokuda, T. Moromizato, S. Okazaki, K. Onigata and H. Kanda

1-12. Relationship between Diagnostic Interval and Pancreatic Ductal Adenocarcinoma (PDAC) Resectability: A Single-Center Retrospective Analysis
     A. Deshwar, D. Torto, E. Sugar, D. Laheru and M. Yarchoan

1-13. Medical Student Concerns about Diagnostic Error
     J. Klein, C. Delany, M. D. Fischer, S. Trumble and D. Smallwood

1-14. The Association between Patient Safety Culture and Medical Office Problems That Could Lead to Diagnostic Error
     J. R. Campione, R. E. Mardon and K. M. McDonald

1-15. Computer-Based Differential Diagnosis Support Tool Improves Patient Satisfaction and the Diagnostic Accuracy of Skin Conditions

1-16. A Typology of Experienced Physician Descriptions of Diagnostic Intuition in Generalist Practice

1-17. An Evaluation of the P.T.T. Advisor Mobile Application for Improving Clinical Laboratory Test Ordering and Diagnosis

1-18. Electronic Trigger-Based Measurement of Delays in Diagnostic Evaluation of Cancer: Time to Think Implementation
     A. N. Meyer, D. Murphy, V. Vaghani, E. Russo, D. F. Sittig, L. Wei, L. Wu and H. Singh

1-19. When Patient Challenges to Diagnosis Are Desirable
     K. F. Simacek

1-20. Test Result Notification Via the Patient Portal: An Exploration Patients’ Experiences

1-21. Are Emergency Department to Emergency Department Transfers at Risk for Diagnostic Errors? a Needs Assessment for a Resident Curriculum
1-22. Understanding the System Factors Influencing Patient Risk: Does Overcrowding and the Presence of a Handoff Increase the Likelihood of Return within 72 Hours?
S. Crane, A. Tegge, R. Muthukattil, K. Coleman and S. H. Parker

1-23. Informing Action through Evidence: Examining Patient Perspective, Interpretation, and Use of Test Results from Patient Portals

1-24. Burden of Missed Diagnostic Opportunities in General Practice in the United Kingdom
S. Cheraghi-Sohi, F. Holland, D. Reeves, H. Singh, A. Esmail, R. Morris, N. Small, C. de Wet and S. Campbell

1-25. Relationship between Student Self-Assessment of Diagnostic Confidence Versus Diagnostic Performance Against a Panel of Case Vignettes
F. J. Papa, J. Alexander and R. Jones

1-26. Risk Factors for Care-Gaps in Abnormal Lab Results Follow-up within a Large Integrated Health System

1-27. Factors Associated with Delayed Follow-up of Abnormal Labs: A Qualitative Exploration of Primary Care Physicians’ Perspectives

1-28. When What You Say Is Not What They Hear: Critical Patient Information Agreement after Communication Model Instruction
K. Dore, A. Patel and G. Regehr

1-29. Beyond Dr. Google: The Evidence about Consumer-Facing, Digital Tools for Diagnosis
M. L. Millenson, J. L. Baldwin, L. Zipperer and H. Singh

1-30. Perceptions and Experiences of Clinicians and Radiologists in Discussing Diagnosis
A. P. J. Olson, A. Lama, E. R. Cohen and J. P. Hogg

1-31. Continued Research on Factors of Unexpected Readmissions within 7 Days after PRIOR Discharge from a Japanese ACUTE Hospital
I. Kitagawa and Y. Shirota

1-32. Diagnostic Error in Stroke Mimics with Discordant Admission and Discharge Diagnoses
Z. Inam, T. A. Berger, D. Hess, S. Mondell and K. Shenberger

1-33. Pulling Back the Curtain: Education and Reporting on Diagnostic Errors of Physicians in Internal Medicine Training Programs
T. P. Wijesekera, L. Sanders and D. Windish

1-34. Bibliometric Study of Diagnostic Delay in Year 2016: Are We Making Progress?
J. Wofford and C. Campos

1-35. Trends in Diagnosis-Related Paid Medical Malpractice Claims Using Data from the National Practitioner Data Bank
A. Schaffer

