

The Road to Clinical Transformation



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Learning Objectives

1. Describe strategies to improve patient safety and clinical outcomes leveraging informatics & technology
2. List the primary factors driving care delivery transformation
3. Discuss opportunities, partnerships and trends for enhancing and promoting nursing informatics

Kaiser Permanente

- 8 Regions serving 9 states & DC
- 9 million members
- 17,000 physicians; 173,000 employees (including 48,000 nurses)
- 37 hospitals (co-located with medical offices)
- 611 medical offices & other outpatient facilities
- \$48 billion operating revenue
- \$2 billion net income
- \$1.8 billion invested in our community
- 67 years of providing care



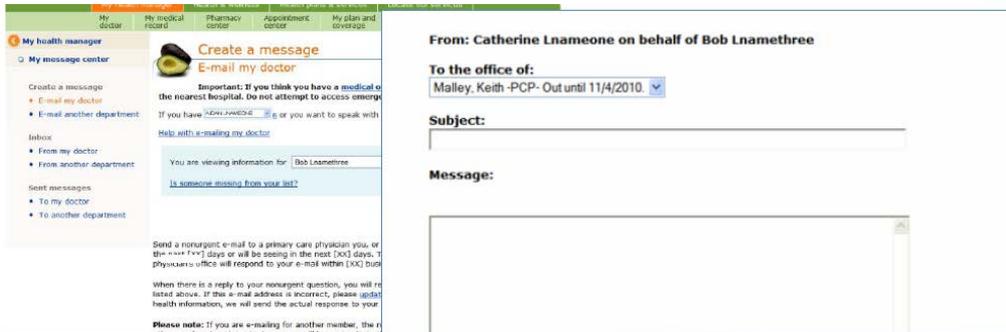
Patient Engagement



Webinars

Policy Clinical Technology Business Meaningful Use HIE Blogs HCI 100

Top 10 Tech Trends: Pushing the Patient into the Picture



Improved quality scores...

...associated with secure messaging, including 2 percent to 6.5 percent improvements in glycemic, cholesterol and blood pressure screening and control.

