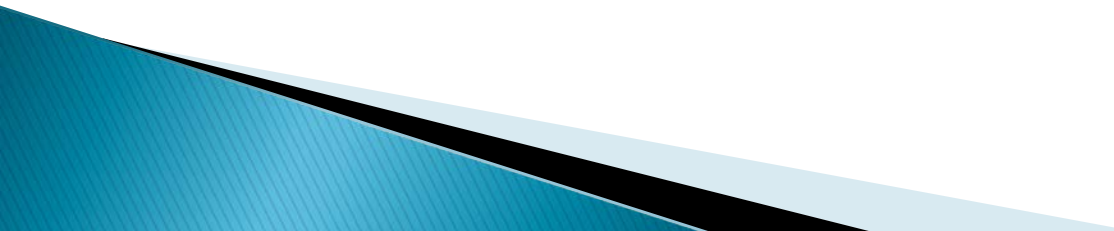


Informatics Solutions for Patient Care Quality

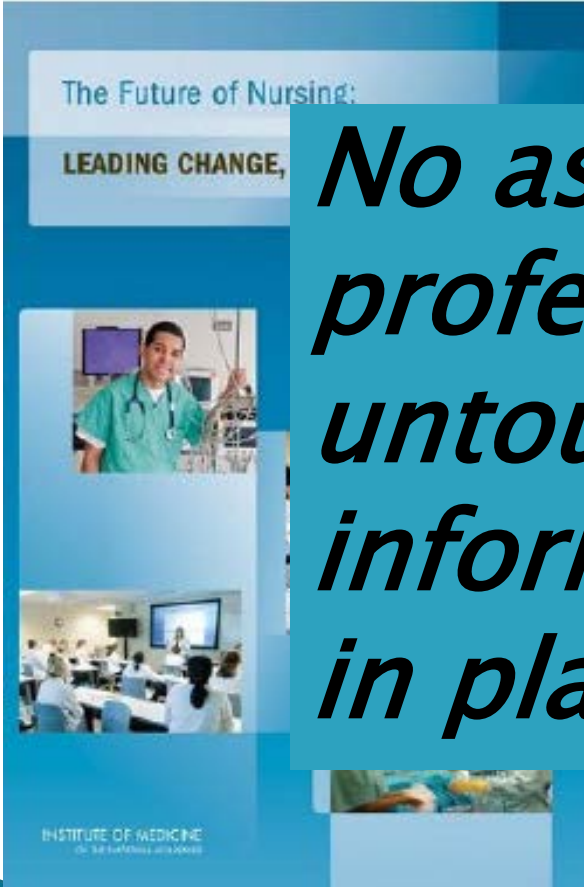
Karlene Kerfoot, PhD, RN, NEA-BC, FAAN
Principal, Kerfoot & Associates, Inc.

Ellen M. Harper, RN, MBA, Doctorate Student
Vice President, Cerner Corporation

Objectives

- ▶ Understand the key success factors that current state of technology can support quality using:
 - Clinical Decision Support
 - Evidence Based Practice
 - Knowledge Management
 - ▶ Recognize the future technology developments that will support nursing in:
 - Patient Centered Care
 - Patient Transitions of Care
 - Consumer Health
- 

Why is this important?



No aspect of our profession will go untouched by the informatics revolution in place

