BUILDING BETTER HEALTHCARE SYSTEMS

The Society For Health Systems Conference & Expo Brings Together Management Engineers, Clinicians, Academicians and other Healthcare Professionals to Build the Knowledge and Skills Required to Successfully Manage and Improve Quality Operations and Complex Healthcare Environments

February 17 - 19, 2011  |  The Peabody Hotel   |  Orlando, Fla.

www.SHSConference.org

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The user-defined proactive analysis environment allows for identifying problems before they occur and alerting appropriate personnel to take corrective action before they impact the throughput of the operation.
As the nation continues to focus on the costs and viability of the U.S. healthcare system, it is now more important than ever that we engage ALL clinical, quality and performance improvement professionals in the effort to create a sustainable, efficient, and low-cost system. In the Society for Health Systems, we feel that the BEST WAY to achieve these goals is the inclusion of engineering principles, concepts, and methodologies in the effort to optimize system performance and increase patient safety.

We welcome participants from throughout the healthcare industry as we share and learn the latest and most successful efforts to create better delivery system for all Americans. The Society for Health Systems Conference and Expo 2011 will focus on healthcare quality and process improvement.

The education sessions and workshops will cover a wide variety of topics and will feature the addition of the clinical tract. The Society for Health Systems has a growing membership of physicians and nurses interested in performance and quality improvement tools, methodologies, techniques, and systems. We would like to continue to rapidly expand our communications and interactions to this important group, so as to bring more clinicians to a deeper understanding of the applications of engineering principles in healthcare.

Therefore, the Society for Health Systems 2011 Conference will feature the new clinical track, preconference workshops, and special opportunities to mingle and learn with others in the healthcare field.
## SCHEDULE AT A GLANCE

### THURSDAY, FEB. 17

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>7 a.m. - 5 p.m.</td>
<td>Conference registration desk open</td>
<td>Blue Spring Foyer</td>
</tr>
<tr>
<td>8 a.m. - 5 p.m.</td>
<td>Pre-Conference Workshops</td>
<td>Rainbow Spring I</td>
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<tr>
<td></td>
<td><em>Identifying and Preventing Error in Healthcare Systems</em></td>
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<tr>
<td>8 a.m. - Noon</td>
<td>Pre-Conference Workshop</td>
<td>Blue Spring</td>
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<td></td>
<td><em>clean Hospital: Teaching lean Tools Effectively in Healthcare v2.0</em></td>
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<tr>
<td>1 p.m. - 5 p.m.</td>
<td>Pre-Conference Workshop</td>
<td>Rainbow Spring I</td>
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<tr>
<td></td>
<td><em>Improving Dialysis and Outpatient Treatment Quality, Flow and Costs</em></td>
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<tr>
<td>5 p.m. - 6 p.m.</td>
<td>Welcome Reception</td>
<td>Manatee Spring 1-2</td>
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### FRIDAY, FEB. 18

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<tr>
<th>Time</th>
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<th>Location</th>
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<tbody>
<tr>
<td>7 a.m. - 5 p.m.</td>
<td>Conference registration desk open</td>
<td>Peabody Grand Ballroom TUV Foyer</td>
</tr>
<tr>
<td>7 a.m. - 7:45 a.m.</td>
<td>Continental Breakfast</td>
<td>Peabody Grand Ballroom S</td>
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<tr>
<td>7:45 a.m. - 7:55 a.m.</td>
<td>Welcome</td>
<td>Peabody Grand Ballroom S</td>
</tr>
<tr>
<td>8 a.m. - 9:50 a.m.</td>
<td>Concurrent Sessions</td>
<td>Various rooms – see Speaker Matrix for specific rooms</td>
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<tr>
<td>10 a.m. - 11 a.m.</td>
<td>Keynote Presentation</td>
<td>Peabody Grand Ballroom S</td>
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<td></td>
<td><em>Kathy Kilmer, Director, Industrial Engineering for Walt Disney Parks and Resorts U.S.</em></td>
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</tr>
<tr>
<td>11 a.m. - 12:15 p.m.</td>
<td>Dedicated Exhibits</td>
<td>Peabody Grand Ballroom TUV</td>
</tr>
<tr>
<td>11 a.m. - 6:30 p.m.</td>
<td>Exhibit Hall open</td>
<td>Peabody Grand Ballroom TUV</td>
</tr>
<tr>
<td>11 a.m. - 12:15 p.m.</td>
<td>Poster Session – authors will be at their posters</td>
<td>Peabody Grand Ballroom TUV</td>
</tr>
<tr>
<td>11 a.m. - 6:30 p.m.</td>
<td>Poster viewing</td>
<td>Peabody Grand Ballroom TUV</td>
</tr>
<tr>
<td>12:15 p.m. - 1:30 p.m.</td>
<td>Lunch with Reports from the leadership of SHS</td>
<td>Peabody Grand Ballroom S</td>
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<tr>
<td>1:40 p.m. - 2:30 p.m.</td>
<td>Concurrent Sessions</td>
<td>Various rooms – see Speaker Matrix for specific rooms</td>
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<tr>
<td>2:30 p.m. - 3 p.m.</td>
<td>Refreshment Break in Exhibit Hall</td>
<td>Peabody Grand Ballroom TUV</td>
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<tr>
<td>3:10 p.m. - 5 p.m.</td>
<td>Concurrent sessions</td>
<td>Various rooms – see Speaker Matrix for specific rooms</td>
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<tr>
<td>5 p.m. - 6:30 p.m.</td>
<td>Networking Reception in Exhibit Hall</td>
<td>Peabody Grand Ballroom TUV</td>
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<tr>
<td>7 p.m. - 9 p.m.</td>
<td>Dutch Treat Dinner</td>
<td>BB King’s Blues Club – Pointe Orlando</td>
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<td><em>(Depart from Peabody lobby at 6:45 p.m.) Ticket must be purchased in advance - limited availability</em></td>
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### SATURDAY, FEB. 19

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<tr>
<th>Time</th>
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<th>Location</th>
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<tbody>
<tr>
<td>7 a.m. - 4:30 p.m.</td>
<td>Conference Registration desk open</td>
<td>Peabody Grand Ballroom TUV Foyer</td>
</tr>
<tr>
<td>7 a.m. - 7:50 a.m.</td>
<td>Department Leader’s Breakfast Session</td>
<td>Celebration 15</td>
</tr>
<tr>
<td>7:30 a.m. - 8 a.m.</td>
<td>Breakfast with the Exhibitors</td>
<td>Peabody Grand Ballroom TUV</td>
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SCHEDULE, FEB. 19 (CONTINUED)

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<tbody>
<tr>
<td>7:30 a.m. – Noon</td>
<td>Exhibit Hall open</td>
<td>Peabody Grand Ballroom TUV</td>
</tr>
<tr>
<td>7:30 a.m. – Noon</td>
<td>Poster viewing</td>
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</tr>
<tr>
<td>8 a.m. - 10:50 a.m.</td>
<td>Concurrent Sessions</td>
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<td>Dedicated Exhibits</td>
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<tr>
<td>10:50 a.m. – Noon</td>
<td>Poster Session – authors will be at their posters</td>
<td>Peabody Grand Ballroom TUV</td>
</tr>
<tr>
<td>Noon - 1 p.m.</td>
<td>Lunch with Student Competition Winning Presentations</td>
<td>Peabody Grand Ballroom S</td>
</tr>
<tr>
<td>1:10 p.m. - 3 p.m.</td>
<td>Concurrent Sessions</td>
<td>Various rooms – see Speaker Matrix for specific rooms</td>
</tr>
</tbody>
</table>
| 3:10 p.m. - 4:30 p.m. | Keynote Presentation<br>
Kenneth J. Musselman, Strategic Collaboration Director, Regenstrief Center for Healthcare Engineering, Purdue University | Peabody Grand Ballroom S        |

*Schedule subject to change.

KEYNOTE SPEAKERS

Kathy Kilmer<br>
Director of Industrial Engineering for Walt Disney Parks & Resorts U.S.

Ms. Kilmer will speak Friday, February 18 on how healthcare organizations can “engineer magic” into their customer experiences like Disney does in their customer experiences with the help of the Disney IE function.

Kilmer is the director of industrial engineering for Walt Disney Parks & Resorts U.S., which includes the world’s largest vacation destination, one of the largest single-site employers in the world, and home of one of the largest centralized industrial engineering teams. She has the challenge of improving the effectiveness, efficiency, and overall profitability across all areas of the business from front-of-house operations (e.g., six theme parks, two water parks, 20 resorts, two Downtown Disney areas, the Disney Cruise Line, etc.) to back-of-house operations (e.g., four textile plants, three distribution centers, asset maintenance, energy management, etc.), as well as sales and marketing and new development around the world.

Kenneth J. Musselman, Ph.D.<br>
Strategic Collaboration Director, Regenstrief Center for Healthcare Engineering, Purdue University

Dr. Musselman will speak Saturday, February 19 on the general topic of how healthcare organizations are applying academic research to transform healthcare delivery.

Musselman is the strategic collaboration director for the Regenstrief Center for Healthcare Engineering at Purdue University, where he helps direct multidisciplinary research teams across engineering, science and management to improve healthcare delivery. Previously, he served as a director for Cantilever Technologies, a high-tech firm specializing in Web-based business activity monitoring and response. Before that, he served as a senior product manager for several world-leading ERP companies where he was responsible for value-add reseller relationships as well as supply chain and advanced planning and scheduling software product design. He has also served as a vice president for Pritsker Corporation, where he directed all corporate consulting and training activities for their simulation-based, capacity management and scheduling software.
**PRE-CONFERENCE WORKSHOPS**

**THURSDAY, FEBRUARY 17, 2011**

**FULL-DAY WORKSHOPS**

**cLEAN HOSPITAL: TEACHING LEAN TOOLS EFFECTIVELY IN HEALTHCARE V2.0**
8 A.M. - 5 P.M. - ROOM: BLUE SPRING
Keith Poole and Nimish Patel, Hospital Corporation of America, Joe Swartz, St. Francis Hospital

Building upon the successful half-day workshop from the SHS Conference 2010, we offer a full-day workshop that turns attendees into effective teachers of both basic and advanced lean tools, with even more specific skills and techniques for educating healthcare staff at all levels in the organization.

**HALF-DAY WORKSHOPS**

**IDENTIFYING AND PREVENTING ERROR IN HEALTHCARE SYSTEMS**
8 A.M. - NOON - ROOM: RAINBOW SPRING I
Patrick Patterson, Texas Tech University

Preventable events resulting from medical errors are often blamed on human error. However, a systems approach views this human error as outcome rather than cause and requires a complete evaluation of the circumstances. A systems way of thinking to reduce incidents and accidents in healthcare will be a key feature of the presentation.

**IMPROVING DIALYSIS AND OUTPATIENT TREATMENT QUALITY, FLOW AND COSTS**
1 P.M. - 5 P.M. - ROOM: RAINBOW SPRING I
Matt Morrissette, More Effective Consulting LLC, and Doug Gruener, Fresenius Medical Care Inc.