13 million email sent by patients

3 million appointments booked

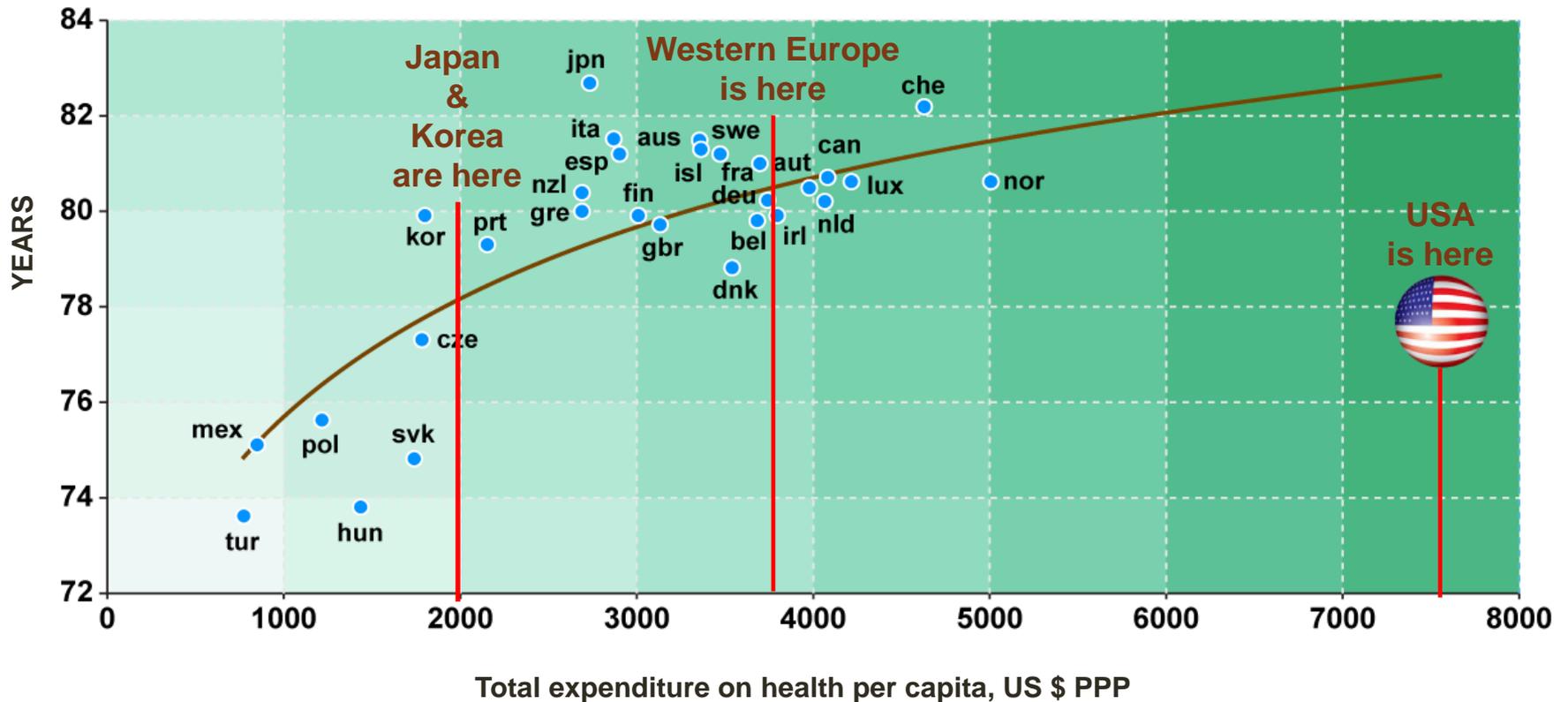
33 million test results viewed



Boston Children's Hospital

U.S. Health Care is Poised for Transformation

Life expectancy at birth years



Source: The Atlantic 3-12

HIT Helping to Drive the Triple Aim

Better
healthcare



Improving patients' experience of care within the Institute of Medicine's 6 domains of quality: *Safety, Effectiveness, Patient-Centeredness, Timeliness, Efficiency, and Equity.*

Better health



Keeping patients well so they can do what they want to do. Increasing the overall health of populations: address behavioral risk factors; focus on preventive care.

Reduced costs



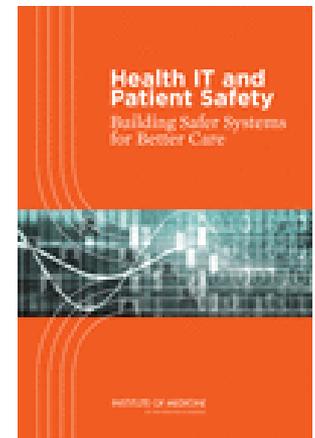
Lowering the total cost of care while improving quality, resulting in reduced monthly expenditures for Medicare, Medicaid, and CHIP beneficiaries.



Health Information Technology

IOM Report: Health IT & Patient Safety

- Technology has the potential to dramatically improve the quality and safety of care
- The evidence in the literature is mixed; CPOE and BCMA has shown to improve medication safety.
- Safety is a property of a larger system including not only the hardware and software but how it is used by clinicians.
- The larger system, a socio-technical system includes technology, people, processes, organization and external environment.
- Comprehensive safety analysis needs to consider these factors as a whole and how they affect each other rather than one root cause.



Challenges in the Current Work Environment

- Documentation is burdensome and overwhelming
- Nurses carry multiple communication devices but care gaps, interruptions and lack of knowledge are pervasive
- Nurses are the 'information integrators'
- There is huge memory load on the nurse; need for real time contextual information at the point of care
- The environment does not support efficiency
- Technology is not fully integrated
- Documentation tools do not support documentation at the point of care or documentation as an automatic product of care
- Lack of appropriate infrastructure to support technology at the bedside

HIMSS Clinical Transformation

Definition of Clinical Transformation

Clinical transformation involves assessing and continually improving the way patient care is delivered at all levels in a care delivery organization.