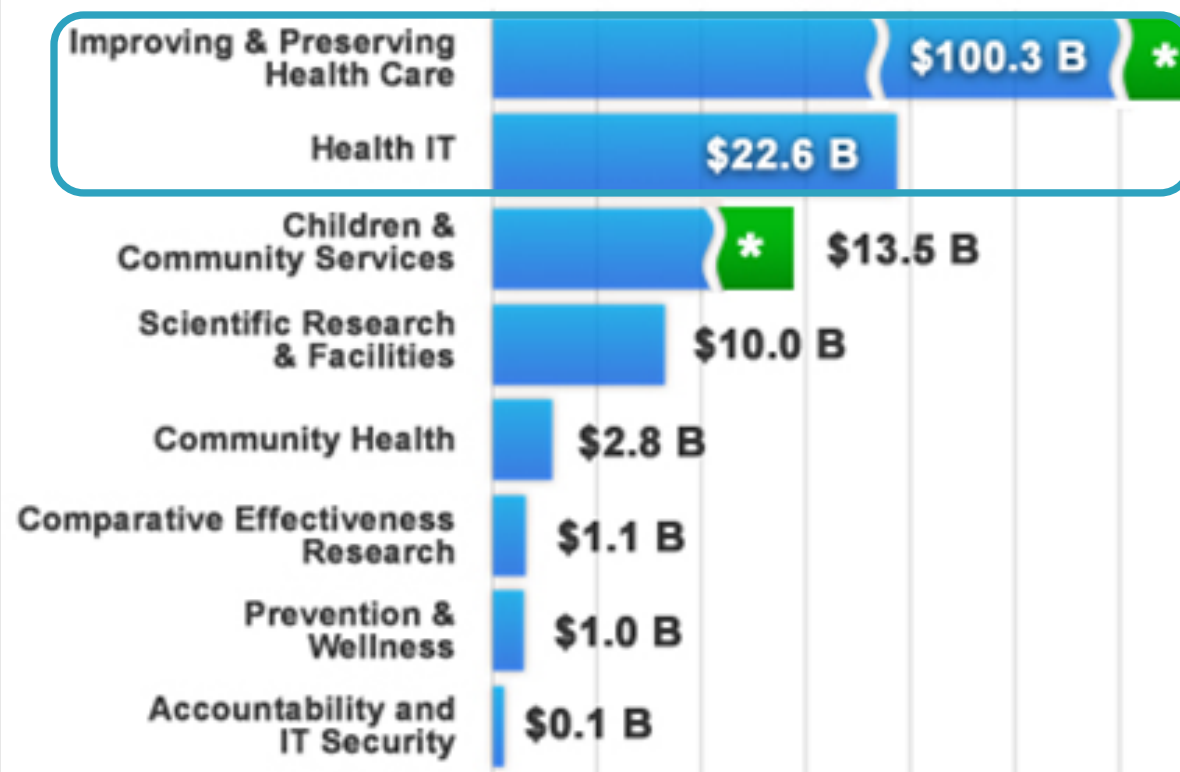
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Technology for Economic and Clinical Health Act

October, 2010

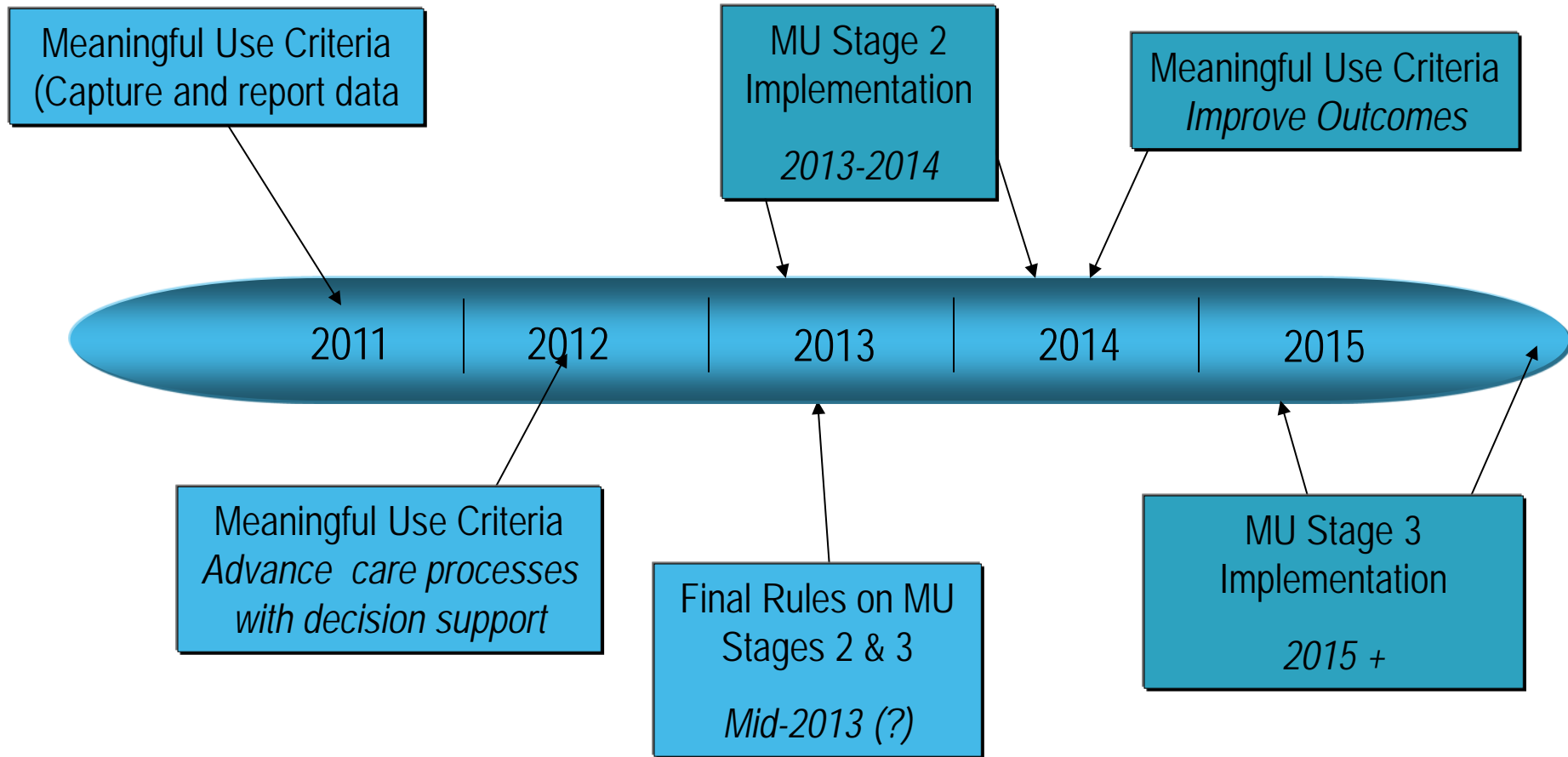
Where is the money going?