1-36. Measuring the Effect of Point-of-Care Ultrasound on Diagnostic Confidence in the Emergency Department: A Prospective Study
J. Gonzales, F. G. Garcia, N. Levin, P. Yeo, E. Ball and G. Baty

1-37. Laboratory Medicine Interdisciplinary Team Actions to Avert Diagnostic Adverse Events with Interpretative Risk Stratification of Significantly Abnormal Patterns of High Risk Blood Test Results
E. M. Travers

1-38. Incidence of Diagnostic Error Among Patients Hospitalized for CVT at a Single Urban Center
E. Bakradze and A. L. Liberman

1-39. A Correlation between Disease Prevalence and Treatment Threshold Probability May Render the “Base Rate Neglect” Cognitive Bias Unimportant
R. M. Hamm, D. C. Scheid, F. J. Papa and J. Van Den Ende

1-40. Stroke Risk after Outpatient Diagnosis of Benign Vertigo Varies across Specialties

1-41. US Federal Research Funding on Diagnostic Error Substantially Lags Its Public Health Burden

1-42. Diagnostic Paths to Pediatric Hypertension
1-43. Patient Perceived Breakdowns in Diagnosis and Treatment in Urgent Care
K. M. Smith, C. L. Hemmelgarn, K. M. Baker and C. A. Goeschel

1-55. Congestive Hepatopathy – a Mimicker of Alcoholic Hepatitis
T. D. Filardo

POSTER SESSION 1: CLINICAL VIGNETTES
Sunday, October 8 | 5:00 p.m. – 6:00 p.m.
Waterfront Pavilion

1-44. Back to Basics: Using the Physical Exam to Diagnose the Patient
N. L. Bennett and C. Marcinak

1-56. A Mimic of Acute Coronary Syndrome
T. Hirosawa and T. Shimizu

1-45. The Best Place to Hide a Leaf Is in a Forest.
A. Ito, Y. Tokuda, Y. Kataoka, H. Ito and A. Tamekane

1-57. Diagnostic Error in Globalization Era: Bias and Its Solution
D. Ikechi and T. Shimizu

1-46. A Case of Confirmation Bias Involved with a Syndrome Described in Uppercase As Combination of Symptoms and Signs
T. Suzuki, H. Kobayashi and Y. Tokuda

1-58. How We Almost Missed Six Gastric Ulcers
L. Faiver, A. Kanj and D. Levine

1-47. Delayed Diagnosis: Malignant Spinal Cord Compression Presenting with Chest Pain
L. Colibao, J. Lu, C. Brown and P. Guerrero

1-59. If You Can Dream It, You Can Do It
S. Tobe, K. Nakano and K. Akazawa

1-48. A Series of Unfortunate and Shocking Events
P. C. Roldan

1-60. Cognitive Bias: A Blindfold
M. L. Jones

1-49. Deep Vein Thrombosis, Is Not Always Simple, a Rare Presentation of a Common Disease
W. Ibrahim, A. Hossam, L. Osman, A. Hassan, A. Subahi and A. M. Osman

1-61. Malignancy : A Phantom Menace
T. Shizuku, K. Nakano and K. Akazawa

1-50. The Crisis Under the Pacific
M. Zhou and J. Rencic

1-62. A New Super-Villain Strikes Under the Cover of DKA
C. Schifeling

1-51. Lessons Learnt from a Case of “Hypertensive Emergency”
H. Wang

1-63. Where There’s Smoke There May be Eosinophilic Pneumonia
B. Lau and S. Igarashi

1-52. Fever in an Infant
D. D. Hanba

1-64. Vitamin Is What You Need
K. Kano, K. Nakano and K. Akazawa

1-53. The Dangers of Anchoring in the ED: A Case of Mistaken Labial Abscess
H. Beauchamp

1-65. Hoofbeats of a Striped Horse: Gastric Ulceration Caused By Colchicine Toxicity in a Medically Complex Patient
M. Kantor, V. Krol and M. Sebasky

1-54. Crystals in Time May Come: Misunderstanding Gout Lab Limitations

1-66. Troponinemia: Red Flag or Red Herring
M. A. Waheed, S. Atif and J. Akhtar

1-55. Of Black Swans
S. Atif and J. Akhtar

1-67. A Diagnostic Cue
B. Nunnally, G. Schillo and J. Akhtar

1-68. Where There’s Smoke There May Be Eosinophilic Pneumonia
B. Lau and S. Igarashi