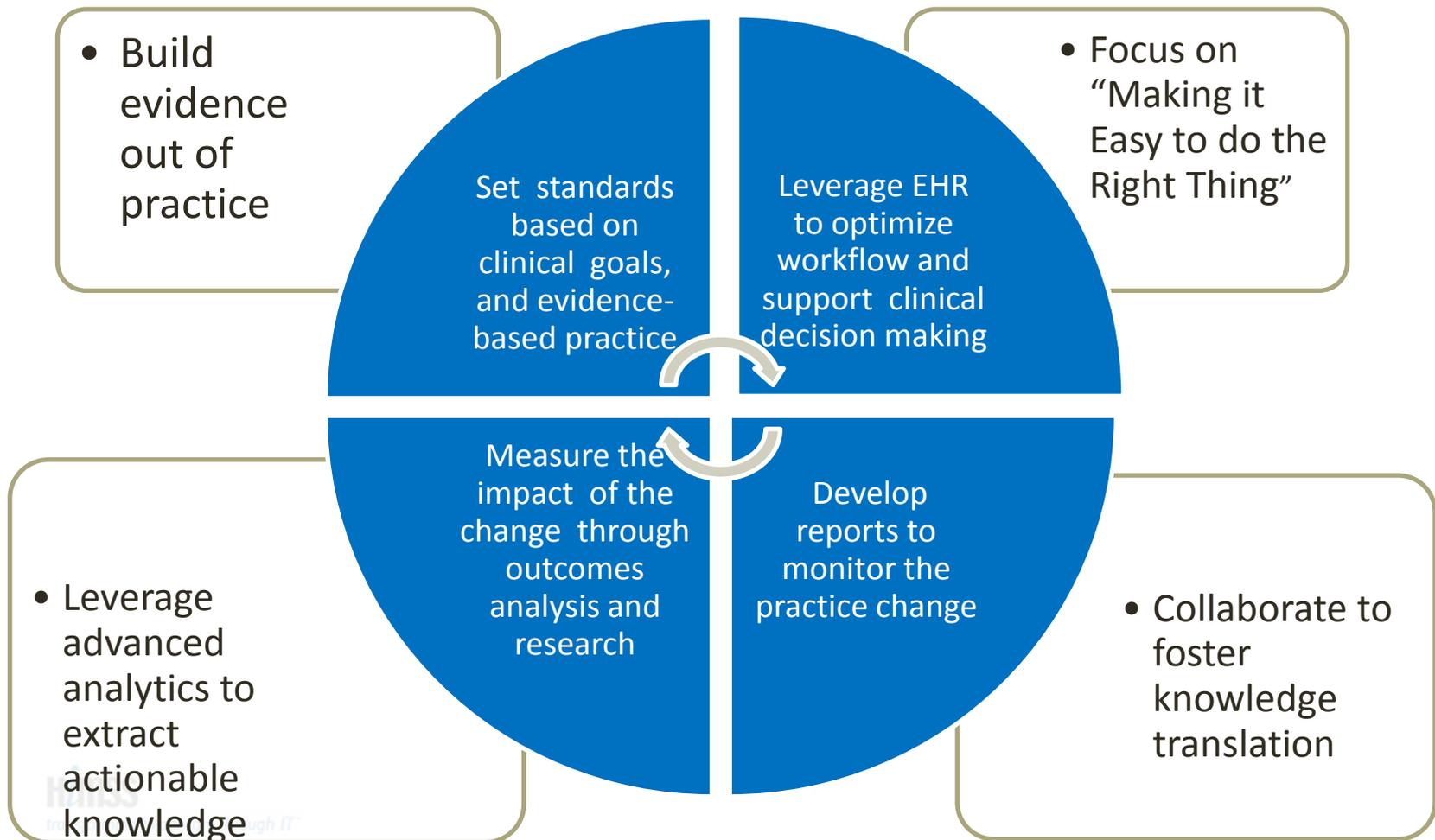


- It occurs when an organization rejects existing practice patterns that deliver inefficient or less effective results and embraces a common goal of patient safety, clinical outcomes and quality care through process redesign and IT implementation.
- By effectively blending people, processes and technology, clinical transformation occurs across facilities, departments and clinical fields of expertise.

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Model for Clinical Transformation



We have to stop **ADDING** work and
start

Organizing and **Simplifying** the
workflow of the nurse

Make it **EASY** to do the **RIGHT THING**

Ten Most Costly Medical Errors and Associated Annual Cost

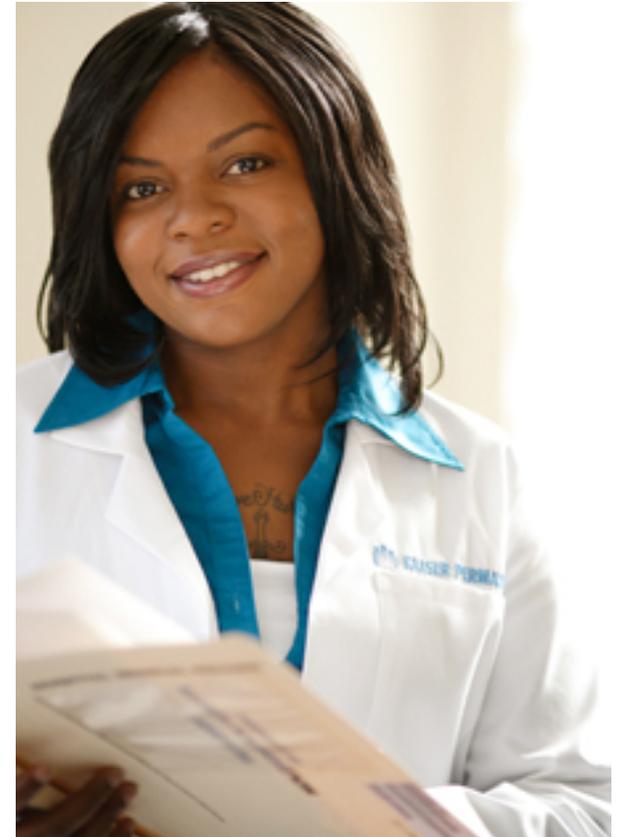
Pressure Ulcers were the most FREQUENT and 2nd most COSTLY medical error identified.

1.	Postoperative infections	\$3.3 billion
2.	Pressure ulcers	\$3.2 billion
3.	Mechanical device or implant complications (non-cardiac)	\$1.0 billion
4.	Postlaminectomy syndrome	\$995 million
5.	Hemorrhage complicating a procedure	\$678 million
6.	Infection due to central venous catheter	\$589 million
7.	Pneumothorax	\$569 million
8.	Infection from injection/infusion/transfusion/vaccination	\$566 million
9.	Other complications of device, implant and graft	\$398 million
10.	Abdominal hernia	\$342 million

The \$17.1 Billion Problem: The Annual Cost of Measurable Medical Errors.
Van Den Bos, J, Rustagi, K, Gray, T., Halford, M., Ziemkiewicz E,, Shreve, J
Health Affairs 30, No 4 April 2011

Call to Action

How might we disruptively innovate and transform the inpatient work environment to enable simple, reliable patient care delivered by nurses and their inter-professional partners through the wise use of data, analytics and information technology?



