Champion Award Winners

1. Rebecca Crowell, PhD
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*System wide Efforts to Improve Everyday Clinical Practice and Health Equity in an Accountable Care Environment*

Project Description: Saint Francis Research Council and Senior Leadership have endorsed a new Research Strategic Plan that focuses on studying efforts to improve everyday clinical practice. Saint Francis has free-standing residency and fellowship programs, and is a teaching hospital affiliated with the University of Connecticut School of Medicine. Last year, we developed a Healthcare Delivery Science curriculum for residents that integrates quality improvement, research, and communication. Our move toward accountable care and population health management has positioned us for developing system-wide improvements to enhance capacity for conducting quality improvement research, health equity research, and research that utilizes data from the EHR. More specifically: We created the Innovation + Learning Center at Saint Francis, which encompasses Education, Leadership Development, Value-Driven Design, Innovation, Research and Health Equity, with responsibility for improving the art and science of healthcare delivery across the entire enterprise. The overarching goal of these efforts is to build research capacity by implementing a fully integrated, interdisciplinary model that aligns research development, performance improvement, and health equity. This goal will be realized through the following aims:

Aim 1: To align and integrate distinct programs and resources in research, performance improvement and health equity toward a common agenda for scholarly activity. Aim 2: To shift the organizational focus on research from isolated clinical trials to collaborative research focused on everyday clinical practice. Aim 3: To develop comprehensive tools and strategies to facilitate uptake and adoption of the model. Aim 4: To promote adoption of the SQUIRE Guidelines within the interdisciplinary framework. Aim 5: To build data mining and evaluation tools into the new EHR for the purposes of interdisciplinary research.

2014 UPDATE: The BestCare grant program gives preference to proposals that integrate research, performance improvement, and health equity. We received 16 Letters of Intent, all of which propose prospective and/or interventional studies. The current LOIs also propose department-level or out-patient/in-patient care collaboration, and focus on a variety of issues and health concerns, such as: utilizing community-based participatory research to identify and integrate patient health priorities into policy and practice.

Our efforts have added a systems focus at the clinical level, and a clinical focus at the systems level. The Simulation Studio has been crucial to this effort. We are scheduled to repeat a successful longitudinal simulation focused on safe transitions of care across departments in early November. This hands-on experience – which includes researchers, clinicians, trainees and mentors, has prompted discussion about how a small event or workflow issues early in the
scenario plays out relative to patient experience, performance, and quality of communication further down the line. We are building a regional research collaborative with local universities to leverage opportunities for research and education. The plan will be completed by the end of December.

2. Linda Headrick, MD, MS, FACP  
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**Building Knowledge about Education in Quality Improvement and Patient Safety through Interprofessional Education and Health System Partnerships**

Project Description: The University of Missouri-Columbia School of Medicine effort creates a continuum of learning about quality and safety for medical students in a way that will advance our understanding of quality & safety education in the core professional development of physicians. This system-wide process increases capacity for research in quality improvement education by:
Creating a laboratory for building and testing innovative educational experiences in quality improvement and patient safety (QI/PS) in the context of a medical school curriculum which states competence in QI/PS as an explicit goal.

- Engaging Office of Medical Education leaders who are experts in medical education research and Center for Health Care Quality (CHCQ) leaders who are experts in QI/PS application and research.
- Utilizing the MU SOM Russell D. and Mary B. Shelden Clinical Simulation Center to increase the authenticity and experiential aspects of the new learning experiences.
- Supporting and developing new faculty leaders who are mentored by the education and QI/PS experts noted above.
- Creating interprofessional educational experiences through relationships with leaders in MU’s other health professional training programs.
- Developing faculty leaders’ capacity to design and evaluate education innovations in a way that leads to scholarly products.

3. Jennifer Lee, MD, FACP  
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**The Quality Improvement and Patient Safety committee: A bridge to multidisciplinary and inter-institutional collaboration to build a culture of high value high quality care**

Project Description: In 2010, the Department of Medicine formed the Quality Improvement and Patient Safety (QIPS) committee whose focus is on proactive efforts to improve the quality and safety of patient care in the hospital and community practice. With representatives from nursing, physicians, and department as well as hospital leadership, our committee is designed to promote and foster scholarship through multidisciplinary and inter-institutional collaboration for QI education, mentorship, projects and research. Our flagship program provides annual funding
support for QI projects that demonstrate (1) multidisciplinary leadership; (2) an improvement focus on high value care relevant to the department and the hospital to encourage inter-institutional collaboration; (3) high probability for sustainability and dissemination.