HHS Recovery Act Funding



[*Actuarial estimates as of January 2011.](#)

HIT Enabled Healthcare Reform





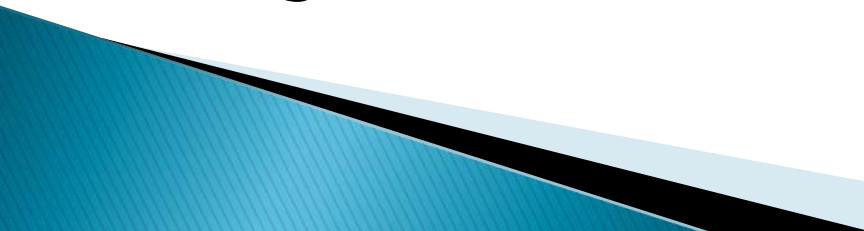
“The legislation provides a road map for healthcare reform, the only problem is that there is no road.”

unknown

EHR Adoption Model—a long way to go

Stage	Capabilities	Percentage of Hospitals
7	Fully electronic MR; CDO able to contribute to ICEHR as byproduct of SEHR	0.1%
6	Physician documentation (structured templates), full CDSS (variance & compliance), full PACS	0.1%
5	Closed loop medication administration	0.5%
4	CPOE, CDSS (clinical protocols)	3.0%
3	Clinical documentation (flow sheets), CDSS (error tracking), PACS available outside Radiology	18.0%
2	CDR, CMV, CDSS inference engine, may have Document Imaging	38.8%
1	Ancillaries – Lab, Radiology, Pharmacy	18.9%
0	All three Ancillaries not installed	20.7%

Informatics is Key To Improve Outcomes, 2015 & Beyond

- ▶ Building an infrastructure for evidence based practice
 - ▶ Informatics is key to increased knowledge and informing practice
 - ▶ Informatics links professional practice model to clinical practice
 - ▶ Informatics is a regulatory and policy influencer
 - ▶ Informatics will support and optimize care delivery models e.g. Accountable Care Organizations
- 