Outpatient and especially dialysis clinic professionals will be challenged to break down silos and communication barriers while eliminating waste and building systems to design and implement the best lean Dialysis Clinic. Students will conduct 4 kaizens and use value stream mapping, waste elimination, line balancing, pull system implementation and refinement, poka yoke-mistake proofing, lean value design, and sustaining methods. This is a hands-on interactive series of exercises, sub-group strategizing, break-out brainstorming and student-teacher learning.
Learn how a new hospital, Henry Ford West Bloomfield, is integrating Baldrige, DNV (Det Norske Veritas) Accreditation and ISO standards in alignment with a PDCA and lean continuous improvement philosophy in order to reach new levels of quality in healthcare. (ALL LEVELS)

This talk will highlight the work by the University of Michigan Health System (UMHS) in developing and implementing a ‘lean in daily work’ model. lean Coaches Brendon Weil and Kevin DeHority will describe the lean management system put in place to surface and resolve problems that negatively impact the customer experience. Features of the presentation will include: “Value metrics” established for the area and displayed visually; daily problem solving built around regular faculty and staff huddles; leadership standard work implemented by the leadership team to respond to problems and monitor trends - all displayed visually in the area; structured problem solving built into existing meetings for problems with the highest trends; and lean solutions documented in a knowledge transfer repository. You won’t want to miss hearing how UMHS took action to simultaneously improve operational measures, customer service and their lean culture. (BASIC LEVEL)

We consider multi-facility OR scheduling with surgical case transfer between multiple facilities of a network. Goal programming approach is adopted for a multi-criteria decision-making process where the criteria are surgery location preference, improved utilization, reduced overtime, and reduced patient wait time. Results of application to the Veterans Affairs Hospital System are reported. (ALL LEVELS)

The intellectual assets of companies are frequently found in shared folders that tend to get “messy” due to lack of standards and access control. 5S is a workplace organization methodology: sorting, straightening, systematic cleaning, standardizing, and sustaining. This hospital case study shows the power of 5S for managing intellectual assets. (IMMEDIATE LEVEL)

This session focuses on increasing efficiency while minimizing risk with Dynamic Simulation and live tracking powered by SimTrack. (ALL LEVELS)
LEADERSHIP AND MANAGEMENT TRACK - CELEBRATION 9-10
LEADING ME/PI DEPARTMENTS FOR MAXIMUM IMPACT - A PANEL DISCUSSION - PART 1 OF 2
Steve Escamilla, John Muir Health, James Benneyan, Northeastern University, Ron McDade, MedStar Health, John Hansmann, Tenet Healthcare and Tracey Lindsey, Baylor Health Care System

As reform pressures on healthcare grow, organizations are calling on ME/PI leaders to develop structures to help improve quality while reducing cost. This session will provide a diverse panel’s view on factors related to an ME/PI department’s ability to succeed in our evolving industry. (ADVANCED LEVEL)

FRIDAY, FEBRUARY 18, 2011 | 9 A.M. - 9:50 A.M.

CLINICAL AND QUALITY TRACK - CELEBRATION 1-2
STANDARDIZING PATIENT TRACK - IMPROVE OUTCOMES IN CARDIAC SURGERY
Christian Rizo and Pam Stinehart, OhioHealth

Discover how OhioHealth focused their efforts on reducing sternal wound infection by leveraging lean tools such as standard work, process maps, daily gemba walks and performance metrics leading to standardization of evidence-based practices from doctors’ offices to case management. This presentation will demonstrate lean tools utilized and results achieved. (BASIC LEVEL)

LEAN SIX SIGMA TRACK - CELEBRATION 3-4
THE LEAN IN DAILY WORK MODEL AT UMHS - A BLUEPRINT FOR LEAN TRANSFORMATION - PART 2 OF 2
Brendon Weil and Kevin DeHority, University of Michigan Health System

This talk will highlight the work by the University of Michigan Health System (UMHS) in developing and implementing a ‘lean in daily work’ model. Lean Coaches Brendon Weil and Kevin DeHority will describe the lean management system put in place to surface and resolve problems that negatively impact the customer experience. Features of the presentation will include: “Value metrics” established for the area and displayed visually; daily problem solving built around regular faculty and staff huddles; leadership standard work implemented by the leadership team to respond to problems and monitor trends - all displayed visually in the area; structured problem solving built into existing meetings for problems with the highest trends; lean solutions documented in a knowledge transfer repository. You won’t want to miss hearing how UMHS took action to simultaneously improve operational measures, customer service and their lean culture. (BASIC LEVEL)

PATIENT FLOW TRACK - CELEBRATION 5
IMPROVING FLOW BY PREDICTING ED-TO-INPATIENT ADMISSION DEMAND
Jordan Peck, MIT Engineering Systems Division/New England Health Care Engineering Partnership

Using the intersection between the ED and inpatient unit as an example, the author explores techniques for predicting patient pathways as a step toward finding a practical method for improving downstream preparation and general patient flow. The presenter looks at both statistical methods as well as expert opinions. (BASIC LEVEL)

POTPOURRI TRACK - CELEBRATION 6
CHANGE: DON’T LEAVE HOME WITHOUT IT!
Duke Rohe, M.D. Anderson Cancer Center

Are you ready for what Washington calls healthcare reform? We can expect waves of change requirements not part of our existing plans for organizational improvement. Are you prepared to help the organization to change and improve? Just being great at process change will no longer be enough. This presentation introduces models of change that will make things a lot easier. Dialogue: the art of thinking together (collective change), Engineering Organizational Change (mechanics of change), Run the Business/Change the Business Strategy (simultaneous change), 7 Levels of Change (innovation), and 10 Tips and Popcorn Thoughts (personal change). Change: Don’t leave home without it! (ALL LEVELS)
Participants will discuss hospitals transforming their operations using a combination of workflow re-engineering and technology. To transform a hospital, leadership must change its mindset (interconnected system versus silos) and be given tools for reinvention. Transformation results include improvements in various areas of hospital operations, including financial, quality, and satisfaction. (ALL LEVELS)

As reform pressures on healthcare grow, organizations are calling on ME/PI leaders to develop structures to help improve quality while reducing cost. This session will provide a diverse panel’s view on factors related to an ME/PI department’s ability to succeed in our evolving industry. (ADVANCED LEVEL)

Two students, with the guidance of their professor, take their summer to travel around to critical access hospitals throughout the state of Montana. In the two weeks they spent at each location, they analyzed the process, developed countermeasures, and implemented change. This presentation shows how these changes can be made. (BASIC LEVEL)

The A3 methodology creates problem solving through people. It engages customers and gives them a clear concise path toward their process improvement goals. Along with the PDCA cycle, the A3 report is an important tool to have in one’s toolbox. (ALL LEVELS)

Relative to manufacturing, healthcare possesses distinct characteristics with respect to pursuing and achieving lean flow. This presentation will highlight those distinctions, and illustrate when certain classic approaches for achieving lean patient flow (pull systems, one-piece flow, leveling, etc…) will or will not work in a healthcare delivery system. (ALL LEVELS)
POTPOURRI TRACK - CELEBRATION 6
BEST PRACTICES IN HOME HEALTH MEDICAL EQUIPMENT SUPPLY CHAINS
Ashlea Bennett, University of Arkansas

Home health care providers must ensure the right medical supplies are available in the patient home at the time of each visit. Providers nationwide are surveyed to determine best practices in procuring and delivering supplies to patient homes. Trends are identified along dimensions such as agency affiliation and patient density. (BASIC LEVEL)

IT TRACK - CELEBRATION 7-8
LESSONS LEARNED FROM MOVING TO WEB-BASED SURGICAL REQUESTS
Phil Troy, Les Entreprises TROYWARE; Trixie Mairura and Dana Porubska, The Sir Mortimer B. Davis Jewish General Hospital; Nadia Lahrichi, CIRRELT

To re-engineer its surgical request submission process, the Chief of Surgical Services at the Jewish General Hospital mandated that surgeons submit these requests via a Web-based capability that only accepted properly completed requests. Lessons learned include the need to get user involvement from involved areas ASAP, persist with software vendors, address unexpected issues after system roll-out, and demonstrate that the future state would be significantly better. (BASIC LEVEL)

LEADERSHIP AND MANAGEMENT TRACK - CELEBRATION 9-10
UTILIZING LEAN IN HOSPITALS TO ESTABLISH OPERATIONAL STABILITY FOR FUTURE CPI SUCCESS
Brock Husby, Altarum Institute & University of Michigan

One of the greatest barriers to continuous process improvement (CPI) is often a lack of operational stability in the departments where improvement efforts are being focused. This lack of operational stability is closely tied to a lack of core management and leadership competencies. This presentation will focus on looking at the issues of operational stability and process improvement sequentially in the context of lean methodologies and philosophy. (ALL LEVELS)

FRIDAY, FEBRUARY 18, 2011 | 3:10 P.M. - 4 P.M.

CLINICAL AND QUALITY TRACK - CELEBRATION 1-2
THE JOURNEY TO ELIMINATING PREVENTABLE HARM
Cindy Kirch, Janet Berry and Terry Davis, Nationwide Children’s Hospital

Nationwide Children’s is striving to eliminate preventable harm by 2013. The presentation will discuss their use of a preventable harm index, methods and advantages to “branding” your patient safety program, and examples of “how to” videos containing vignettes to demonstrate various tools/behaviors. (INTERMEDIATE LEVEL)

LEAN SIX SIGMA TRACK - CELEBRATION 3-4
USING LEAN TO EFFECTIVELY SELECT AND DEPLOY TECHNOLOGY IN HEALTHCARE
Brock Husby, Altarum Institute & University of Michigan

The investment in and use of technology in healthcare is a significant driver in the increasing costs of healthcare as well as a common outcome of process improvement activities. While these technologies represent significant capabilities and specifications, their impact on organizational performance is usually less than expected and they are often only partially deployed. lean’s capability to eliminate this disconnect between expected and realized technological outcomes will be explored. (ALL LEVELS)
The purpose of this work is to develop a decision support tool to allocate consulting rooms to medical specialties considering the physician availabilities. We propose an optimization model that maximizes the utilization levels. The model improves the utilization in 89% on average. (INTERMEDIATE LEVEL)

How many quality improvement projects should you undertake? How many people should be trained in lean or Six Sigma? Should you develop internal training, or “hire out” all training? The presenter will show how to link improvement projects to your strategic objectives and how to optimize your return on investment. (INTERMEDIATE LEVEL)

Because of the dependence healthcare organizations across the spectrum of care will have on the EHR, it is imperative that the EHR is always accessible, data is secure, and the system is reliable. Unfortunately, many existing hospitals do not have the necessary IT infrastructure in place to properly support an EHR. More worrisome is that many of these hospitals aren’t even aware of the existing IT issues they are up against. It is crucial that these IT infrastructure issues that have been overlooked, ignored and swept under the rug year after year are now fixed. (INTERMEDIATE LEVEL)

This session is an overview of a successful management engineering department supporting a large academic healthcare institution. The focus is to present key tools and techniques to help other ME departments adapt to the challenging and dynamic pace of modern healthcare organizations. Key take-away includes department structure, project sources, key initiatives, and department value-added/ROI. (ALL LEVELS)