To date, 24 projects have been showcased at our annual QI poster session. Nine were spearheaded by residents under faculty supervision. Six focused on high value care. Five were presented at national conferences. Over the next five years, we aim to develop systems of sustainable improvement which include programs for faculty continuing education in QI, establishing a formal mentorship network and raising the awareness of QI research through publications and national dissemination of our achievements. We have encountered many barriers to efforts to elevate our program to the next level. Mentoring in applying QI core principles and formal research design, research and data entry support and analysis have been challenging to provide. Funding sources are needed in order to continue to meet the growing needs required to move the program forward and reach our goals.

4. David Nelson, MD
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**Consent2Share**

Project Description: Consent2Share is an innovative UF program that allows patients, at the point of care, to consent to be re-contacted for future research studies in which they may be eligible to participate. Consent2Share is co-led by the Chair of the UF IRB and the Director of the Integrated Data Repository. Consent2Share data are then loaded into i2b2, so researchers can query for the number of patients who have consented to be contacted about research studies for which they might be eligible.

As of September 2014, more than 17,000 patients have enrolled in Consent2Share. Of approached patients, 84% agreed to be re-contacted and 4,157 patient names have been released to researchers across 10 protocols for participant recruitment. In 2015, an electronic consent for with electronic signature via EPIC will allow enterprise wide expansion to include all patients being seen at UH Health.

5. Ron Price
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**Rapid, Self-serve Clinical Analytics: A Web and Hadoop-based Clinical Research Database (CRDB)**

Project Description: The purpose of this project was to create a large-scale, easily accessed clinical research database (CRDB) with de-identified data from Loyola University Health System’s Epic electronic medical record (EMR). By significantly reducing the time and effort required for data identification and acquisition the self-service CRDB was developed to facilitate the institution’s clinical research and quality improvement initiatives, as well as educational
programs for medical students, residents, fellows and other health professions trainees involved in research. To support this project, information technologies (IT) and experienced clinical research teams worked in concert to: 1. Develop a suitable technical platform for the clinical research database. “Big Data” Hadoop technology was selected as the database and analytic platform; 2. Define a series of simplified and refined clinical data structures; 3. Create and validate the required logic and routines to load the new repository with de-identified clinical information from Epic; 4. Create a supporting web site with predefined dashboards and ad-hoc query tools that allow end-users to directly identify targeted patient cohorts; and 5. Define and refine data categories, and identify frequent types of data requests.

Loyola University Chicago Stritch School of Medicine (SSOM) and the affiliated Loyola University Health System (LUHS) are located 15 miles west of downtown Chicago. LUHS has a mature Epic environment – implementation began in 2003. While the institution has more than 90 percent of clinical operations in this environment, it is not suitable for easy-access, large-scale clinical research studies. Prior to development of this CRDB, data identification and extraction from Epic was a complex and labor-intensive process, as well as an inefficient use of staff time and resources. Even mundane ‘Preparatory for Research’ analyses required significant staff effort, limiting throughput. Time from initial request to extraction often took more than two weeks with complex extractions taking one to two months. Post CRDB implementation, most routine requests are handled online via a self-serve web site.

6. Monika Safford, MD  
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**Building the infrastructure to enhance QI research in the UAB Health System**

Project Description: Using this award, we planned to integrate experts in design and analysis from the Department of Epidemiology in the School of Public Health and the Center for Outcomes and Effectiveness Research and Education (COERE) into the planning phase of QI projects. The Pioneer Grant was proposed to be used to carry out the following 3 Aims: 1) convene an interdisciplinary team of health system and clinical leaders and health services researchers to evaluate barriers and facilitators to conducting QI research at UAB, and to review how other institutions have succeeded at QI-research partnerships; 2) informed by the results of Aim 1, design and implement strategies to integrate scientists early in the design phase of major QI initiatives; 3) evaluate the implementation of the new process and its success in facilitating QI research at UAB. This Planning Award was proposed to serve as the nexus to bring together scientists engaged in health services and QI research with Health System leaders in QI to enhance the Health System’s QI program and create ample opportunities for QI research. Our overall goal was to create an infrastructure to bring the considerable health services research talent at UAB together with our Health System to more actively collaborate on QI projects, for the benefit of our patients and to advance the science of QI.

2014 UPDATE: As a result of this award and a recent partnership between UAB and Medscape/WebMD, we have pursued several opportunities to conduct QI research. We have obtained extramural funding for projects on ischemic stroke management, chronic lymphocytic leukemia quality of care, and rheumatoid arthritis. Our CME office facilitates the creation of
teams to respond to these opportunities, bringing together scientists and clinical staff involved in QI to work together to create educational activities around specific QI topics, along with a tailored QI project. As a result of these types of projects, we will continue to build connections between educators, clinicians and researchers for the benefit of UAB’s patients.

