Acknowledging Our Track Chairs

- Steve Simon, Harvard Medical School
- Jack Starmer, Vanderbilt University
- Atif Zafar, Indiana University
- Marc Overhage, Regenstrief Institute
- Mark Frisse, Vanderbilt University
- Jan Walker, Partners Health Care and Cntr for Health IT Leadership
- Eric Poon, Partners Health Care and Harvard Medical School
- Theresa Cullen, Indian Health Service
- David Bates, Partners Health Care and Harvard Medical School
- Hal Kaplan, Columbia University
- Jules Rosen, University of Pittsburgh
- Chris Landrigan, Harvard Medical School
- Judy Ozbolt, University of Maryland School of Nursing
- Michael Harrison, Agency for Healthcare Research and Quality
- David Munch, Exempla Lutheran Medical Center
Track 1:
Patient Safety and Health IT Across Settings and Populations

Chair:
Steven Simon, Harvard Medical School
Overview of Track 1

- Settings outside the hospital not as far along
- Research descriptive, observational, translational
- Large gaps exist in knowledge, quality, safety in wide range of settings:
  - Rural/critical access
  - Outpatient
  - Elderly/long-term care
  - Tele-health
Key Insights, Key Challenges (1)

- Health IT and Special Populations (rural hospitals, pediatrics, long-term care, HIV patients)
  - Perception of technology adoption ≠ actual adoption ≠ use of the technology
  - Helpful to use multiple methods (quantitative, qualitative, self-report, observation) to detect errors.
  - All events identified as errors may not represent true safety problems (false positives)
  - Using IT to maximize human-based care (e.g., case management in HIV)
Key Insights, Key Challenges (2)

- EHRs in Outpatient Clinics
  - Less than 1 in 4 practices have EHRs – but adoption alone not adequate measure
  - Importance of organizational culture in EHR adoption
  - Need to understand predictors of usage, esp. CDSS
  - Expectations and actual experiences about EHR implementation not always aligned
Key Insights, Key Challenges (3)

- Patient Safety in Emergency Care
  - Unexplored territory for quality and safety, esp. outside hospital (e.g., paramedics)
  - Providers willing (enthusiastic) to enroll in simulation-based training
  - High-tech solutions (IR, RF) to track patients and staff → quality, safety.

- Improving the Safety and Quality of Care for the Elderly
  - CDSS not magic bullet (anticoagulation alerts)
  - Health literacy frequently overlooked as intervention target
  - Need for standardization in QI (e.g., ISO)
Track 2:
Implementation Issues in Patient Safety and Health IT

Co-Chairs:
Atif Zafar, Indiana University
Jack Starmer, Vanderbilt University
Overview of Track 2

- Focused on implementation issues:
  - People, process, and technology.
  - Rural, urban, community, academic.

- Presenters described implementation challenges and success stories with a focus on improving patient safety and delivering high quality patient care.
Key Challenges Identified by Participants

- **People**
  - Technology that doesn’t support clinical workflow.
  - Disconnect between management and clinical staff.

- **Process**
  - Lack of standard process across units or provider groups.
  - Inefficient and ineffective process.

- **Technology**
  - Technology not intuitive.
  - Interoperability and readiness of external organizations limits achieving full value.
What Did We Learn? Key Insights

People
- Well meaning providers are not always right (e.g. adjusting anticoagulants).
- Trust is key in developing a culture of quality.

Process
- Demonstrating value at the user level is a critical factor for adoption.
- Understanding processes up front can better inform how to integrate technology into workflow.

Technology
- Independent and engaged expertise is critical.
- Focus on low hanging fruit (start small and show value)
Track 3: Improving the Health of Communities through Regional Health Information Exchange

Co-Chairs:
Mark Frisse, Vanderbilt University
Marc Overhage, Regenstrief Institute
Overview of The Track

- Addressing the critical issues in health information exchange
- Aligning these issues with the broader patient safety and quality agenda of AHRQ
- Programmatic linkages with other government, private sector, and community initiatives
- Sharing ideas; gauging progress
- Defining our collective research agenda
Key Challenges Identified by Participants

- There remains no generic approach. Need to abstract the lessons learned for dissemination