This presentation describes in detail the load on the ER physicians. The presentation explores the process that the physicians follow, the durations of the various activities as well as the distances traveled throughout a shift in the ER. We also discuss the communication load on the physicians, and the preferred layout. (INTERMEDIATE LEVEL)
LEAN SIX SIGMA TRACK - CELEBRATION 3-4
USING QUALITY TOOLS TO DESIGN EFFICIENT PHARMACY DELIVERY SYSTEMS
Valentine Boving, M.D. Anderson Cancer Center

M.D. Anderson Cancer Center is ranked by U.S. News & World Report as the premier cancer center in the nation. Its Central Pharmacy prepares more than 1,000 IV medications and chemotherapy drugs daily. Using spaghetti maps, value stream maps, and kaizen, the center reduced TAT by 24% by eliminating the meds delivery queue. (INTERMEDIATE LEVEL)

PATIENT FLOW TRACK - CELEBRATION 5
IMPROVING OPERATING ROOM FIRST-CASE ON-TIME STARTS
Shannon Harris, Greenville Hospital System, and Kevin Taaffe, Clemson University

The project team systematically identified key process parameters that affect the delivery of consistent preoperative care in order to improve on-time starts for first cases of the day. Fundamental engineering management methodologies such as process mapping, simulation, and statistical analysis helped to achieve the on-time start improvement. (ALL LEVELS)

POTPOURRI TRACK - CELEBRATION 6
EVOLUTION OF A PROCESS: FROM VISION TO IMPLEMENTATION
Tara Danneffel and Brooke Wessman, Henry Ford Health System

Designing, integrating and aligning various processes across a new facility can be a challenging task. Understand the road map used to successfully implement the various patient and work flow processes for a new 300-bed hospital that were safe, patient-focused, and actually worked. (ALL LEVELS)

IT TRACK - CELEBRATION 7-8
A LEAN APPROACH TO IMPLEMENTING CPOE
Kevin Martin, Maestro Strategies

CPOE (computerized physician order entry) is being adopted at many hospitals around the country. This presentation focuses on implementing CPOE using general lean principles, to optimize the outcome for the most efficient processes for physicians, nurses, ancillary staff, and, most importantly, the patient. (ALL LEVELS)

LEADERSHIP AND MANAGEMENT TRACK - CELEBRATION 9-10
LESSONS FROM IMPLEMENTING AN OUTPATIENT CLINIC - SIMULATION IS NOT ENOUGH
Lawrence Rosenberg and Dana Porubska, McGill University and the Sir Mortimer B. Davis Jewish General Hospital, Nadia Lahrichi, CIRRELT

While simulation was a critical component in the replacement of a pre-admission test center with a new presurgical screening clinic, more important were the human factors involved in change management; the need to develop a multi-layered and iterative approach to effect change; and the need for transparency, persistence and objective data to establish buy-in. (BASIC LEVEL)

SATURDAY, FEBRUARY 19, 2011 | 8 A.M. - 8:50 A.M.

CLINICAL AND QUALITY TRACK - CELEBRATION 1-2
OPERATING ROOM UTILIZATION STUDY
Jihan Wang and Kai Yang, Wayne State University, Susan Yu, John D. Dingell VA Medical Center

The presentation discusses the most influential factors impacting the utilization of operating rooms. Statistical analysis is conducted to identify the key factors and how important each factor is. (ALL LEVELS)
LEAN SIX SIGMA TRACK - CELEBRATION 3-4
LEAN SYSTEM FOR MANAGING (LSFM) … THE FORGOTTEN CHANGE MANAGEMENT TOOL - PART 1 OF 2
Patrick Lucansky, VIPGroup
The session outlines a systematic approach to provide the necessary input to ensure efficient economic operation of the business. Proper use of the tool will increase both the overall effectiveness of leaders and their ability to reach established goals and objectives on a daily basis. LSFM is an integration program for organizational mobilization and sustained culture change. It provides the organization with an opportunity to build a new culture aligned with corporate objectives of work velocity, quality, and training. By carefully crafting the message of LSFM, the mobilization campaign can be instrumental in promoting the understanding, principles and practices critical to a successful culture change. (INTERMEDIATE LEVEL)

PATIENT FLOW TRACK - CELEBRATION 5
IT’S TIME TO GET RID OF EMERGENCY DEPARTMENT TRIAGE
Michael A. Meloni Jr., St Lucie Medical Center
Emergency department triage and registration has made the emergency department “The Berlin Wall” rather than “The Front Door” of most hospitals. It’s time to scrap emergency department triage and replace it with “Pull ’til Full”, bedside registration, and initial assessment and treatment protocols immediately initiating medical treatment upon patient arrival. (INTERMEDIATE LEVEL)

POTPOURRI TRACK - CELEBRATION 6
A CRASH COURSE IN HEALTHCARE SYSTEMS ENGINEERING
Sandra Garrett and Samantha Sissel, Clemson University
The need for industrial and systems engineers to improve the quality and efficiency of healthcare delivery has never been greater. The presenters will provide a high-level overview of the U.S. healthcare system and begin to discuss how industrial engineering tools can be used to improve patient safety and healthcare delivery. (BASIC LEVEL)

HUMAN FACTORS TRACK - CELEBRATION 7-8
WORKLOAD AND SITUATIONAL AWARENESS IN THE EMERGENCY DEPARTMENT
Scott Levin, Lauren Sauer, Gabor Kelen and Thomas Kirsch, Johns Hopkins University School of Medicine, Dan France, Vanderbilt University Medical Center
A human factors study of the relationship between workload and situational awareness (SA) in the emergency department (ED) will be presented. Adapted methods for measuring workload and SA for individual physicians in healthcare settings are demonstrated. The gap and need for human factors work in the ED will be discussed. (INTERMEDIATE LEVEL)

LEADERSHIP AND MANAGEMENT TRACK - CELEBRATION 9-10
SUSTAINING FINANCIAL PERFORMANCE THROUGH A LARGE-SCALE SYSTEMWIDE PERFORMANCE IMPROVEMENT INITIATIVE
Lynn Alters, WellStar Health System
Improving operating margin 40% is not an endeavor that many would think possible without draconian measures or hiring outside consultants. WHS CEO, Dr. Greg Simone, and his leadership team developed and led Opportunities 2010, which has created stronger leaders and will soon exceed its initial goal threefold. Initiated at the forefront of economic downturn, Opportunities 2010 positioned WHS to remain fiscally strong and stay on track with its aggressive strategic plan. The ability to be innovative in its approach created an environment of trust and respect among its staff, physicians and community. (INTERMEDIATE LEVEL)
<table>
<thead>
<tr>
<th>Track</th>
<th>Title</th>
<th>Presenters</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>CLINICAL AND QUALITY TRACK</strong>&lt;br&gt;<strong>CELEBRATION 1-2</strong>&lt;br&gt;A STUDY OF OPERATING ROOM LABOR PERFORMANCE</td>
<td>Jihan Wang and Kai Yang, Wayne State University, Susan Yu, John D. Dingell VA Medical Center</td>
<td>Labor costs make up the majority of OR operation costs. It is important to monitor and manage this resource to its efficiency. This presentation proposes several labor performance metrics and addresses the relation among the new metrics and existing OR performance metrics. OR management may want to focus on how to improve the labor metrics to enhance the OR efficiency. (ALL LEVELS)</td>
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<tr>
<td><strong>LEAN SIX SIGMA TRACK</strong>&lt;br&gt;<strong>CELEBRATION 3-4</strong>&lt;br&gt;LEAN SYSTEM FOR MANAGING (LSFM) … THE FORGOTTEN CHANGE MANAGEMENT TOOL - PART 2 OF 2</td>
<td>Patrick Lucansky, VIPGroup</td>
<td>The session outlines a systematic approach to provide the necessary input to ensure efficient economic operation of the business. Proper use of the tool will increase both the overall effectiveness of leaders and their ability to reach established goals and objectives on a daily basis. LSFM is an integration program for organizational mobilization and sustained culture change. It provides the organization with an opportunity to build a new culture aligned with corporate objectives of work velocity, quality, and training. By carefully crafting the message of LSFM, the mobilization campaign can be instrumental in promoting the understanding, principles and practices critical to a successful culture change. (INTERMEDIATE LEVEL)</td>
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<tr>
<td><strong>PATIENT FLOW TRACK</strong>&lt;br&gt;<strong>CELEBRATION 5</strong>&lt;br&gt;INCREASING PATIENT FLOW USING LEAN SIX SIGMA AND INFORMATION TECHNOLOGY</td>
<td>Robert Furrey, Baptist Health Medical Center</td>
<td>Baptist Health Medical Center – Little Rock successfully developed and implemented a real-time patient tracking software that increased the operational efficiency of their Cath Lab, Vascular Lab, and CPRU. The project started with a lean Six Sigma assessment of the departments identifying communication and lab turnaround as their primary constraints. (ALL LEVELS)</td>
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<td><strong>POTPOURRI TRACK</strong>&lt;br&gt;<strong>CELEBRATION 6</strong>&lt;br&gt;ENTERPRISE LEAN SIX SIGMA IN A HOSPITAL ED</td>
<td>Sandy Furterer, Holy Cross Hospital</td>
<td>There is profound attention and pressure on healthcare organizations to become more efficient in the ways that they deliver services. This is especially true in hospitals. This presentation will provide an emergency department (ED) case study integrating lean, Six Sigma and systems engineering principles and tools to enhance enterprisewide performance excellence. (ALL LEVELS)</td>
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<tr>
<td><strong>HUMAN FACTORS TRACK</strong>&lt;br&gt;<strong>CELEBRATION 7-8</strong>&lt;br&gt;USING PERSONALITY TRAITS TO IMPROVE NURSES’ JOB-FIT AND RETENTION</td>
<td>Stephanie Means and David Lyth, Western Michigan University</td>
<td>Nursing is a discipline with many facets. Not only do job demands differ in each department, but also the personality characteristics among the nurses within these departments. Investigating the traits of good nurses will provide a means to improving job-fit, performance, and retention to meet the demands associated with nursing. (ALL LEVELS)</td>
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<tr>
<td><strong>LEADERSHIP AND MANAGEMENT TRACK</strong>&lt;br&gt;<strong>CELEBRATION 9-10</strong>&lt;br&gt;GUERILLA PROJECT MANAGEMENT TACTICS FOR OPERATIONALIZING A NEW HOSPITAL</td>
<td>Lori Doyle, Henry Ford Health System</td>
<td>The focus on construction timelines may distract from the detailed planning required to deliver an effective healthcare operation. The involvement of strong operational leadership in readiness planning is vital to the success of any building project. Learn how one organization refined project management tools to manage a large-scale project. (ALL LEVELS)</td>
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</table>
Hospital readmissions are a huge concern throughout healthcare, including as many as 20% of all hospitalizations (30-day readmit rate) and resulting in over $25 billion annually. This presentation discusses several systems engineering, management science, and operations research approaches to measure, model and reduce unplanned readmissions. (INTERMEDIATE LEVEL)

This presentation focuses on the question “How is VSM methodology is successfully used to visualize waste, reduce cost and improve quality in healthcare?” It provides various examples of VSM, metrics used to measure the success, and future research direction on the observed gaps found in the literature. (INTERMEDIATE LEVEL)

This presentation will describe the areas our process improvement team addressed to increase throughput in the emergency room and PACU areas by monitoring discharges to create inpatient bed availability. A multidisciplinary team focus was used to create a complete discharge in a timely manner. (BASIC LEVEL)

Patient wait time and access to care have long been a recognized problem in modern outpatient healthcare delivery systems. An effective approach is presented to improve the quality and efficiency of healthcare delivery by developing a physician schedule, a patient arrival schedule considering ancillary services, and a dynamic overbooking policy. (ALL LEVELS)

Information flow in healthcare is becoming more complex as information technology systems are added shifting the role of providers. Human factors can be used to understand these information flows and to study the impact of these new technologies. Outpatient prescribing will be used as a real-world example. (BASIC LEVEL)

This presentation uses an enterprise systems perspective to review the literature and describe the current system of care for post-traumatic stress and related conditions in the U.S. military and presents initial recommendations for system improvement. This review presents implications for the use of an enterprise systems perspective to describe and ultimately improve a large-scale healthcare system and presents areas for future research. (ALL LEVELS)
SATURDAY, FEBRUARY 19, 2011 | 1:10 P.M. - 2 P.M.