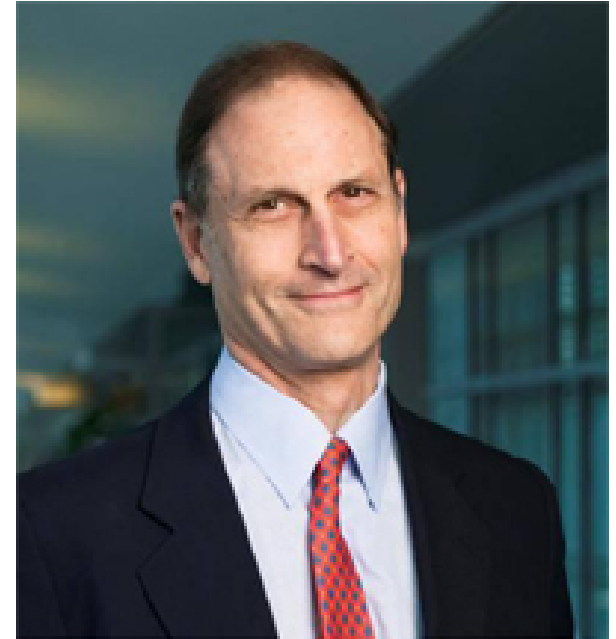
6 Key Success Factors for Informatics and Patient Care Quality

1. Clinically Driven Project
2. Governance
3. Standardization of Practice
4. Workflow and Process Drives Design
5. Enabling a Single Source of Truth
6. Knowledge Management/Research



1. Clinically Driven Project

- ▶ “People working in health IT should think about EHRs **not as a technology project, but as a change-management project**”



Dr. David Blumenthal

**National Coordinator for Health
Information Technology**

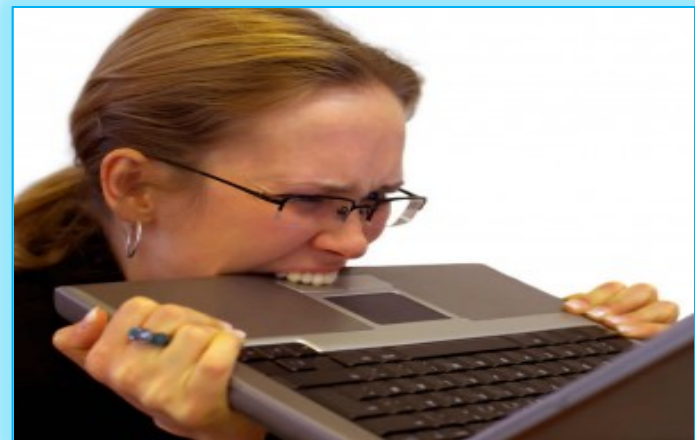
November 17, 2009: In a speech before the American Medical Informatics Association's annual symposium in San Francisco