- Linkage among HIE, population health, quality, and safety will take time (but work being done)

- Slow progress (like weight loss) doesn’t give many early wins; no “short cuts.” This work requires long-term commitment

- Differing agenda remain; fragmented health care system
What Did We Learn? Key Insights

- Positive repetition – focus on key ideas
- Real results; real models; real issues
- Differences are good differences
- Building the foundations; digging the trenches
- Things take time and patience
- Privacy and confidentiality are central
- Funding and sustainability in context
Track 4:
Assessing Value & Evaluating Project Impact

Co-chairs:
Jan Walker, RN MBA
Eric Poon, MD MPH
Overview of Track 4

- Assess value and impact of health IT tools:
  - Computerized Physician Order Entry
  - Electronic Health Records
  - Health Information Exchange
  - Medication Administration Technologies
  - Clinical Decision Support

- Explore new evaluation approaches

- Share early results of evaluation
  - Impact on quality of care, cost, satisfaction
  - Success factors for adoption
  - Lessons learned
Key Challenge: Evaluation is Hard in the Real World!

- Not easy to find good comparison group
- It is difficult to isolate the impact of the technology from the quality of implementation and other environmental factors
- Not all systems allow for easy retrieval of data useful for evaluation
- Limited resources (expertise & budget) -- how do we “evaluation lite”? 
What Did We Learn? Key Insights

- **Implementation Lessons:**
  - Multidisciplinary approach: “It takes a village to be successful.”
  - It is important to capture unintended consequences
  - IT is a means, not an end
  - Use evaluation results to help adoption

- **Successful Methodologies**
  - Leverage existing sociological framework, novel approaches
  - Multi-modal evaluation approaches (e.g., surveys, focus groups, observations, work system analysis, cost-benefit analysis)
  - Continuous evaluation and monitoring

- **High interest in cross-Grantee Learning**
  - Evaluation approaches
  - Lessons learned and best practices for implementation
  - National repository of clinical knowledge
Track 5: Achieving and Sustaining Improvements

Co-Chairs:
Theresa Cullen, IHS
David Bates, Partners Healthcare
■ Need observational studies to track the frequencies of adverse medical device events
  ■ Standardizing nomenclature of medical devices is important, but it is not sufficient for patient safety. Unique device identification is also necessary.

■ Preparation and planning including usability are key for HIT implementation, but they are not sufficient; systems need to be in place for ongoing revision and observation.

■ EHRs need to facility the delivery of population based health care.

■ Transitions represent vulnerable points in care and we are still learning how to manage them.
Key Challenges Identified by Participants

- Adverse Medical Device Events are not routinely reported
  - There is no national standard for data collection of AMDEs

- Key tenets of usability are often ignored within technology development in healthcare.

- Many EHRs do not support population based care.

- Managing the critical points in transitions.
What Did We Learn? Key Insights

- Rates of AMDEs are much higher than previously recognized. The frequency of these events varies according to surveillance method.
- Usability matters and change needs to be made on a continuous basis with HIT.
- Redesigning workflow before HIT implementation can lead to greater program success.
- Population health is possible.
- Care transitions must be improved.
Track 6: Using Reporting Systems for Safety and Quality Improvement

Chair: Hal Kaplan, Columbia University
Overview

- Improving the Accuracy and Utility of Reporting Systems
- Using Reporting Systems to Track Changes Over Time
- Using Reporting Systems to Track Adverse Drug Events
- Innovative Applications of Reporting Systems
Key Challenges Identified by Participants

• Underreporting of adverse events
  • Fear of repercussions, disciplinary, regulatory
    • PSOs
  • Time consuming and cumbersome
    • Perception vs. Reality
    • Timely and useful feedback

• Inconsistent/incomplete data
  • Anonymous reporting makes re-contacting difficult
  • Patients reporting
    • may recognize adverse events differently
  • Triangulation
What Did We Learn? Key Insights

- Will report error when safeguards are in place and system is viewed as useful
  - Adoption vs. compliance

- Include working conditions and practice environment in data capture

- Event reporting systems as a community of practice
  - For example, “Plumtree” or “MySpace”

- Good examples of not only data capture, but data use
  - Sense-making
Track 7: Working Conditions Challenges in Patient Safety

Co-Chairs:
Christopher Landrigan, Harvard Medical School
Jules Rosen, University of Pittsburgh Medical Center
Overview of My Track

- Impact of health IT on provider working conditions and their performance:
  - Effects of working conditions on implementation of HIT
  - Exploring working conditions, relationships, and links to performance
  - Organizational and team strategies
Key Challenges Identified by Participants

- We still understand far too little about human factors in the genesis of patient safety hazards.