CLINICAL AND QUALITY TRACK - CELEBRATION 1-2
BUILD SUSTAINABLE PROCESSES: TOOLS TO ENABLE CLINICAL IMPROVEMENT FOR EVIDENCE-BASED CARE
Marcia Jackson, Premier Inc.

This presentation will familiarize attendees with the proven benefits of visually representing high-level clinical process flow of the best practices within evidence-based care. The presenter has demonstrated that engaged departments can effectively develop and deploy appropriate hard-wired, sustainable processes to efficiently and reliably close performance gaps at the indicator level. (INTERMEDIATE LEVEL)

LEAN SIX SIGMA TRACK - CELEBRATION 3-4
LEAN IN HEALTHCARE MATERIALS MANAGEMENT – EVALUATION OF 5S’S BEST PRACTICE
Sanjith Venkateswaran, Isabelina Nahmens and Laura Ikuma, Louisiana State University

This research will showcase effective means of managing supplies in healthcare by adopting 5S technique. The presentation will walk through three implementation approaches of 5S in three hospitals’ central warehouses and finally evaluate the best 5S practice, which is a combination of inventory management techniques and process improvement tools that showed the greatest improvement. (INTERMEDIATE LEVEL)

PATIENT FLOW TRACK - CELEBRATION 5
REDUCING LENGTH OF STAY USING SERVICE LINE LEAN CONCEPTS
Jonathan Flanders, Juran Institute, Inc.

A 400-bed hospital reduced average LOS for hospitalist patients by one day using service-line-level lean concepts. The multidisciplinary team, including hospitalists, used lean tools such as value stream mapping, voice of the customer, and rapid improvement events to implement and sustain solutions in 100 days. (ALL LEVELS)

POTPOURRI TRACK - CELEBRATION 6
CASE STUDY: PROCESS IMPROVEMENT FOR PHYSICIAN RELATIONSHIPS FROM RECRUITING TO ONBOARDING
Jeff Ratliff, OhioHealth

Lean is applicable in all processes including the identification, recruiting, hiring and onboarding of physicians. This case study details the process used to identify and implement various improvements. Hospitals largely use physician recruiting to grow their business, and streamlining the process creates a huge advantage. (BASIC LEVEL)

HUMAN FACTORS TRACK - CELEBRATION 7-8
UNDERSTANDING PRE-HOSPITAL ADVERSE EVENTS
Roger Price, Ambulance Service of New South Wales

Incident data mining and a survey were used to build a picture of what adverse events look like in this large and diverse Australian ambulance jurisdiction. (BASIC LEVEL)

LEADERSHIP AND MANAGEMENT TRACK - CELEBRATION 9-10
LEAN SERVICE LINES IN HEALTHCARE
Er Ralston and Brian Stockhoff, Juran Institute Inc.

Many healthcare providers have turned to lean to facilitate cost reduction, improved patient satisfaction, and outcomes. However, lean cannot reach its full potential within the constraints of traditional organizational structures. By implementing lean through a clinical service line infrastructure, healthcare can break through organizational constraints and attain greater performance levels. (ALL LEVELS)
SATURDAY, FEBRUARY 19, 2011 | 2:10 P.M. - 3 P.M.

**CLINICAL AND QUALITY TRACK - CELEBRATION 1-2**

**IMPLEMENTATION OF SYSTEM WIDE LEAN LAB MANAGEMENT**
Richard Zarbo and Rita D'Angelo, Henry Ford Health System

This session describes cultural and leadership challenges and successful sustaining structures associated with the continuation of the Henry Ford Production System lean Quality initiative applying a consistent culture of problem-solving by extending our core quality culture to 6 acute hospitals and 26 medical center laboratories throughout the Henry Ford Health System in Detroit. (INTERMEDIATE LEVEL)

**LEAN SIX SIGMA TRACK - CELEBRATION 3-4**

**REDESIGNING OPERATING ROOM TURNOVER USING A LEAN APPROACH**
Anne Myers, Rudy Santacroce and Marisa Farabaugh, Shands HealthCare

The otolaryngology (ENT) and thoracic and cardiovascular surgery (TCV) services at a large academic medical center are the focus of a lean initiative to reduce between-case delays, expedite last patient incision closure to new patient incision, and decrease compounding effects of stacked turnover delays. (BASIC LEVEL)

**PATIENT FLOW TRACK - CELEBRATION 5**

**DYNAMIC VITALS MONITORING FOR PATIENT PRIORITIZATION IN THE EMERGENCY DEPARTMENT**
David Claudio, Montana State University

This research focuses on the development of a dynamic decision making model for patient prioritization in the emergency department (ED). (ALL LEVELS)

**POTPOURRI TRACK - CELEBRATION 6**

**POLARITY MANAGEMENT: IDENTIFYING AND MANAGING “UNSOLVABLE PROBLEMS” IN HEALTHCARE**
Laurie Levknecht, CPM Resource Center-An Elsevier Business

Practice or technology? Standardized care or individualized care? Mission or margin? When there does not seem to be an answer, consider Polarity Management™. Experience polarities as interdependent pairs, and consider how to identify and manage common healthcare polarities. Increase your ability to appreciate the tensions within complex situations, and sustain transformative change. (BASIC LEVEL)

**HUMAN FACTORS TRACK - CELEBRATION 7-8**

**REDUCING PATIENT FALLS THROUGH THE APPLICATION OF HUMAN FACTORS ENGINEERING**
Brian Fillipo, Bon Secours Virginia hospitals

Using a collaborative format, Bon Secours Virginia hospitals have been testing and implementing strategies based on the principles of human factors engineering to help both patients and clinicians do the “right thing” to reduce patient fall risk. This presentation will review the process used, lessons learned and results. (BASIC LEVEL)

**LEADERSHIP AND MANAGEMENT TRACK - CELEBRATION 9-10**

**DETERMINATION AND QUANTIFICATION OF FACTORS INFLUENCING NURSING WORKLOAD**
Dries Myny, University Hospital of Ghent

No workload measurement tool will ever be able to account for all existing influencing factors of the nursing workload. Nevertheless, based on the results of this mixed method study, it will be possible to account for the main, measurable factors with an unambiguous impact on the nursing workload. (INTERMEDIATE LEVEL)
POSTER SESSIONS

Posters will be on display in the Exhibit Hall - Peabody Grand Ballroom T-V during exhibit hours. Poster authors will be at their posters on Friday, February 18, 11 a.m. – 12:15 p.m. and Saturday, February 19, 10:50 a.m. – Noon, to discuss their work and answer your questions.

POSTER 18
A LEAN JOURNEY TO OVERHAUL AN ENDOSCOPY PRACTICE
Authors: Kathleen Scheele and Adrienne Palmer, Mayo Clinic

The Endoscopy Practice needed an overhaul. This presentation describes the lean journey that included an initial assessment and four kaizen events over 18 months. Using lean tools helped to improve processes, eliminate waste, decrease patient delays and improve the bottom line.

POSTER 26
DESIGNING IMPROVED FLOW WITH VALUE STREAM MAPS
Author: Dale Hershfield, ValuMetrix Services

This session explores value stream mapping as a design tool to improve flow, reaching beyond this tool’s most common use for documenting current and future state work processes. Session content will focus on value stream design principles and guidelines and then apply them in healthcare settings.

POSTER 28
A NEW APPROACH FOR HEALTHCARE SIMULATION
Authors: Francisco Ramis, UBB, Jose Sepulveda, University of Central Florida, Liliana Neriz, Universidad de Chile

This poster presents the advantage of using an object-oriented modeling approach versus the traditional process-oriented approach of discrete-event simulation in order to decrease patient waiting time; improve patient flow; and better utilize physicians, nurses, and other resources to satisfy the demand for healthcare services.

POSTER 33
RPIW WORKSHOP TO REDUCE OPERATING ROOM FIRST-CASE START DELAYS
Authors: Matthew Banas and Britta Neugaard, James A. Haley VA Center

This presentation will highlight lean improvement work being conducted at a large VA Medical Center. The poster will cover information on the steps taken by a multidisciplinary team to reduce delays in surgery first-case starts.

POSTER 40
IMPROVING ADVANCE DIRECTIVE EDUCATION AND COMPLETION RATES
Authors: Jennifer McIntosh and Nancy Martinez, Indianapolis Roudebush VA Medical Center

This presentation will define what an advance directive is and provide a summary of a reorganization of a medical center’s process in completing advance directives that increased patient interest and staff understanding.

POSTER 43
APPLYING THE ANALYTICAL HIERARCHY PROCESS TO IMPROVING PATIENT THROUGHPUT TIME
Authors: Elizabeth Gentry, Abigail Wooldridge and Gail DePuy, University of Louisville

This presentation applies the analytical hierarchy process to improving patient throughput time in a Children’s Hospital Emergency Room. It is important for hospitals to use a decision making process when deciding the order of improving conflicts and events. These results will help hospital administrators make better decisions on implementation strategies.
POSTER 44
SURGICAL SERVICES PATIENT TRACKING - MAXIMIZING PATIENTS, SURGEONS, AND STAFF COMMUNICATION
Authors: Evan Lewis and Cynthia Pearcy, HCA
This poster describes a peri-operative services patient tracking tool that provides real-time data based on RN documentation in HCA’s existing clinical documentation software (Meditech). The tracking tool allows the surgical staff, patient’s family and surgeon’s office staff to view a snapshot of the patient’s progress through the peri-operative course.

POSTER 50
IMPLEMENTING A PRODUCTIVITY MANAGEMENT SYSTEM IN A REAL-WORLD HOSPITAL
Author: Gavin Richards, MedStar Health
This session tracks the often-painful evolution of a hospital’s department-level productivity monitoring tools, from ad-hoc paper records to integration with a pre-existing automated systemwide tool. The importance of systemwide data definitions will be discussed, and solutions to the roadblocks encountered along the path to full implementation will be shared.