1-69. An Unusual Cause of Septic Emboli – the Dangers of Anchoring on the Heart
M. Flesher, B. Smith, W. Follansbee, S. Tilstra and E. Bonifacino

1-70. Overlooking the Aberrant Lab: A Case of Hypercoagulability and Confirmation Bias
B. Smith
POSTER SESSIONS (CONTINUED)

POSTER SESSION 2: APPLIED INNOVATIONS
Monday, October 9 | 7:00 a.m. – 8:45 a.m.
Commonwealth Ballroom Salon 1

2-1. Medical Communication Deficiencies Solved with Pathologytracker
S. Smith

2-2. Discussing Diagnostic Error: Knowledge and Perceptions of a Pediatric Hospital Medical Staff
J. A. Grubenhoff, S. I. Ziniel and D. Hyman.

2-3. A Tale of Two Programs. Reducing Diagnostic Error: The Johns Hopkins and Medstar Experience
N. Muganlinskaya and S. Kotwal


2-5. The CYCLE of Epidemiologic and Diagnostic Error in Medicine
M. Gusack

2-6. The Present State of Clinical Terminology and Diagnostic Nosology Hinders the Reduction of Diagnostic Error in Medicine
M. Gusack

2-7. A Proposed MODEL for Presenting Laboratory Test Results to Reduce Diagnostic Error in Medicine
M. Gusack, M. McConnell and J. McCormack

2-8. A Self-Directed Virtual Simulation Tool for Working up Patients While Learning Diagnostic Reasoning

2-9. Diagnostic Errors: Impact of an Educational Intervention on Pediatric Primary Care
J. N. Walsh

2-10. The Clinical Reasoning Case Conference: Use of Principles from “Example Based Learning” in a Conference Format
D. DiNardo, T. Painter, G. Tabas, T. Bui, W. Follansbee, M. McNeil and S. Tilstra

2-11. Listening to Reason: Strategies for Instilling a Culture of Clinical Reasoning in Medical Education
E. Bonifacino, D. DiNardo, S. Tilstra, T. Painter, M. McNeil and W. Follansbee

2-12. Atrius Health Safety Nets: Prostate Cancer
S. Uiterwyk and M. Kelly

2-13. Initial Results from the Kaiser Permanente Gross Hematuria Surenet Screening Program
P. Elliott, R. Loo, C. Ng, R. Timmins, M. H. Kanter and E. Rhee

2-14. Application of Fault Tree Analysis for Insights into Diagnostic Error
D. Rogith, M. S. Iyengar and H. Singh

S. Apgar, A. Panchal, B. Monash and L. Sommers

C. A. Pilcher

2-17. Technology That Actually Brings Us Back to the Bedside – a Study of Point of Care Ultrasound to Improve Patient’s Understanding of Diagnostic Process
B. K. Mathews and A. P. J. Olson

2-18. An Innovative Step-Wise Clinical Reasoning Conference for Pre-Clinical Medical Students
E. Bonifacino, M. McNeil, W. Follansbee and D. DiNardo

2-19. Teaching Second Year Medical Students to Prevent Diagnostic Errors via DX: Diagnostic Excellence Online Virtual Patient Modules
L. G. Broutman, A. Sterenstein, C. Velagapudi, A. Katz, V. Reed and A. P. J. Olson

K. W. Blansit, F. W. Torriani, R. Taplitz and R. El-Kareh

2-21. The Right Reasons: A Faculty Development Workshop for Teaching Clinical Reasoning
T. P. Wijesekera, B. Brown and N. Lomayesva

S. Tilstra, D. DiNardo, G. Tabas, T. Bui, T. Painter and W. Follansbee
2-23. Empowering Residents to Embrace and Communicate about Uncertainty in the Diagnostic Process  
A. P. J. Olson, E. Borman-Shoap, K. Mathias and M. Olson

2-24. Multidisciplinary Teamwork and the Pathology Diagnosis: Improving Internal Quality Assurance?  
B. Kane