- Studying HIT in context—there is no way of separating the technology from the human interaction component.

- Training curve is intensive.

- Implementing solutions requires continuous management and investment.

- The cost of implementing the solutions is greater than the cost of the technology.
What Did We Learn? Key Insights

- Culture—unequivocal leadership support and local champions are essential for change

- Return on investment is not obvious in terms of quality improvement. Long term investment

- Team building and communication as organizational priorities go hand in hand with HIT

- Taking care of providers in healthcare is a critical part of patient safety
  - Working conditions
  - Empowerment- Making sure they feel that they’re part of the change process
Track 8: Patient and Family-centered Health IT and Safety

Chair:
Judy Ozbolt, University of MD School of Nursing
Overview of Patient-and Family-Centered Health IT and Safety

- New Approaches in Medication Management and Care Transition
  - Amy Friedman (Yale University), Kathryn Leonhardt (Aurora Health), Melinda Muller (Legacy Health), Robert Rosati (Visiting Nurse Service of New York)

- Patient-Centered Health IT: Perceptions and Approaches
  - James Ralston (Group Health Cooperative), Srinivas Emani (Fallon Clinic), Christopher Lamer (Cherokee Indian Hospital), John Reiling (St. Joseph’s Hospital)
Key Challenges in Reducing Medication Errors

- Maintain a complete, accurate, up-to-date medication list
  - What medications are currently prescribed by all providers—and consistent with formulary?
  - What medications are patients actually taking?
- Support patients in adhering to complex medication regimens
- Enhance communications across providers and settings of care
What Did We Learn? Key Insights

- Competing health systems have created a single medication list document accepted by all.

- A web-based CCR and e-transitions system allows communication between MDs and home care nurses.

- Community partnerships may help to improve communications about medications. *Innovation: Medications bag to keep all meds together and bring them to clinic appointments.*

- With good support and training, even older patients who have never used a computer can learn to manage complex medication regimes.
Key Challenges in Perceptions and Approaches to Patient-Centered HIT

- What are patients’ concerns and preferences with regard to HIE?
- How can PCIT support communications between patients and providers?
- Can an EHR and other integrated IT support a tobacco cessation program?
- How can the design of a new hospital, incorporating HIT, improve safety?
What Did We Learn? Key Insights

- Patients do have concerns about privacy and security, but they think appropriate information exchange is important and must happen.

- Patients like having access to their health information and being to enter information, but see little value in emailing providers.

- An EHR and other IT are supporting communication and management of patients’ progress in a tobacco cessation regime.

- Patient-centered hospital design can support a culture of safety.
Track 9: Emerging Approaches To Drive Change in Healthcare

Co-Chairs:
Michael Harrison, AHRQ
David Munch, Exempla Health System
Overview

- Human vigilance to IT defects
- The issues around developing PSI measures
- Use of Technology in High Reliability Systems
- Positive Deviance (Empowering users to discover doable, underused solutions)
- Lean approaches to improving safety and efficiency
Key Challenges Identified by Participants

- It is hard to detect errors in IT function when results look plausible.
- Assuring comparability in composite measures and giving proper weight to high priority elements.
- Maintaining vigilance and awareness of risks in IT environment.
- Releasing the creativity of front line staff.
- Fitting industrial methods to complex health care processes.
- Pursuing the principals and not just the tools of Lean.
What Did We Learn? Key Insights

- Do not assume things are working when they because they “seem” ok.

- More work is needed to make composite measures actionable.

- The five principals of High Reliability provide a relevant construct for improving healthcare safety.

- Positive Deviance is a successful approach to discovering the untapped solutions in healthcare.

- Lean principals and tools provide effective means to improve clinical and non-clinical processes in healthcare.