7. Fred Sanfilippo, MD, PhD
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**A multi-disciplinary, multi-institutional network that provides faculty, staff, and students with information, resources, and connectivity to accelerate innovation in healthcare services research and education.**

Project Description: The overarching goal of the Emory-Georgia Tech Healthcare Innovation Program (HIP) is to accelerate innovation in health services research and education among Emory, Georgia Tech, and our academic and health system partners. Our approach has been to create an interactive network of faculty, staff and students through their engagement in novel inter-institutional and inter-disciplinary health services research and education HIP-sponsored resources and activities. Examples of HIP resources and activities include:

- Health Services Research Analytics have been developed by HIP to assess the extent and trend of extramural sponsored research categorized by discipline, academic unit, and nine topic areas to help guide strategic planning and identification of research priorities.
- HIP web directory listing health services research projects and educational offerings to help other investigators and students identify potential collaborators/mentors.

8. Maureen Smith, MD, PhD, MPH
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**Connecting Dots: Creating a Learning System Linking Clinical Quality Improvement, Maintenance of Certification and Research**

Project Description: Despite overlapping interests, there are often gaps in collaboration between continuing education, quality improvement, and health services research. Our project ‘closed the loop’ and built the infrastructure to align three University of Wisconsin Health System (UW Health) programs: continuing education (Office of Continuing Professional Development), quality improvement education and implementation (Department of Quality, Safety, and Innovation), and practice-based learning and scholarly contributions (Health Innovation Program). For this project, we built on our newly-acquired (in 2013) status as one of the original Maintenance of Certification (MOC) Multi-specialty Portfolio Program Sponsors. Specifically, we targeted leveraging our academic research strengths in concert with MOC activities.
Preliminary discussions with physicians working with the UW Health MOC Portfolio Program enthusiastically supported the concept of working with HIP to build a web-based resource to support the preparation of manuscripts for submission to a peer-reviewed journal, facilitating the evolution from quality improvement project to generalizable knowledge. Support for scholarly work has benefitted from health services researchers contributions and researchers benefit from having access to “real life” improvement efforts at the frontline, uncovering additional areas for further collaboration. The award was used to develop the online portal, resulting in better patient care, improved efficiency for physicians required to complete recertification and academic requirements, and improved knowledge for researchers regarding current improvement efforts at the frontlines of care, identifying potential areas for sharing expertise and new areas for investigation.

2014 UPDATE: Our QI Publishing web resource (https://hip.wisc.edu/qi_Publish) has been launched, representing a successful alignment between continuing education (OCPD), quality improvement education and implementation (QSI), and practice-based learning and scholarly contributions (HIP).

9. Christine Turley, MD
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Achieving a Learning Health System through Collaborative Engagement and the Creation of a Statewide Research Infrastructure and Clinical Data Resources

Project Description: Health Sciences South Carolina (HSSC) is a research collaborative engaging South Carolina’s largest health systems, academic medical centers, and research intensive universities. HSSC’s vision is to establish a statewide learning health system through engaging public and private partners. HSSC is based at University of South Carolina (USC), with its two medical schools, USC School of Medicine (SOM) Columbia and USC SOM Greenville. Additional HSSC supported organizations include Medical University of South Carolina (MUSC), and Clemson University (Clemson), as well as the state’s major health systems: AnMed Health (AH), Greenville Health System (GHS), McLeod Health (MH), Palmetto Health (PH), Self Regional Health System (SelfRHS), and Spartanburg Regional Health System (SRHS). HSSC convenes research and clinical leaders, develops shared clinical data and research resources, and provides statewide training.

In 2013, HSSC unveiled its multi-institutional Clinical Data Warehouse (CDW), which captures and harmonizes historical and near-real time clinical and administrative data from heterogeneous health systems, then aggregates and integrates the data into a structured, usable format. HSSC has implemented solutions to complex research network issues, including an innovative governance system, comprehensive data-sharing, security, and patient privacy management. Another HSSC research infrastructure component is an electronic Institutional Review Board (eIRB), a resource that affords cooperative review for research projects and increases statewide collaboration. The HSSC cooperative engagement model between academic medical centers, research institutions, and non-academic health systems has created the shared vision and
infrastructure for a statewide learning health system and serves as a model for the national imperative to improve healthcare quality.