POSTER 52
HUMAN FACTORS ANALYSIS OF A WIRELESS CLINICAL INFORMATION SYSTEM FOR THE OPERATING ROOM
Authors: Dan France, Damon Michaels, Neal Sanders and Michael Higgins, Vanderbilt University Medical Center, Scott Levin, Johns Hopkins University School of Medicine
Vigilance, a wireless, handheld monitoring system, has been implemented in Vanderbilt’s operating rooms (OR) to improve communications, and anesthesiologists’ situational awareness, workload and workflow. Vigilance displays streaming video from the ORs, output from physiological monitors, and OR schedule and status, and it provides access to other information systems.

POSTER 53
HOLISTIC QUALITY ASSESSMENT OF HEALTHCARE ENTERPRISES WITH A ZACHMAN-BAYESIAN FRAMEWORK
Authors: Ramakanth Gona and Eric Smith, University of Texas at El Paso
A modern healthcare enterprise needs to competently engage opportunities as a coherently functioning enterprise, addressing customer and societal concerns, business realities, system architectures, technology potentials, novel medical device implementations, as well as the realistic daily operational capabilities of its work force. A new holistic quality assessment framework addresses this dynamic environment.

POSTER 59
A SYSTEMATIC APPROACH TO LAYOUT DESIGN FOR CLINIC SPACE
Author: Kambiz Farahmand, North Dakota State University
Identifying and utilizing a systematic approach to developing clinical space layout for various functional departments in a medical facility to highlight interactions, improve flow, increase utilization, reduce non-value-added activities, and improve access. Presenting layout alternatives as part of recommendations a la carte for management decision making process is most popular.

POSTER 60
SPECIALTY CLINICS AND LAB – IMPROVED FLOW, LAYOUT AND EFFICIENCY
Author: Kambiz Farahmand, North Dakota State University
Presentation focuses on how to improve patient flow and facilitate the efficient functioning of specialty clinics such as the mental health clinic and stress laboratory in a medical center. Utilization of space is improved based on the current and future needs of the department to include consideration for all constituents involved including staff.
POSTER 61
A SYSTEM’S JOURNEY TO AN IMPROVED VALUE ANALYSIS PROCESS
Author: Jennifer Gaines and Jamie Jenkins, Premier Inc.
Understanding the value analysis process is crucial in identifying supply savings. In this session, participants will learn how BHS supply chain leadership redesigned their team and processes using the lean method of value stream analysis. The presenters will share their success using an outcomes-based, value-driven approach.

POSTER 67
OCcupATIONAL THERAPY ACCESS TO CARE
Authors: Jonathon Schuller and Kristin Fallieras, Nationwide Children’s Hospital
The Occupational Therapy Department at Nationwide Children’s Hospital significantly reduced the waitlist using lean/Six Sigma methodologies during an internal Operational Excellence Training Program. Through a review of capacity, workflow processes, and patient management we achieved our goal of providing a therapy appointment within 45 days from the identification of need.

POSTER 69
USING AN ESTABLISHED FRAMEWORK TO GUIDE SUCCESSFUL HEALTHCARE TECHNOLOGY IMPLEMENTATION
Author: Laurie Levknecht, CPM Resource Center-An Elsevier Business
The American Reinvestment and Recovery Act (ARRA) has designated $19 billion to fund health information technology. These resources must be used to enhance the quality and effectiveness of care. To sustain this work over time, there will need to be a merging of technology and practice. Use a proven framework-driven approach to transform both culture and practice.

POSTER 72
PRESSURE ULCER STAGING GAGE R AND R
Author: Ethling Hernandez, Holy Cross Hospital
Consistent pressure ulcer staging is an important part of any hospital as it guides appropriate patient care as well as hospital quality metrics. A Gage R and R was performed in Holy Cross Hospital to assess the reliability and repeatability of nurses in staging ulcers.

POSTER 75
IMPROVING ON-TIME DELIVERY OF MEDICAL/SURGICAL EQUIPMENT TO NURSING UNITS
Authors: Setenay Kara and Steve Swift, Nationwide Children’s Hospital
The project aims to increase the on-time deliveries from 77% to 95% without increasing cost. The two bottlenecks are peak demand around 7 a.m. and cleaning too many equipment in advance. The solutions are changing the staff schedule and implementing par levels for clean equipment. Switching to an electronic log-keeping system made better monitoring possible.

POSTER 80
AN ANALYSIS OF A HOSPITAL NETWORK TRANSPORTATION SYSTEM
Author: Annie Kwon, Veterans Affairs Engineering Resources Center
This poster illustrates the current issues of the VISN 1 transportation system. Stakeholder analysis is used to better define an ideal transportation system, system design tools are employed to better analyze and understand the system, and a discrete-event simulation is constructed to suggest the effectiveness of alternate designs (including geographic reallocation of services and travel reimbursement policies).
POSTER 84
DOES YOUR SCORECARD CAPTURE THE COST OF POOR QUALITY?
Authors: Geeno Carlone and Ryan Walker, Juran Institute, Inc.
Most organizations use scorecards in some fashion to monitor and drive strategic planning and improvement. However, the scorecard often fails to address a key improvement concept: the cost of poor quality (COPQ). Understanding how measures contribute to COPQ empowers organizations with more robust and transparent scorecards.

POSTER 103
PATIENT EXPERIENCE ENHANCEMENT BASED ON CLINIC FLOW REDESIGN
Authors: Joanne Untalan, Anne Myers, Katie Murphy and Natalie Hyman, Shands HealthCare
Providing outstanding quality of care and service excellence is essential for a faculty group practice clinic to maintain a competitive edge. This project demonstrates how clinic improvement efforts are based on operational flow factors affecting patient experience. These factors include waiting room environment, communication methods, wait times, and physician interaction.

POSTER 104
EVALUATING FACILITY DESIGN USING MOCK-UP
Author: Lauren Simpson, New England Healthcare Engineering Partnership
In an effort to evaluate a planned facility at Boston’s VA Medical Center, the Veterans’ Engineering Resource Center created a mock-up of the space. Staff were allowed to run through work processes in the mock space and provide feedback, which, when combined with other observations and considerations, motivated changes to the design in order to create the most optimal workspace.

POSTER 119
UNDERSTANDING HEALTHCARE NETWORKS’ BEHAVIORS IN MASS CASUALTY DISASTERS
Authors: Maria Bull and Serge Sala-Diakanda, University of Central Florida
This presentation illustrates the virtues of systems sciences in capturing healthcare networks’ behaviors in mass casualty disasters. The work demonstrates how a holistic representation of these networks, based on the careful identification of the very essence of their complexity, may be achieved, and be a critical asset to decision makers.

POSTER 123
ANALYZING INSURANCE COVERAGE STRATEGIES FOR FUNDED TBI PATIENTS VIA SIMULATION
Authors: Ashwin Chandramouli and Nan Kong, Purdue University, Stephen Downs and Kristin Hendrix, Indiana University School of Medicine
The authors developed a simulation model for the Medicaid-funded traumatic brain injury (TBI) rehabilitation process and studied critical issues regarding the public insurer’s coverage policy. With the model, they propose more effective ways to manage patient flow during post-TBI rehabilitation from a public financing viewpoint.

POSTER 126
EXPERIENCE-BASED DESIGN FOR PROCESS IMPROVEMENT AND PATIENT CENTEREDNESS
Author: Cliona Archambeault, Veterans Health Administration
The Experience-Based Design approach focuses on patients’ emotional journeys during the stages of a visit. Emotional feedback is tied to specific processes, which is the basis for improvement. The lessons and results are described from the VHA’s use of EBD during their transformation to the patient-centered medical home model.
POSTER 133
ASSESSING BUSINESS CASE OF AN ELECTRONIC REFERRAL SYSTEM
Authors: Yihan Xie and Shinyi Wu, University of Southern California

Access to specialty care has become an increasingly pressing issue. Electronic referral systems were developed to improve the referring process. This project assessed a business case of the eReferral system. Workflow analysis and discrete-event simulation models were conducted to compare access and cost performance between the electronic and paper systems.

POSTER 137
NOVEL VIBROTACTILE DISPLAYS TO SUPPORT MONITORING AND MULTITASKING DURING ANESTHESIA
Authors: Thomas Ferris, Texas A&M University, and Nadine Sarter, University of Michigan

This poster describes a series of research activities that contributed to the design of a novel “continuous informing” display of patient data: one that encodes data in complex vibration patterns. Evaluation studies set in a proprietary anesthesia induction simulator showed improved monitoring and multitasking ability for anesthesiologists equipped with this display.

POSTER 138
ACHIEVING HOSPITAL-LEVEL OPERATIONS EXCELLENCE FLOW
Author: Germán Rueda, Tefen

Hospital improvement efforts typically follow the direction of whichever area or department “screams” the loudest. However, in order to achieve significant and hospital-wide successful results, executives, departments heads, and staff members must have the tools and understanding required to create and attain hospital flow operations excellence.

POSTER 140
ANALYZING PATIENT FLOW IMPROVEMENT SCENARIOS AT A LOW-ACUITY EMERGENCY DEPARTMENT
Authors: John Kros and Evelyn Brown, East Carolina University; Kellie Keeling, University of Denver

A regional hospital has an affiliated low-acuity ED that currently struggles to meet its service level goals on a monthly basis. Using simulation, we analyze scenarios to improve patient flow based upon the addition of various combinations of resources and the rescheduling of some of the existing resources.

POSTER 142
SIMULATION MODELING FOR A CHILDHOOD OBESITY CLinic
Authors: Dongxue Ma, Bo Sun, Gerald Evans, Lijian Chen and Lihui Bai, University of Louisville

This poster addresses the development and use of a simulation model to schedule patients and a multidisciplinary staff in a childhood obesity clinic. Trade-offs between performance measures such as patients waiting time and staff utilization will be addressed.