Break Down the Silos



Anticipated Challenges

There is a *HIGH* cost to lack of buy in and participation



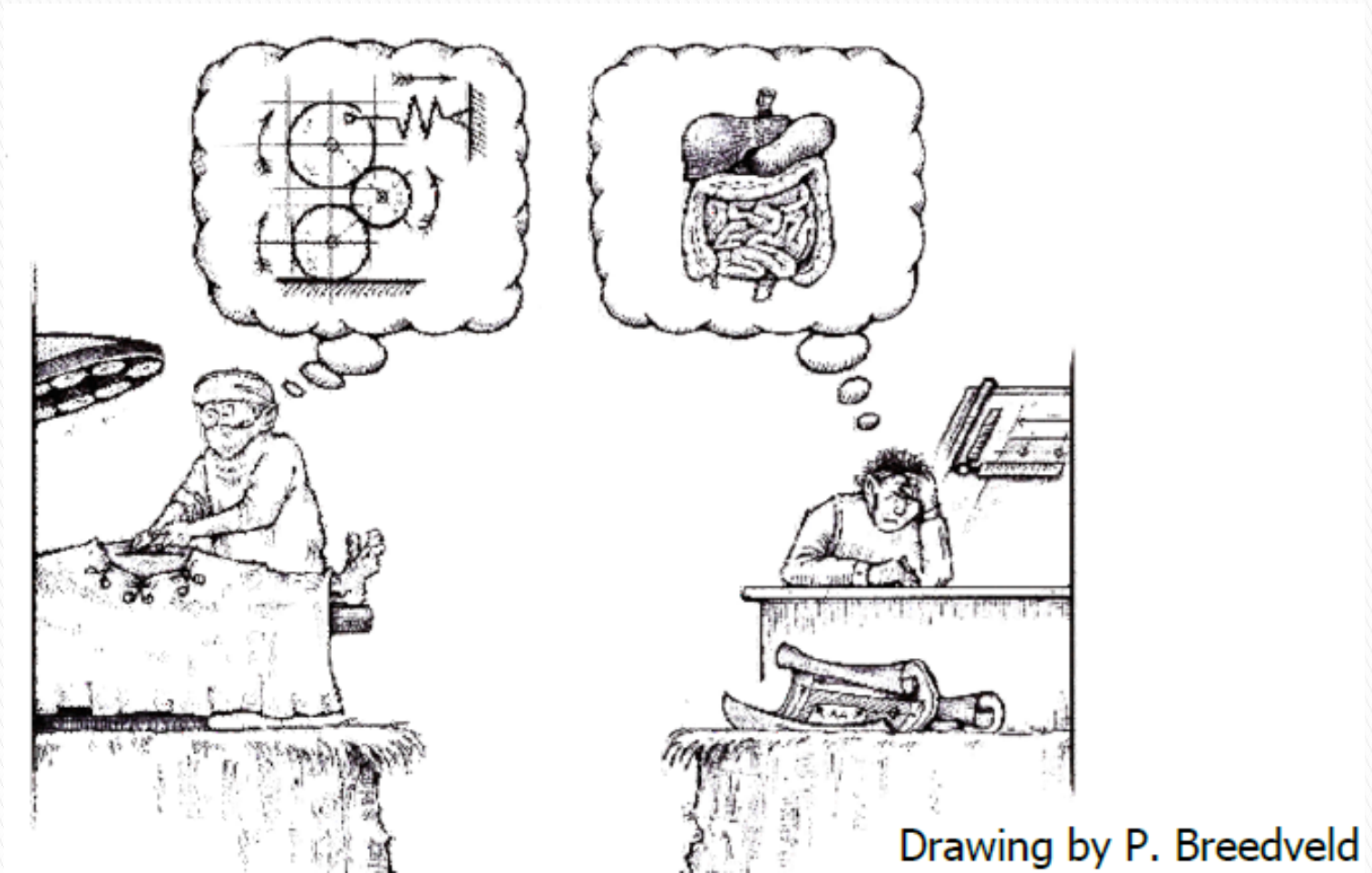
Be an Influencer

- Successful influence lies in three powerful principles:
- ▶ Identify high-leverage behaviors that lead to rapid and profound change
 - ▶ Use personal and vicarious experience to change thoughts and actions
 - ▶ Use multiple sources of influence to make change inevitable

Influencer



2. Governance



Drawing by P. Breedveld

Bridge the gap between two worlds
Technical and Clinical

Team Work – Road to Implementation

We can't all be heroes because someone has to sit on the curb and clap as they go by.

- *Will Rogers*



Junichi Iwamoto / AP

3. Standardization of Practice

When variability and unpredictability is recognized, better processes and frameworks can be created

- ▶ Nomenclature/terms
- ▶ Workflows (bar coding meds at the bedside)
- ▶ Hardware (computers on wheels)
- ▶ Smart devices



... for successful clinical automation

Standardized Terminology is the Foundation for Knowledge Management

“If we cannot name it (nursing), we cannot control it, practice it, research it, teach it, finance it, or put it into public policy.”