KP SmartCARE Technology Strategy

Vision:

Leverage data & technology to transform care delivery and improve patient safety and quality outcomes.

Strategy:

Accelerate the adoption of smart, standards-based, interoperable, patient centered technology that will make healthcare delivery safer, more efficient, timely, and accessible.

Execution:

Strategic implementation of key technology initiatives within the clinical setting.

KP SmartCARE Priorities

Clinical Transformation

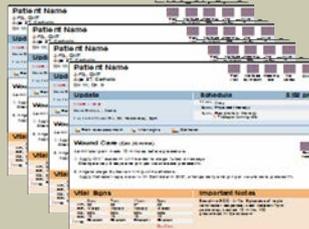
Rapid Sign-On

Eases the burden and repetition of logging-in to the EHR every few minutes



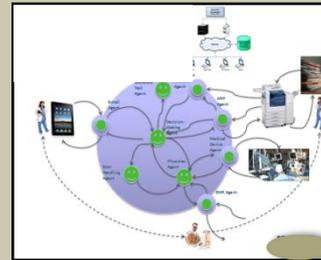
Clinical Intelligence

Provides cognitive support and real time contextual information



Workflow Automation

Manage tasks, schedules and events

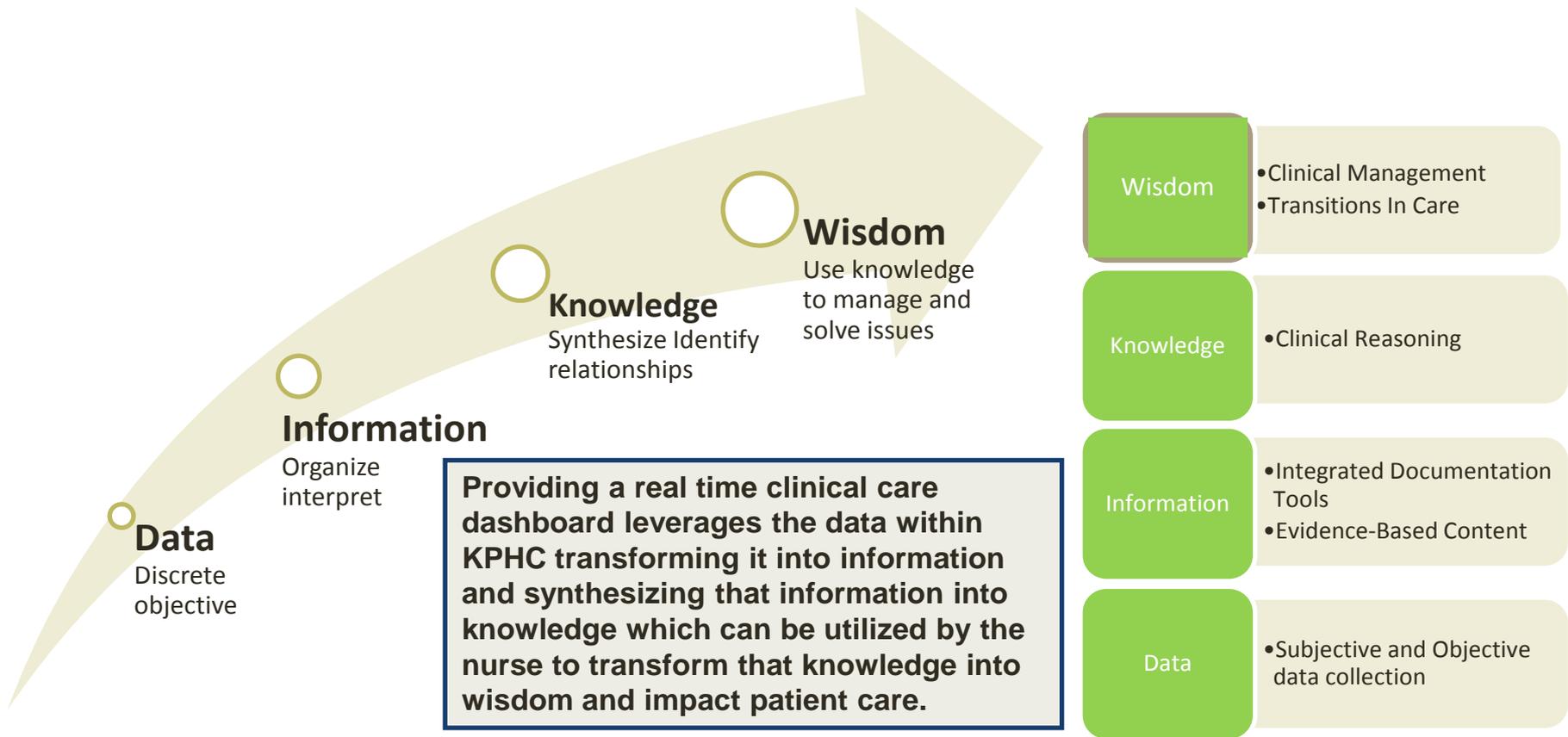


Mobility



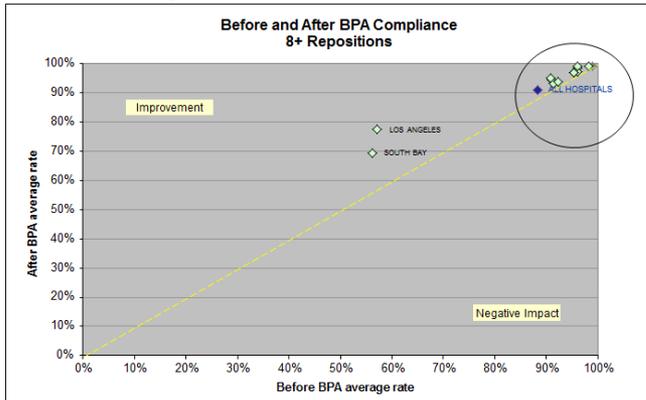
Biomedical Device Integration (BDI) captures patient data automatically resulting in real-time, accurate, easily available patient information. BDI is foundational to the KP SmartCARE Strategy.

Nursing Clinical Practice Transformation



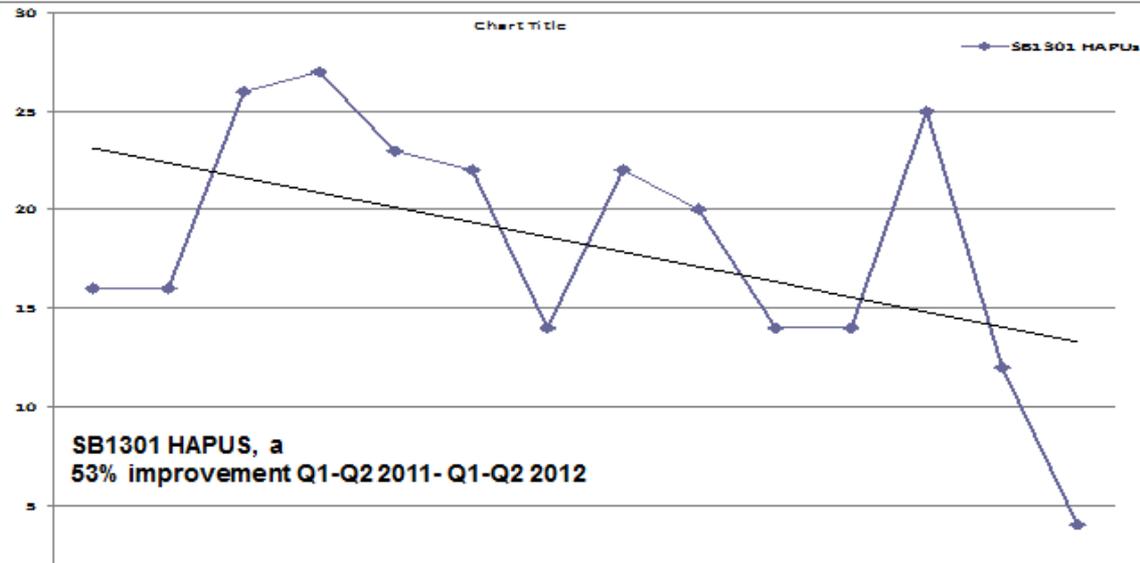
CDS > Documentation > Outcomes

Measure Change Through Outcomes Analysis & Research: Impact of Best Practice Alert



SB 1301 Hospital Acquired Pressure Ulcers Q1 2009-Q2 2012

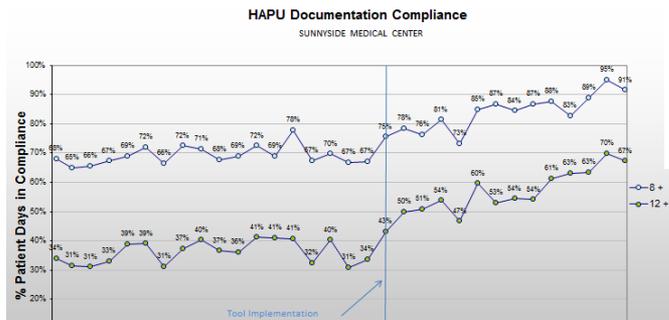
Attachment C



**SB1301 HAPUS, a
53% improvement Q1-Q2 2011- Q1-Q2 2012**

*All improvements in pressure ulcer prevention outcomes are the result of a comprehensive and multi-pronged approach to performance improvement.