POSTER 160
INTERNET SURVEY OF UNINTENDED CONSEQUENCES OF IMPLEMENTING HEALTHCARE INFORMATION TECHNOLOGY
Authors: Caitlin Hawkins and Shinyi Wu, University of Southern California

Healthcare information technology (HIT) has demonstrated many benefits, but unintended consequences (UCs) of its implementation cause barriers to realization. Analysis of responses to an online survey showed UCs persist over years and that the most frequent UCs are workflow problems caused by workarounds, software design, and lack of stakeholder engagement.
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<tr>
<th>POSTER 164</th>
<th>SUSTAINING A SUCCESSFUL LABOR PRODUCTIVITY PROGRAM</th>
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<tbody>
<tr>
<td>Author: Gary Altman, Crittenton Hospital Medical Center</td>
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<tr>
<td>The presentation provides attendees with a guide for implementing and sustaining a successful labor productivity program. Examples of methods are demonstrated and results provided.</td>
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<tr>
<th>POSTER 166</th>
<th>DECISION SUPPORT FOR TYPE-2 DIABETES INTERVENTION USING ANALYTIC HIERARCHY PROCESS</th>
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<tbody>
<tr>
<td>Authors: Min Wang and Yung-wen Liu, University of Michigan-Dearborn, Xiangyang Li, Johns Hopkins University</td>
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<td>This study investigates the potential of computational tools for shared clinical decision making. AHP models derive the priority values of different interventions for type-2 diabetes in a structured manner based on evidences and constraints from both patient and physician. Case studies demonstrate the use of such tools to improve patient-centered intervention.</td>
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<tr>
<th>POSTER 169</th>
<th>PUTTING THE DUE DILIGENCE IN PHYSICIAN PRACTICE DUE DILIGENCE</th>
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<tr>
<td>Author: David Rice, OhioHealth</td>
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<tr>
<td>Due diligence is a hospital system's opportunity to evaluate and conduct a financial valuation of a physician practice under consideration for employment by the system. See how lean methodology streamlined this multidisciplinary process to reduce lead-time, eliminate duplication, and provide a more cohesive evaluation of physician practices.</td>
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<tr>
<th>POSTER 171</th>
<th>CLINICAL DIAGNOSIS MODELING TECHNIQUES WITH A SYSTEMS DYNAMICS FOCUS</th>
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<tbody>
<tr>
<td>Authors: Bharath Dantu and Eric Smith, University of Texas at El Paso</td>
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<td>Diagnoses are perhaps the most complex and crucial decisions within the modern healthcare enterprise. Models for complex healthcare decisions must incorporate consideration for the usual multiplicity of important factors, interacting feedback loops among these factors, and the dynamic nature of the full diagnostic arena. A diagnoses modeling technique that has the requisite variety of relevant considerations is presented. The technique has the potential to overcome mandatory time criteria, while considering the competence and robustness of high importance diagnostic decisions.</td>
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<tr>
<th>POSTER 173</th>
<th>MERGING PROCESS ANALYSIS TECHNIQUES TO IMPROVE HEALTHCARE EFFICIENCY</th>
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<tbody>
<tr>
<td>Author: John Dulin, Concurrent Technologies Corporation</td>
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<tr>
<td>We present a new approach to performance improvement in healthcare organizations that combines various analytical techniques and addresses the interdependencies among different areas of a healthcare organization.</td>
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<th>POSTER 175</th>
<th>INTERACTIVE VISUAL NAVIGATOR FOR REPROCESSING REUSABLE MEDICAL EQUIPMENT</th>
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<tr>
<td>Authors: Kai Yang, Darrin Ellis, Yasemin Gencer and Mike Lederle, Wayne State University</td>
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<td>This project’s aim is to develop a touch screen multimedia workstation for interactive presentation of standard operating procedures during reprocessing of endoscopic instruments. The system will be developed in a series of iterative rapid prototyping and evaluation cycles following the principles of participatory design.</td>
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POSTER 178
UTILIZING LEAN TOOLS TO IMPLEMENT VISUAL CONTROLS IN SUPPLY ROOMS
Author: Craig Alvis, Richard L. Roudebush VA Medical Center
Nurses were spending crucial patient care time searching for supplies necessary for patient care in cluttered drawers. Through a two-phased project, 5S methodologies and implementing a kanban system, the reorganization of supply rooms on inpatient wards resulted in 60.9 hours of time spent searching for items saved per week.

POSTER 181
ANSWERING THE QUESTION: DUDE, WHERE’S MY PATIENT?
Authors: Matt Horn and Craig Alvis, Richard L. Roudebush VA Medical Center
There are times when patients need to be moved. How long should that take? Before this project, we didn’t know. Now, thanks to improvements using lean methods, we know who is moving the patient, where they are going, and about how long it should take.

POSTER 183
PROPOSED TECHNIQUE TO REDUCE INTER-RATER VARIABILITY OF PRESSURE ULCER CLASSIFICATION
Author: Harkina Rangi, University of Louisville
Studies have shown high inter-rater variability when nurses or caregivers classify pressure ulcers. This presentation introduces a tool that has been proposed to reduce this inconsistency and examines methods that can be applied toward future work in this area.

POSTER 195
EDUCATING HEALTHCARE PROFESSIONALS TO USE LEAN - JUST WHAT THE DOCTOR ORDERED
Authors: Karen Chase and Melissa Dolan, Stony Brook Medical Center
Building a culture of lean in healthcare through engagement and education of hospital staff and leadership in the use of lean concepts and principles.

POSTER 198
PLEASE SEND ALL AVAILABLE TUBES TO THE PHARMACY
Authors: Todd Schneider, Greg Shak and Marcus Badgeley, Nationwide Children’s Hospital
The pneumatic tube system plays an important part in providing patient medications and transporting samples to the lab for patient diagnoses; however, the system can be ineffective when staff hoard tubes or use the system incorrectly. Within two months of implementing behavioral modification techniques, the system failures were reduced by over 90%.

POSTER 210
CARDIOTHORACIC DASHBOARD AND ANALYTICS
Authors: Ekta Agrawal and Salman Ali, The Methodist Hospital System
This poster demonstrates the implementation of a business intelligence solution using Business Objects XI 3.0 platform to monitor the outcome of cardiothoracic surgical procedures and performance of the surgeons.
### Thursday, February 17, 2011

#### Session Room: Blue Spring

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 a.m. - 5 p.m.</td>
<td><em>clean Hospital: Teaching lean Tools Effectively in Healthcare v2.0</em></td>
<td>Keith Poole and Nimish Patel, Hospital Corporation of America, Joe Swartz, St. Francis Hospital</td>
</tr>
</tbody>
</table>

#### Session Room: Rainbow Spring I

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 a.m. - Noon</td>
<td><em>Identifying and Preventing Error in Healthcare Systems</em></td>
<td>Patrick Patterson, Texas Tech University</td>
</tr>
<tr>
<td>1 p.m. - 5 p.m.</td>
<td><em>Improving Dialysis and Outpatient Treatment Quality, Flow and Costs</em></td>
<td>Matt Morrissette, More Effective Consulting LLC, Doug Gruener, Fresenius Medical Care Inc.</td>
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</tbody>
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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>5 p.m. - 6 p.m.</td>
<td>Welcome Reception – Manatee Spring 1-2</td>
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### Friday, February 18, 2011

#### Session Room: Conference Registration Desk Open - Peabody Grand Ballroom T-V Foyer

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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</thead>
<tbody>
<tr>
<td>7 a.m. - 5 p.m.</td>
<td>Conference Registration Desk Open - Peabody Grand Ballroom T-V Foyer</td>
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</table>

#### Session Room: Continental Breakfast - Peabody Grand Ballroom S

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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</thead>
<tbody>
<tr>
<td>7:45 a.m. - 7:55 a.m.</td>
<td>Welcome – Peabody Grand Ballroom S</td>
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</table>

#### Session Room: Track 1 - Clinical and Quality

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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</thead>
<tbody>
<tr>
<td>8 a.m. - 8:50 a.m.</td>
<td><em>Creating High Performing Organizations using Baldrige, DNV, ISO and lean</em></td>
<td>Jean Lakin, Henry Ford Health System All levels</td>
</tr>
<tr>
<td>9 a.m. - 9:50 a.m.</td>
<td><em>Standardizing Patient Care to Improve Outcomes in Cardiac Surgery</em></td>
<td>Christian Rizo, OhioHealth Basic level</td>
</tr>
</tbody>
</table>

#### Session Room: Track 2 - Lean Six Sigma

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>8 a.m. - 8:50 a.m.</td>
<td><em>The lean in Daily Work Model at UMHS - A Blueprint for lean Transformation</em></td>
<td>Brendon Weil and Kevin DeHority, University of Michigan Health System Basic level</td>
</tr>
<tr>
<td>9 a.m. - 9:50 a.m.</td>
<td><em>The lean in Daily Work Model at UMHS - A Blueprint for lean Transformation</em></td>
<td>Brendon Weil and Kevin DeHority, University of Michigan Health System Basic level</td>
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</tbody>
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#### Session Room: Track 3 - Patient Flow

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>8 a.m. - 8:50 a.m.</td>
<td><em>Multi-facility Operating Room Surgical Case Scheduling</em></td>
<td>Alper Murat, Jihan Wang, Kai Yang and Yanli Zhao, Wayne State University All levels</td>
</tr>
<tr>
<td>9 a.m. - 9:50 a.m.</td>
<td><em>Improving Flow by Predicting ED-to-Inpatient Admission Demand</em></td>
<td>Jordan Peck, MIT Engineering Systems Division/ New England Health Care Engineering Partnership Basic level</td>
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</tbody>
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#### Session Room: Track 4 - Potpourri

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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>8 a.m. - 8:50 a.m.</td>
<td><em>SS Case Study: Convert File Mess Management to Intellectual Assets</em></td>
<td>Samuel McDowell, VITL, Joseph McDowell, Gifford Medical Center Intermediate level</td>
</tr>
<tr>
<td>9 a.m. - 9:50 a.m.</td>
<td><em>Change: Don't Leave Home Without It!</em></td>
<td>Duke Rohe, M.D. Anderson Cancer Center All levels</td>
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#### Session Room: Track 5 - IT

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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>8 a.m. - 8:50 a.m.</td>
<td><em>Optimizing Staffing Based on Varying Demand Using Dynamic Simulation</em></td>
<td>Justin Sandquist, CreateASoft Inc. All levels</td>
</tr>
<tr>
<td>9 a.m. - 9:50 a.m.</td>
<td><em>Integration of Technology and Workflow Re-engineering to Transform Hospital Performance</em></td>
<td>Amanda Mewborn, CareLogistics All levels</td>
</tr>
</tbody>
</table>

#### Session Room: Track 6 - Leadership and Management

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>8 a.m. - 8:50 a.m.</td>
<td><em>Leading ME/PI Departments for Maximum Impact – A Panel Discussion Part 1 of 2</em></td>
<td>Steve Escamilla, John Muir Health, Jim Benneyan, Northeastern University, Ron McDade, MedStar Health, John Hansmann, Tenet Healthcare, and Tracey Lindsey, Baylor Health Care System Advanced level</td>
</tr>
</tbody>
</table>

#### Session Room: Keynote Presentation - Kathy Kilmer, Director, Industrial Engineering for Walt Disney Parks and Resorts U.S. - Peabody Grand Ballroom S

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 a.m. - 11 a.m.</td>
<td><em>Keynote Presentation - Kathy Kilmer, Director, Industrial Engineering for Walt Disney Parks and Resorts U.S.</em></td>
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</table>

#### Session Room: Dedicated Exhibits - Peabody Grand Ballroom T-V

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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</thead>
<tbody>
<tr>
<td>11 a.m. - 12:15 p.m.</td>
<td><em>Dedicated Exhibits</em></td>
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</table>

#### Session Room: Exhibit Hall Open - Peabody Grand Ballroom T-V

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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</thead>
<tbody>
<tr>
<td>11 a.m. - 6:30 p.m.</td>
<td><em>Exhibit Hall Open</em></td>
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</table>

#### Session Room: Poster Session - Peabody Grand Ballroom T-V

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>11 a.m. - 6:30 p.m.</td>
<td><em>Poster Session</em></td>
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#### Session Room: Lunch with reports from the leadership of SHS - Peabody Grand Ballroom S