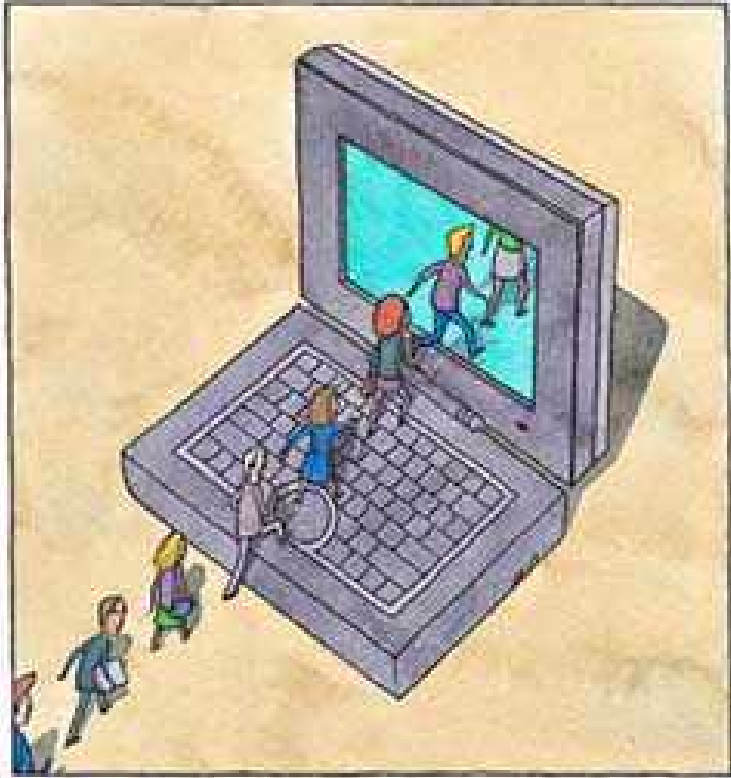
*Norma Lang, PhD, RN, FAAN
1992*

Change Management Expectations



**"Of course, I'm feeling uncomfortable.
I'm not allowed on the couch."**

Plan for Sustaining the Change



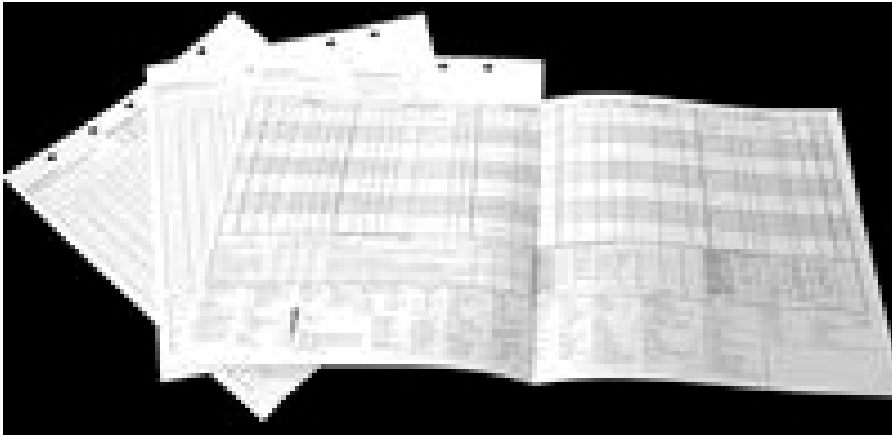
- ▶ Defining the role of the manager to monitor compliance
 - Documentation
 - Future state workflows
 - Nursing Report Cards/Unit Quality Monitoring
- ▶ Establishing expectations for your managers, super users, front line support team
- ▶ Chart reviews
- ▶ Monitoring and auditing

4. Workflow & Process Drives Design



- ▶ Don't automate poor processes
- ▶ Close the loop on how information will be viewed, monitored and audited
- ▶ Don't focus on how information gets into the system

Before Automation



Name: McGehee, Wendy
Date: 3/19/78
Room: 302
Nurse: [initials]

Medication Administration Record

DATE	TIME	MEDICATION	AMOUNT	ROUTE	TIME	DATE	LEVEN
3/19	08:00	Penicillin	100 mg	IV	08:00		
3/19	08:00	Penicillin	100 mg	IV	08:00		
3/19	08:00	Penicillin	100 mg	IV	08:00		

SINGLE ORDERS - THE OPERATIVES

DATE	TIME	OPERATIVE	NO. GIVEN	NO. WITH PAIN	NO. WITH ANGE	SUBSTITUTES
3/19	08:00	Penicillin	100	1/4		
3/19	08:00	Penicillin	100	1/4		
3/19	08:00	Penicillin	100	1/4		