Impact of Clinical Care Dashboard - Preliminary results
NW – Sunnyside Medical Center



Rapid Improvement Model

- 1. Set goals**
What are we trying to accomplish?
- 2. Establish measures**
How will we know that the change is an improvement?
- 3. Select changes**
What changes will result in improvement?
- 4. Test change**
Plan, Do, Study, Act



Best Care at Lower Cost

Recommendations

1. Improve the capacity to capture clinical, care delivery process, and financial data for better care, system improvement, and the generation of new knowledge.
2. Involve patients and families in decisions regarding health and health care, tailored to fit their preferences.
3. Accelerate integration of the best clinical knowledge into care decisions.
4. Continuously improve health care operations to reduce waste, streamline care delivery, and focus on activities that improve patient health.
5. Improve coordination and communication within and across organizations.



BEST CARE AT LOWER COST

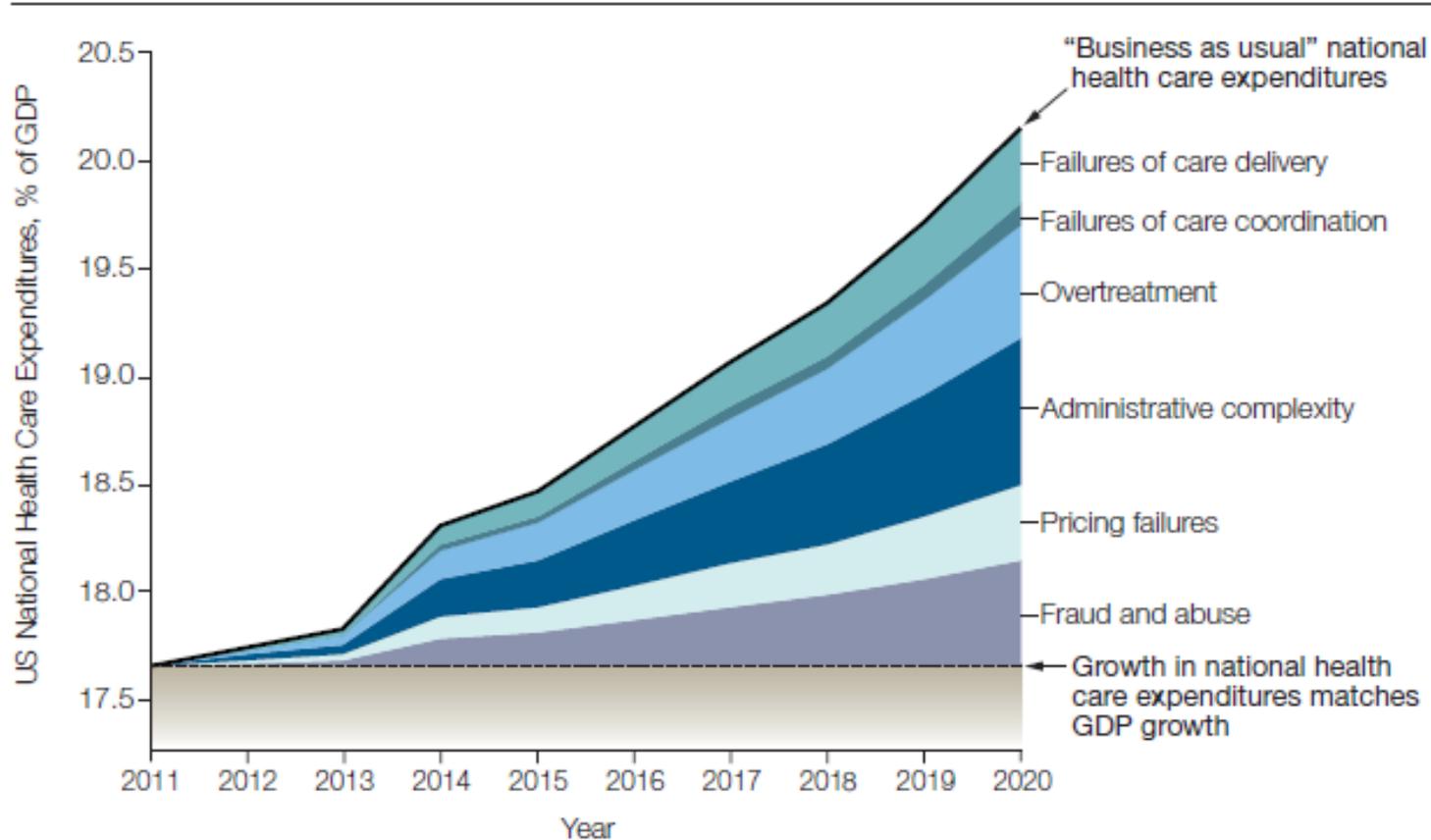
The Path to Continuously Learning
Health Care in America

Operating Principles for Clinical Transformation

- Leadership & Governance
- Intuitive to our care teams
- Simplify workflows
- Intelligent use of our data
- Decrease waste
- Engage staff closest to the work
- Lead with the clinical problem –not the technology
- Build skills in boundary spanning leadership

Opportunities to Remove Waste

Figure. Proposed “Wedges” Model for US Health Care, With Theoretical Spending Reduction Targets for 6 Categories of Waste