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
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<tbody>
<tr>
<td>12:15 p.m. - 1:30 p.m.</td>
<td><em>Lunch with reports from the leadership of SHS</em></td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Session Room</th>
<th>CLINICAL AND QUALITY</th>
<th>LEAN SIX SIGMA</th>
<th>PATIENT FLOW</th>
<th>POTPOURRI</th>
<th>IT</th>
<th>LEADERSHIP AND MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:40 p.m. – 2:30 p.m.</td>
<td></td>
<td><strong>CELEBRATION 1-2</strong></td>
<td><strong>CELEBRATION 3-4</strong></td>
<td><strong>CELEBRATION 5</strong></td>
<td><strong>CELEBRATION 6</strong></td>
<td><strong>CELEBRATION 7-8</strong></td>
<td><strong>CELEBRATION 9-10</strong></td>
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<td></td>
<td>Events for Critical Access Hospitals</td>
<td>Jennifer Panco, Providence Health and Services All levels</td>
<td>Charles Noon, University of Tennessee All levels</td>
<td>Ashlea Bennett, University of Arkansas Basic level</td>
<td>Phil Troy, TROYWARE, Dana Porubksa and Trixie Mairura, Jewish General Hospital, Nadia Lahrichi, CIRRELT Basic level</td>
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</tr>
<tr>
<td>2:30 p.m. – 3 p.m.</td>
<td>Refreshment Break in Exhibit Hall - Peabody Grand Ballroom T-V</td>
<td><strong>CELEBRATION 7-8</strong></td>
<td><strong>CELEBRATION 9-10</strong></td>
<td><strong>CELEBRATION 7-8</strong></td>
<td><strong>CELEBRATION 9-10</strong></td>
<td><strong>CELEBRATION 9-10</strong></td>
<td><strong>CELEBRATION 9-10</strong></td>
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<tr>
<td>3:10 p.m. – 4 p.m.</td>
<td>The Journey to Eliminating Preventable Harm</td>
<td>Todd Schneider and Cindy Kirch, Nationwide Children's Hospital Intermediate level</td>
<td>Using lean to Effectively Select and Deploy Technology in Healthcare</td>
<td>A Decision Support Tool to Generate the Monthly Schedule for Consulting Rooms in a Public Hospital</td>
<td>How To Optimize Quality Improvement Project Selection, Staffing, and Training</td>
<td>EMR and Your Existing IT Infrastructure</td>
<td>Leading Effective Management Engineering Departments In Today's Dynamic Healthcare Environment</td>
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<td>Brock Husby, Altarum Institute &amp; University of Michigan All levels</td>
<td>Nubia Velasco, Ciro Alberto Amaya, Fabian Castaño and Santiago Rojas, Universidad de los Andes Intermediate level</td>
<td>Daniel Rand, Winona State University Intermediate level</td>
<td>Christian Lindmark, M+NLB Intermediate level</td>
<td>Rudy Santacroce, Shands Healthcare All levels</td>
</tr>
<tr>
<td>4:10 p.m. – 5 p.m.</td>
<td>Managing the Load on Emergency Room Physicians</td>
<td>David Ben-Arieh and John Wu, Kansas State University Intermediate level</td>
<td>Using Quality Tools to Design Efficient Pharmacy Delivery Systems</td>
<td>Improving Operating Room First Case On-Time Starts</td>
<td>Evolution of a Process: From Vision to Implementation</td>
<td>A lean Approach to Implementing CPOE</td>
<td>Lessons from Implementing An Outpatient Clinic - Simulation is Not Enough</td>
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<td>Valentine Boving, M.D. Anderson Cancer Center Intermediate level</td>
<td>Kevin Taaffe, Clemson University, Shannon Harris, Greenville Hospital System All levels</td>
<td>Kevin Martin, Maestro Strategies All levels</td>
<td>Kevin Martin, Maestro Strategies All levels</td>
<td>Lawrence Rosenberg and Dana Porubksa, McGill University and the Sir Mortimer B. Davis Jewish General Hospital, Nadia Lahrichi, CIRRELT Basic level</td>
</tr>
<tr>
<td>5 p.m. – 6:30 p.m.</td>
<td>Networking Reception in Exhibit Hall - Peabody Grand Ballroom T-V</td>
<td><strong>CELEBRATION 9-10</strong></td>
<td><strong>CELEBRATION 9-10</strong></td>
<td><strong>CELEBRATION 9-10</strong></td>
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### SATURDAY, FEBRUARY 19, 2011

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>7 a.m. – 4:30 p.m.</td>
<td>Conference Registration Desk Open - Peabody Grand Ballroom T-V Foyer</td>
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<tr>
<td>7:30 a.m. – 8 a.m.</td>
<td>Breakfast with the Exhibitors - Peabody Grand Ballroom T-V</td>
</tr>
<tr>
<td>7:30 a.m. – Noon</td>
<td>Exhibit Hall Open - Peabody Grand Ballroom T-V</td>
</tr>
<tr>
<td>7:30 a.m. – Noon</td>
<td>Poster Session - Peabody Grand Ballroom T-V</td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>SESSION ROOM</th>
<th>CLINICAL AND QUALITY</th>
<th>LEAN SIX SIGMA</th>
<th>PATIENT FLOW</th>
<th>POTPOURRI</th>
<th>HUMAN FACTORS</th>
<th>LEADERSHIP AND MANAGEMENT</th>
</tr>
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<tbody>
<tr>
<td>8 a.m. – 8:50 a.m.</td>
<td>Operating Room Utilization Study</td>
<td>Jihan Wang and Kai Yang, Wayne State University, Susan Yu, John D. Dingell VA Medical Center</td>
<td><strong>CELEBRATION 1-2</strong></td>
<td><strong>CELEBRATION 3-4</strong></td>
<td><strong>CELEBRATION 5</strong></td>
<td><strong>CELEBRATION 6</strong></td>
<td><strong>CELEBRATION 7-8</strong></td>
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<td>lean System for Managing (LSFM) - The Forgotten Change Management Tool Part 1 of 2</td>
<td>It’s Time to Get Rid of Emergency Department Triage</td>
<td>A Crash Course in Healthcare Systems Engineering</td>
<td>Workload and Situational Awareness in the Emergency Department</td>
<td>Sustaining Financial Performance through a Large-Scale Systemwide Performance Improvement Initiative</td>
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<td>Bob Burke, VIPGroup Intermediate level</td>
<td>Michael A. Meloni Jr., St. Lucie Medical Center Intermediate level</td>
<td>Sandra Garrett and Samantha Sissel, Clemson University Basic level</td>
<td>Scott Levin, Lauren Sauer, Gabor Kelen and Thomas Kirsch, Johns Hopkins University School of Medicine, Dan France, Vanderbilt University Medical Center</td>
<td>Lynn Alters, WellStar Health System Intermediate level</td>
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<td>Intermediate level</td>
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<td>Basic level</td>
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<tr>
<td>SESSION ROOM</td>
<td>CELEBRATION 1-2</td>
<td>CELEBRATION 3-4</td>
<td>CELEBRATION 5</td>
<td>CELEBRATION 6</td>
<td>CELEBRATION 7-8</td>
<td>CELEBRATION 9-10</td>
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<tr>
<td>9 a.m. – 9:50 a.m.</td>
<td>A Study of Operating Room Labor Performance Jihan Wang and Kai Yang, Wayne State University, Susan Yu, John D. Dingell VA Medical Center All levels</td>
<td>lean System for Managing (LSFM) - The Forgotten Change Management Tool Part 2 of 2 Bob Burke, VIPGroup Intermediate level</td>
<td>Increasing Patient Flow Using lean Six Sigma and Information Technology Robert Furrey, Baptist Health Medical Center All levels</td>
<td>Enterprise Lean Six Sigma in a Hospital ED Sandy Futerer, Holy Cross Hospital All levels</td>
<td>Using Personality Traits to Improve Nurses’ Job-Fit and Retention Stephanie Means and David Lyth, Western Michigan University All levels</td>
<td>Guerrilla Project Management Tactics for Operationalizing a New Hospital Lori Doyle, Henry Ford Health System All levels</td>
<td></td>
</tr>
<tr>
<td>10 a.m. – 10:50 a.m.</td>
<td>Systems Engineering and Management Science Approaches to Preventable Hospital Readmissions James Benneyan and Senay Demirkan Delice, Northeastern University Intermediate level</td>
<td>Value Stream Mapping: Applied to Healthcare Background &amp; Case Studies Krishnan Krishnaiyer, Frank Chen and Glenn Kuriger, Center for Advanced Manufacturing and lean Systems Intermediate level</td>
<td>Coordination of Multiple Departments to Improve ED Throughput Jeff Ratliff, OhioHealth Basic level</td>
<td>An Appointment Order Outpatient Scheduling System that Improves Outpatient Experience Yu-Li Huang, New Mexico State University All levels</td>
<td>A Human Factors Perspective on Information Flow in Healthcare Sandra Garrett, Clemson University, Ashley Benedict, Purdue University Basic level</td>
<td>Innovating PTSD Services Systems in the U.S. Military Health Enterprise Wiljeana Glover, Jayakanth Srinivasan, C. Robert Kenley and Deborah Nightingale, lean Advancement Initiative All levels</td>
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<tr>
<td>10:50 a.m. – Noon</td>
<td>Dedicated Exhibits - Peabody Grand Ballroom T-V</td>
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<tr>
<td>Noon – 1 p.m.</td>
<td>Lunch with Student Competition Winning Presentations - Peabody Grand Ballroom S</td>
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<tr>
<td>1:10 p.m. – 2 p.m.</td>
<td>Build Sustainable Processes: Tools to Enable Clinical Improvement for Evidence-Based Care Marci Jackson, Premier Inc. Intermediate level</td>
<td>lean in Healthcare Materials Management - Evaluation of SS's Best Practice Sanjith Venkateswaran, Isabelina Nahmens and Laura Ikuma, Louisiana State University Intermediate level</td>
<td>Reducing Length of Stay Using Service Line Lean Concepts Jonathan Flanders, Juran Institute Inc. All levels</td>
<td>Case Study: Process Improvement for Physician Relationships from Recruiting to Onboarding Jeff Ratliff, OhioHealth Basic level</td>
<td>Understanding Pre-hospital Adverse Events Roger Price, Ambulance Service of New South Wales, Australia Basic level</td>
<td>Lean Service Lines in Healthcare Er Ralston and Brian Stockhoff, Juran Institute Inc. All levels</td>
<td></td>
</tr>
<tr>
<td>2:10 p.m. – 3 p.m.</td>
<td>Implementation of Systemwide Lean Lab Management Rita D’Angelo and Richard Zarbo, Henry Ford Health System Intermediate level</td>
<td>Redesigning Operating Room Turnover Using a Lean Approach Anne Myers, Rudy Santacroce and Marisa Farbaugh, Shands Healthcare Basic level</td>
<td>Dynamic Vitals Monitoring for Patient Prioritization in the Emergency Department David Claudio, Montana State University All levels</td>
<td>Polarity Management: Identifying and Managing “Unsolvable Problems” in Healthcare Laurie Levknecht, CPM Resource Center-An Elsevier Business Basic level</td>
<td>Reducing Patient Falls through the Application of Human Factors Engineering Brian Fillipo, Bon Secours St. Mary’s Basic level</td>
<td>Determination and Quantification of Factors Influencing Nursing Workload Dries Myny, University Hospital of Ghent Intermediate level</td>
<td></td>
</tr>
<tr>
<td>3:10 p.m. – 4:30 p.m.</td>
<td>Keynote Presentation – Kenneth J. Musselman, Ph.D., Strategic Collaboration Director, Regenstrief Center for Healthcare Engineering, Purdue University - Peabody Grand Ballroom S</td>
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The Society for Health Systems sponsors a student paper competition to recognize outstanding work that demonstrates the use of industrial engineering skills in improving healthcare-related products, processes or services.