10. Denise White-Perkins, MD, PhD
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**Henry Ford Health System Healthcare Equity Scholars Program**

Project Description: The Healthcare Equity Scholars Program will be an outgrowth of an existing educational effort. It will be a year-long program designed to create experts in the field of healthcare equity, able to conduct research and quality improvement work aimed at eliminating healthcare disparities and to create organizational change at the departmental or institutional levels. In addition to attending skills-based workshops, each of the twenty participants will implement a project within their own department or business unit within the health system. A team of experts will be available to provide guidance and technical assistance on the projects, and successful ones will be spread throughout the System at an annual Quality Expo, and at leadership and board meetings. As our communities become increasingly diverse, it is important to have a cadre of health system employees capable of addressing the cultural and linguistic needs of diverse populations to ensure that there is equity in quality and safety, patient satisfaction, and employee engagement. The Healthcare Equity Scholars Program will serve that purpose.

2014 UPDATE: We have 16 projects or data analyses in progress. Some of their questions include:

- Among patients who participate in Diabetes Care Services, what are the differences in clinical outcomes between African American and non-African American patients?

- How can we improve recruitment of minority patients into clinical trials at Henry Ford Hospital and decrease the number of minority patients who drop out of trials?

- What methods/processes are effective for starting a conversation with African American patients about end-of-life care?

We have facilitated the linking of clinicians, researchers and educators by recruiting participants from different professional backgrounds. Of our 20 participants, 4 are staff physicians, one is a resident, 7 are nurses (mostly nurse education specialists), 2 are social workers, and the rest are more administrative in areas such as Clinical Quality, Language Services, etc. Participants are sharing that it has been valuable getting to know colleagues in other areas of the health system to be able to collaborate either on their equity projects or simply in areas of their day-to-day work.

11. Consuelo H. Wilkins, MD
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The Community Engagement Studio: Strengthening Research Capacity through Community Engagement

Project Description: The primary purpose of the Community Engagement Studio (CES) is to provide a proven, easy to replicate mechanism to advance community engagement in research. The CES has the potential to improve research in all three target areas (quality improvement research, health equity research and research that utilizes electronic health data) through systematic and facilitated inclusion of patient and community stakeholder perspective.

Even those researchers who have experience engaging patients and community stakeholders report barriers to implementing stakeholder engagement due to the lack of institutional infrastructure and resources needed to facilitate the process. To accommodate the growing need for stakeholder engagement, we have developed a systematic approach that facilitates meaningful engagement. This approach is efficient and minimizes burden on stakeholders and researchers. The CES allows researchers to obtain direct input from representative groups to enhance their research questions, design, implementation, translation and/or dissemination. Unlike most methods of stakeholder engagement, the CES reduces the burden on the researcher for identifying and recruiting stakeholders and facilitating the involvement.

12. Aimee Zaas, MD, MHS
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The Duke University Learning Health System Training Program

Project Description: The Duke University Hospital Learning Health System Training Program (LHSTP) will develop and pilot a systemic change in the provision of graduate medical education to better meet the needs of an LHS, preparing them to be practitioners of “evidence based medicine version 2.0 (EBM 2.0)”. We will train resident physicians in the skills needed to become physician data scientists who are able to understand and obtain individual patient and clinician practice level data from the LHS, analyze the data to inform current clinical questions and processes, integrate findings with published research evidence to practically solve clinical problems, use local data to support iterative organizational practical improvement, and ultimately transform individual and system-wide clinical practice patterns to realize the goal of providing high value care.

Our goal in the initial pilot is to design and implement a novel educational program that will train high-level users of the LHS. These individuals, referred to as “Trailblazers,” will be equipped with the skills necessary to build evidence and advance LHS-based initiatives across their disciplines and the Duke Health System. We plan intensive training in clinical data structure, informatics, data visualization, and statistics, allowing trainees to better understand existing patterns of care, and to alter clinical practice to improve quality, and patient outcomes. Lessons learned will be incorporated into a practical curriculum for wider dissemination at Duke and beyond, and into a second phase in the LHSTP development that focuses on equipping the more entry-level user of practice-based data with core basic LHS skills. With support from this award we will: 1) develop of core LHS curriculum 2) lead 5-10 physicians-in-training through
the LHS curriculum 3) have each learner develop and implement a LHS-based project, with the initial PDSA cycles completed in AY2014-15.

2014 UPDATE: Our trainees have a high level of interest in learning the skills necessary to practice in a learning health environment. Most trainees selected to participate are at a relatively advanced level of data manipulation from the electronic health record, but need continued instruction in statistics. Importantly, engagement of the health system in our projects has helped the trainees access information and discuss projects with high-level health system representatives. This input is key to gaining access to the individuals who are most skilled at extracting data from the electronic health record. Allowing trainees to choose projects of interest from a list of projects put forth by health system leadership has maintained a high degree of trainee interest. Our first cohort of six trainees began in January 2014 and are scheduled to complete their training and projects in May 2015. Our second cohort, consisting of nine trainees, began in July 2014 and will complete training and projects in May 2015. We anticipate recruiting an additional cohort to begin in July 2015.