Interactive Patient Care Technology

IPC Systems return control to the patient in their hospital room by providing increased autonomy, capability and comfort



Adult Experience



Four Sites of Care

Care in the future will be delivered in four distinct “sites of care” which are incredibly and increasingly well supported with technology to provide personalized access



STAFFED BEDS

Health Plan
Brokers
Employer
Groups



IN-HOME

Consumers
Workforce
Care
Team/Operations



FACE-TO-FACE



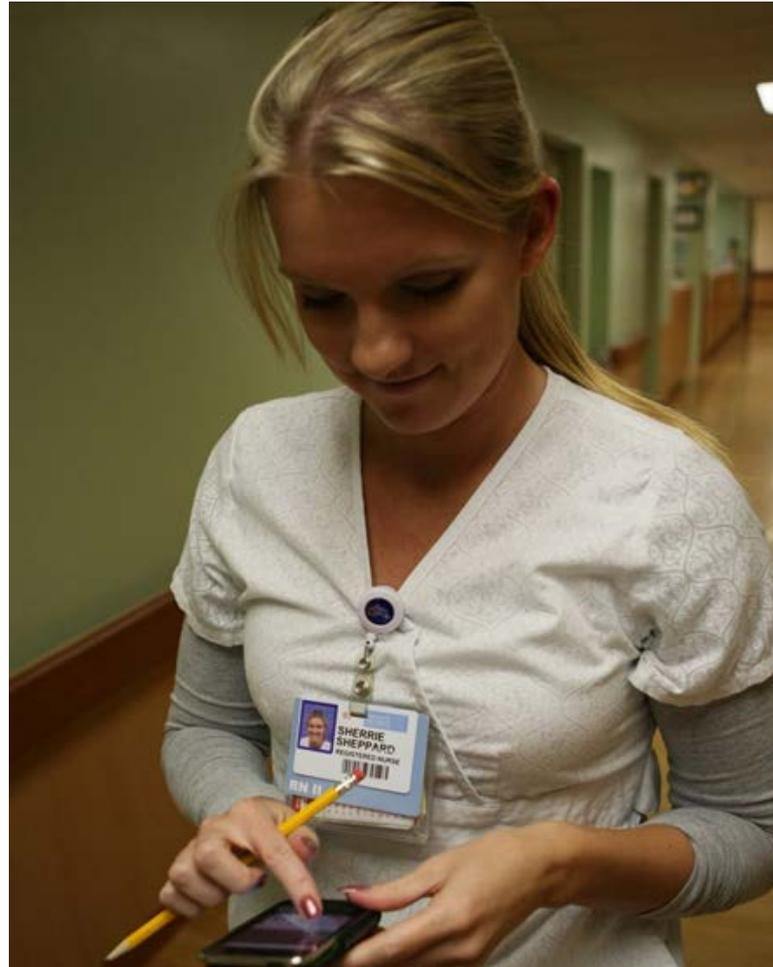
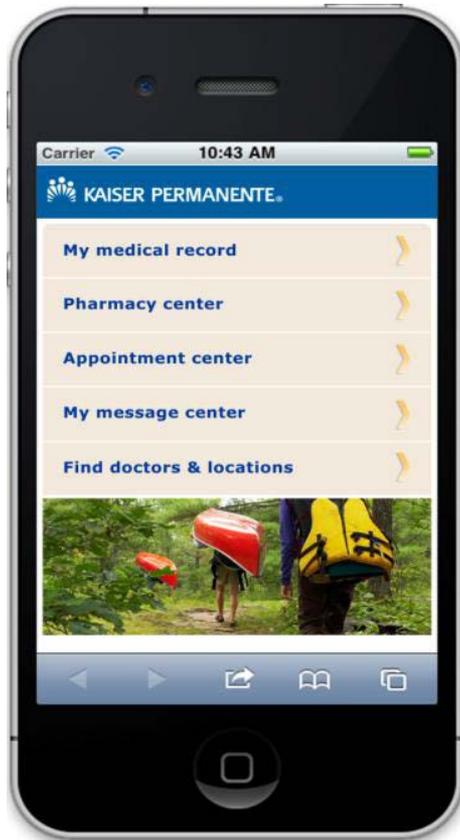
VIRTUAL