The Society for Health Systems is pleased to announce the winners of the 2011 Student Paper Competition.

Graduate Paper Winner
“Nurse Scheduling: From the Theoretical Modeling to Practical Resolution”
Martine Dagenais, École Polytechnique de Montréal

Undergraduate Paper Winner
“Improving Inpatient Discharge Process to Reduce Readmission”
Vanda Ametlli, Wayne State University

Judging criteria was based on originality and soundness, applicability, methodology, organization and quality of the paper. Winners of the undergraduate and graduate competition will present their papers during lunch on Saturday, February 19.

DUTCH TREAT DINNER
The Society for Health Systems Board and Conference Committee invites all attendees to join them on Friday, February 18 for an evening of networking and meeting new friends. This is a great way to network! We will walk next door to Pointe Orlando – the home to BB King’s Blues Club. We will depart from the Peabody lobby at 6:45 p.m. Limited tickets may be available – please check with the Conference Registration Desk for availability. Cost is $25 for the buffet dinner.

SOCIETY FOR HEALTH SYSTEMS SCHOLARSHIP
The Society for Health Systems Scholarship recognizes and rewards an undergraduate industrial engineering student who possesses academic excellence and a demonstrated interest in healthcare. It is open to active SHS student members who are enrolled full-time in an undergraduate industrial engineering, operations research or course of study related to improvement in healthcare operations programs.

POSTER SESSION
View the latest in operational and quality improvement tools, methodologies and concepts such as lean, Six Sigma, productivity, benchmarking, simulation and project management in a visual form. Posters will be on display in the Peabody Grand Ballroom T-V.
SOCIETY FOR HEALTH SYSTEMS CONFERENCE AND EXPO 2011
FEBRUARY 17-19, 2011
THE PEABODY ORLANDO | ORLANDO, FLA.
Visit the exhibit hall to take advantage of this unique collection of new products, solutions, and ideas focused on healthcare and healthcare systems.

CreateASoft Inc. | Booth # 9
CreateASoft, Inc. provides dynamic process improvement solutions for process based operations dedicated to improving their efficiency and operational responsiveness. Our products include: SimCad process simulator, SimTrack: real-time visibility, reporting and analysis with alerts/notifications, SimData pocket data collector, SimCad Online.com, and VSM-value stream analyzer.

3909 75th Street, Suite 105
Aurora, IL 60504
630-248-2850
Fax: 630-963-3755
www.createasoft.com

EmendoHealth | Booth # 6
EmendoHealth’s product CapPlan, optimizes the use of physical and workforce resources in healthcare settings. The tool-set facilitates long range forecasting, short term scheduling optimization, and real-time decision support. Data is collected passively through interfaces from patient management and labor management systems, and significant resource savings and quality/safety gains are achieved.

122 Brown Hill Road
PO Box 400
Tamworth, NH 03886
603-323-0200
www.emendohealth.com

Flexsim Healthcare | Booth # 1
Flexsim HC is the first healthcare simulation tool created specifically to support the analytical needs of both the healthcare manager and practitioner. Flexible, versatile and comprehensive, HC makes healthcare systems planning and evaluation easy. It's been designed to capture the intricacies of the patient care process with stunning 3D animation for immediate model validation.

Canyon Park Technology Center
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Orem, Utah 84097
801-224-6914
Fax: 801-224-6984
www.flexsim.com

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3685 44th Avenue
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Canada H1A 5B9
866-526-8040
514-526-8040
www.umtproduct.com

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LRS is the leader in on site communication solutions. Our PC paging solution, NetPage Unlimited, enables staff to send pages or SMS text messages to staff or patients from any PC. We also provide wireless room to room push button paging solutions. Our solutions improve your staff communication, response times, and patient flow.

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214-553-5308
www.pager.net

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800-448-3555 (US)
814-238-3280 (CAN)
www.minitab.com
Edward P. Fitts Department of Industrial and Systems Engineering
Campus Box 7906
401 Daniels Hall
Raleigh, NC 27695
919-515-6401
Fax: 919-515-5281
www.isc.ncsu.edu

Premier Healthcare Alliance | Booth # 7
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Ortho Clinical Diagnostics Inc., ValuMetrix® Services | Booth # 12
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Raritan, NJ 08869
908-218-8316
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www.novaces.com

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919-515-6401
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MoreSteam.com | Booth # 8
MoreSteam.com is the leading provider of online process improvement training and support technology, serving over 1,800 global corporations (45% of the Fortune500). Our e-Learning courses emphasize practice, flexibility, and affordability. We provide project management software, data analysis software, and St. Sigma, a new classroom teaching simulation for the healthcare industry.

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614-310-1080
www.moresteam.com

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Raritan, NJ 08869
908-218-8316
www.valumetrixservices.com
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203-225-0451
www.productivityinc.com

Rockwell Automation, Inc. | Booth # 20

Rockwell Automation, Inc., the world’s largest company dedicated to industrial automation and information, makes its customers more productive and the world more sustainable. Headquartered in Milwaukee, Wis., Rockwell Automation employs about 19,000 people serving customers in more than 80 countries.

2100 Corporate Drive, Suite 550
Wexford, PA 15090
724-741-4044
Fax: 724-741-4001
www.arenasimulation.com

Simul8 Corporation | Booth # 15

Since 1994, SIMUL8 Corporation has been creating simulation software for whole system strategic and operational decision making throughout healthcare organizations. Prevent negative effects on budgets and patient care by making evidence based decisions with SIMUL8. Worldwide customers include: Johns Hopkins, The American Red Cross and The UK NHS.

225 Franklin Street
26th Floor
Boston, MA 02110
800-547-6024
www.SIMUL8.com

The Ergonomics Center of North Carolina | Booth # 2

The Ergonomics Center of North Carolina is housed in the Edward P. Fitts Department of Industrial and Systems Engineering at North Carolina State University. The Center provides ergonomics consulting, training programs, workshops, and research for corporations and companies throughout the United States to support and enhance their ergonomics efforts.

North Carolina State University
3701 Neil Street
Raleigh, NC 27607
919-515-2052
Fax: 919-515-8156
www.TheErgonomicsCenter.com

University of Tennessee - Center for Executive Education | Booth # 21

The University of Tennessee Center for Executive Education is a leader in management education and business solutions, distinguished for cutting-edge research, thought leadership and implementation focus.

College of Business Administration
603 Haslam Business Building
Knoxville, TN 37996-4160
865-974-5001
Fax: 865-974-4989
http://TheCenter.utk.edu

Thomson Reuters | Booth # 4

Thomson Reuters produces insights, information, benchmarks and analysis that enable organizations to manage costs, improve performance and enhance the quality of healthcare. Our Operational and Financial Solutions help healthcare providers improve their operating costs, labor productivity, and resource allocation. Thomson Reuters is the world’s leading source of intelligent information for businesses and professionals.

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Greenwood Village, CO 80111
303-486-6540
Fax: 303-468-6464
www.thomsonreuters.com
EXHIBIT HALL PRIZES
Visit with the exhibitors to get entry cards for prizes that will be given away at 11:45 a.m. on Saturday, February 19! Exhibitors will be distributing these cards, so the more exhibitors you visit, the more entries you will have. Place your entries in the various receptacles that will be in the exhibit hall.

THIRSTY?
Visit the exhibitors for additional drink tickets for the Friday evening reception.

1 - Flexsim Healthcare
2 - The Ergonomics Center of North Carolina
3 - North Carolina State University
4 - Thomson Reuters
6 - EmendoHealth
7 - Premier Healthcare Alliance
8 - MoreSteam.com
9 - CreateASoft Inc.
10 - Laubrass Inc.
11 - Minitab
12 - Ortho Clinical Diagnostics Inc., ValuMetrix® Services
13 - Long Range Systems, Inc.
14 - Productivity, Inc., Healthcare Solutions
15 - Simul8 Corporation
16 - TBD
17 - Society for Health Systems
18 - PracticeMatch Services LLC
19 - NOVACES
20 - Rockwell Automation, Inc.
21 - University of Tennessee- Center for Executive Education
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Dean Athanassiades, Philips Healthcare

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Amanda Mewborn, CareLogistics
Aaron Kanne, CareLogistics
Karl Kraebber, St. John’s Hospital
Mark Graban, lean Enterprise Institute
Sheryl Lambert, Dixie Regional Medical Center

SHS COMMITTEE MEETINGS
If you are interested in learning more about what the following SHS committees are working on or in possibly joining us, please feel free to join us at our meetings at the conference.

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Committee</th>
<th>Meeting Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, Feb. 17</td>
<td>3:30-5:30 p.m.</td>
<td>Membership Committee</td>
<td>Rock Spring 1 &amp; 2</td>
</tr>
<tr>
<td></td>
<td>4-5 p.m.</td>
<td>Communication Committee</td>
<td>Celebration 15</td>
</tr>
<tr>
<td>Friday, Feb. 18</td>
<td>11 a.m.-Noon</td>
<td>Tools and Content Committee</td>
<td>Celebration 15</td>
</tr>
</tbody>
</table>

SPONSORS

Society for Health Systems (SHS)
The Society for Health Systems is a professional association that focuses on the needs and resources of health systems professionals and leaders who are charged with improving healthcare processes. SHS offers the latest in process analytics, tools, techniques and methodologies for performance improvement.

SHS exists to enhance the career development and continuing education of professionals who use industrial and management engineering expertise for productivity and quality improvement in the healthcare industry. Among the members of the society are management engineers, CEOs, directors of continuous improvement, administrators, clinicians, and department managers.

Visit us in booth #17.

HIMSS
The Healthcare Information and Management Systems Society (HIMSS) is the healthcare industry’s membership organization exclusively focused on providing global leadership for the optimal use of healthcare information technology (IT) and management systems for the betterment of healthcare. Founded in 1961 with offices in Chicago, Washington, D.C., Brussels, Singapore, and other locations across the United States, HIMSS represents more than 23,000 individual members and over 380 corporate members that collectively represent organizations employing millions of people. HIMSS frames and leads healthcare public policy and industry practices through its advocacy, educational and professional development initiatives designed to promote information and management systems’ contributions to ensuring quality patient care.
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For more information, visit booth # 23 or www.arenasimulation.com.