POSTER SESSION 2: CLINICAL VIGNETTES

Monday, October 9 | 7:00 a.m. – 8:45 a.m.  
Commonweath Ballroom Salon 1

2-25. Delayed Diagnosis of Arterial Dissection and Stroke: A Learning Opportunity  
K. Marshall, B. Hohmuth and H. Singh

2-26. Diagnostic Momentum Resulting in Delayed Diagnosis of Pulmonary Embolism  
D. L. Varela, E. Armenia and J. N. Lessing

2-27. Scleroderma Overlooked By Multiple Specialists Despite of Typical Presentation  
Y. Yabushita, T. Wakai, M. Saijo and U. Nakagawa

2-28. Two Cases of Polymyalgia Rheumatica Nearly Underwent Unnecessary Surgeries  
M. Saijo, T. Wakai, Y. Yabushita and U. Nakagawa

2-29. Recurrence of Amoebic Colitis 1 Year after Previous Diagnosis of Non-Specific Colitis  
K. Inoue

2-30. A Guillain-Barre Syndrome Mimicry, Myasthenia Gravis  
T. Nakanishi, O. Hamada and M. Nakai

2-31. An Understanding of Appropriate Workup and Latency of Symptom Onset May Assist in Diagnosing Atypical Presentations of Malaria.  
B. Ingalls

2-32. Diagnostic Error Caused By Copy and Paste of Templates on Electronic Health Records  
Y. Takahashi and I. Kitagawa

2-33. Hypovolemic Shock Masked By Sympathomimetic Medication  
T. Kodama, K. Kinoshita and H. Kobayashi

2-34. The Dangers of Anchoring Bias: A Case of Obstructive AKI Admitted As Heart Failure Exacerbation from Cardiology Clinic  
L. S. Head, T. Jespersen Nizamic and M. Anderson

2-35. A Pregnant Patient with Leg Pain  
A. Winfield-Dial and K. Cosby

2-36. Don’t Fix Hickham’s Dictum  
M. Kurihara, K. Nakamura and Y. Tokuda

2-37. Temporary and Asymptomatic Cause of Hypophosphatemia  
M. Kurihara and Y. Tokuda

2-38. This Time Around: Repeated Lymph Node Biopsy Revealed Malignant Lymphoma  
S. Watanuki

2-39. Interstitial Pneumonia Induced By “Japanese Kampo Medicine” and an Accidental Challenge Test"  
Y. Miyoshi and T. Abe

2-40. Elevated Alkaline Phosphatase: Bone, Liver or Both?  
A. Kanj, N. Abdallah and A. Daoud

2-41. A Diagnostic Dilemma with Conflicting Treatments  
J. Rocco and S. Tilstra

2-42. Canagliflozin: Masking Hyperglycemia in DKA  
A. Ahmed, J. Kaur and D. Levine

2-43. Military Medical Evaluation Board Role in Labeling of Misdiagnosed Case of Crohn's Disease  
J. Dawdy and P. Schoenfeld
EXHIBIT INFORMATION

EXHIBITORS

EXHIBIT TIMES (Exhibitors to be located in the Grand Ballroom Foyer)

<table>
<thead>
<tr>
<th>SUNDAY, OCTOBER 8</th>
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<th>MONDAY, OCTOBER 9</th>
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<td>7:00 a.m. – 8:45 a.m.</td>
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<td>12:15 p.m. – 1:00 p.m.</td>
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<th>TUESDAY, OCTOBER 10</th>
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<td>9:30 a.m. – 9:45 a.m.</td>
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<td>12:30 p.m. – 1:30 p.m.</td>
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<tr>
<td>3:30 p.m. – 3:45 p.m.</td>
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PARTICIPATE IN PASSPORT TO PRIZES!

Complete your Passport to Prizes card, and submit it to the registration desk by 3:45 p.m. on Tuesday. The winner will be announced during the Conference Summary.
SAVE THE DATE

DIAGNOSTIC ERROR IN MEDICINE 11TH INTERNATIONAL CONFERENCE

NOVEMBER 4-6, 2018 • HYATT REGENCY NEW ORLEANS • NEW ORLEANS, LA