Mobile will be Dominant

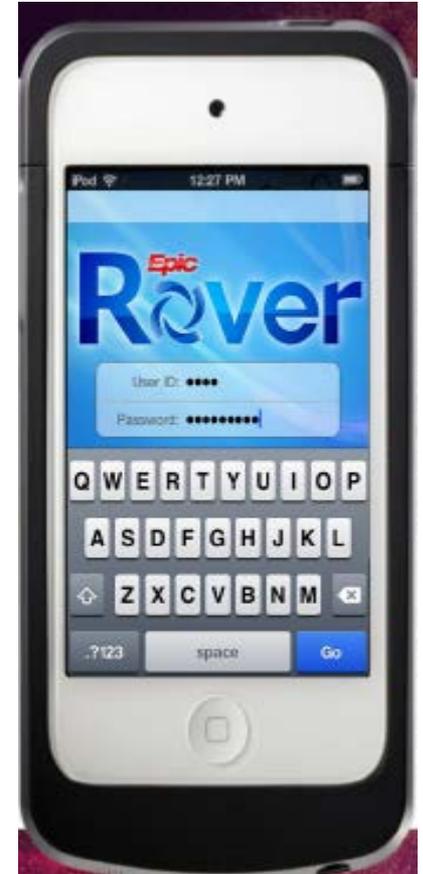


Communication & Mobility

Patients / Families



Clinician to Clinician



Real-time, Personalized Health Care



Smart

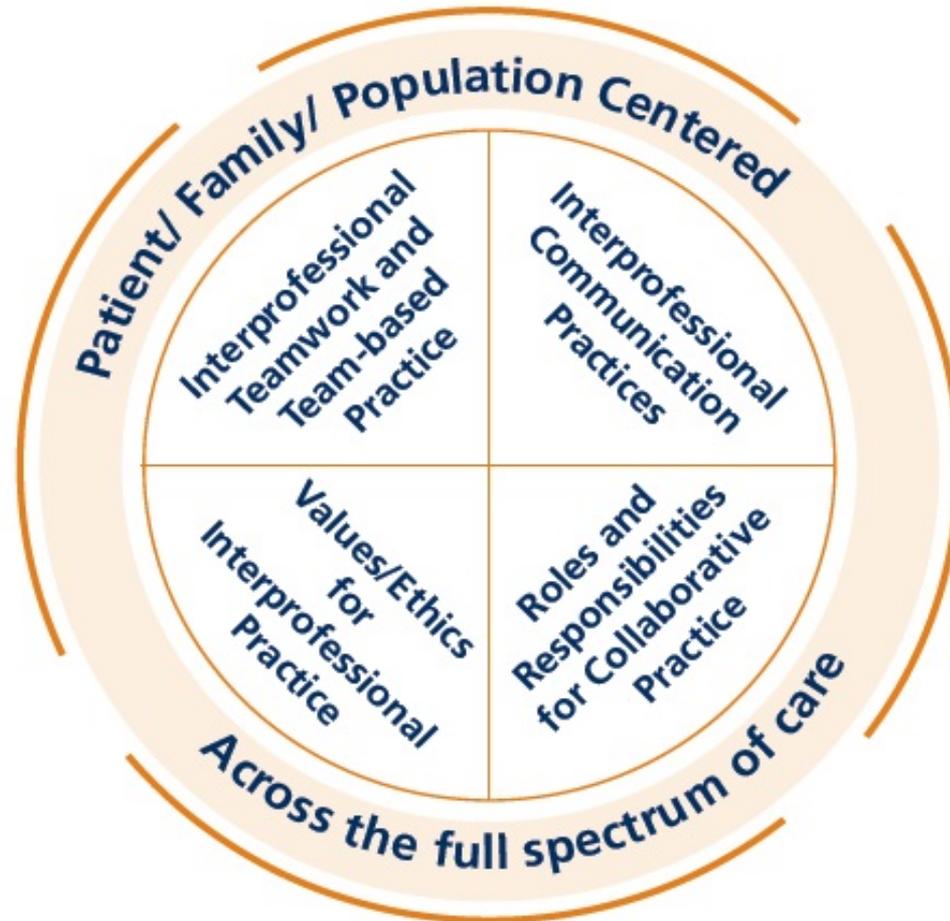
Networked

Collaborative

Affordable

Preventive

Interprofessional Collaborative Practice Core Competency Domains



The Learning Continuum

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Transformation Priorities & Themes

- Evidence Based Care
- Clinical Decision Support
- Advanced Analytics
- Usability
- Clinical Intelligence
- BioMedical Device Integration
- Mobility
- Performance Improvement & Removing Waste
- Patient & Family Engagement
- Data Portability, Data Exchange & Data Reuse
- Inter-Professional Clinical Informatics Teams

United States EMR Adoption Model SM			
Stage	Cumulative Capabilities	2013 Q2	2013 Q3
Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	2.1%	2.2%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	10.0%	11.1%
Stage 5	Closed loop medication administration	18.7%	20.9%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	14.6%	15.1%
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	34.5%	31.9%
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	9.0%	8.4%
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed	3.8%	3.5%
Stage 0	All Three Ancillaries Not Installed	7.2%	6.9%

Data from HIMSS Analytics® Database ©2012

N = 5439

N = 5437

IOM Report: Transforming Nursing Roles

- Leaders in the effective design & use of EHR systems
- Full partners in decision making
- Care coordinators across disciplines
- Experts to improve quality, safety, efficiency and reduce health disparities
- Advocates for engaging patients & families
- Contributors to standardize infrastructure within the EHR
- Researchers for safe patient care
- Preparing the workforce in a technical & digital environment
- Leaders on federal committees impacting health IT and quality measures

Judy Murphy, Journal of Healthcare Information Management Vol. 24, 2 Spring 2010

The Future is in Your Hands