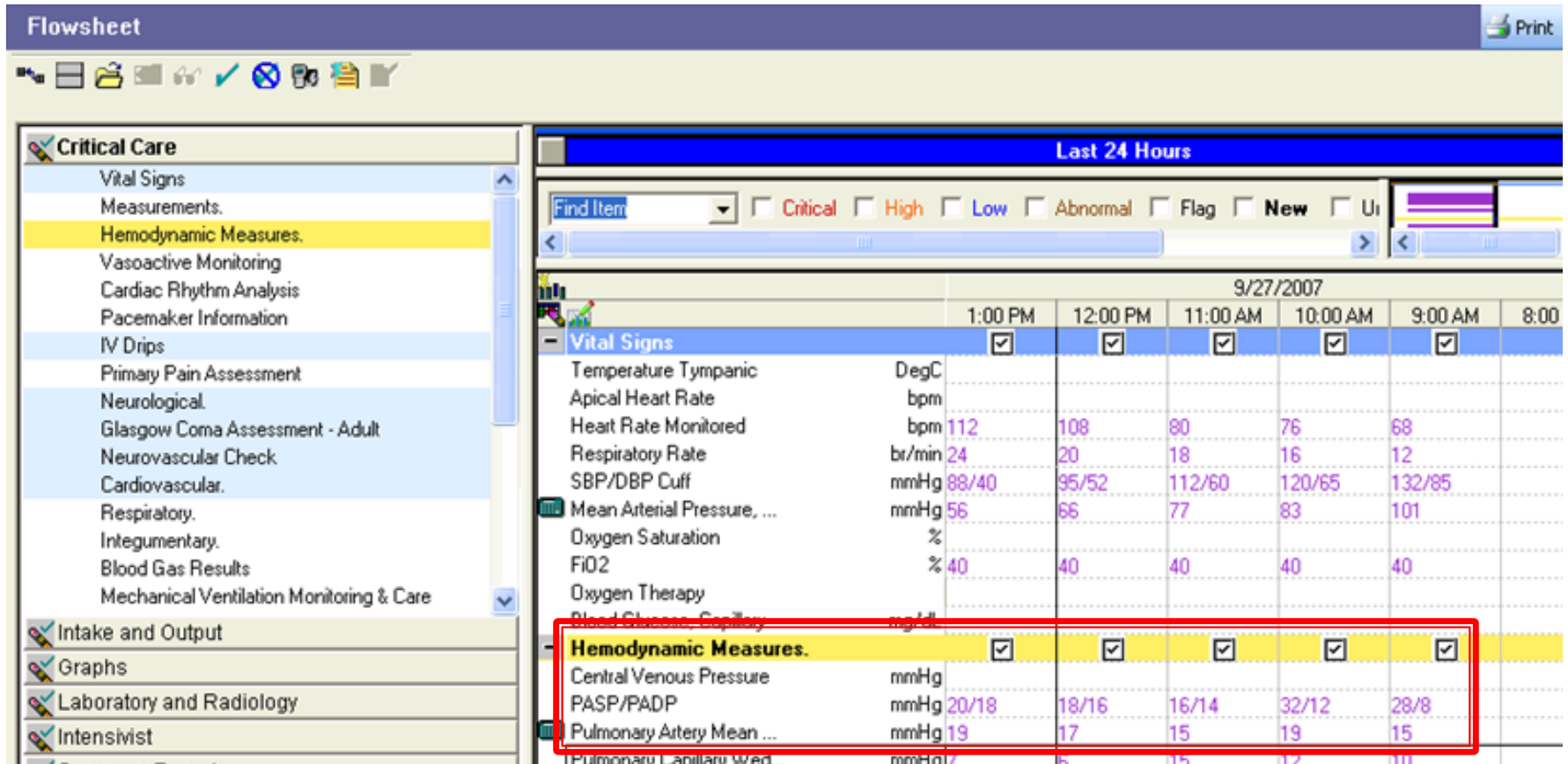
VITAL SIGNS

DATE	TIME	TEMP	PEND	HEART RATE	BP	RR	SP	MEAN	PAP	MINIUM	MEUR	INITIALS
3/19	08:00	37.2	136	78	118	18	94	30	24	118	18	WJ
3/19	08:00	37.2	136	78	118	18	94	30	24	118	18	WJ
3/19	08:00	37.2	136	78	118	18	94	30	24	118	18	WJ

REV. 1-1-78 E. H. H. H. H.



Documentation – In Context



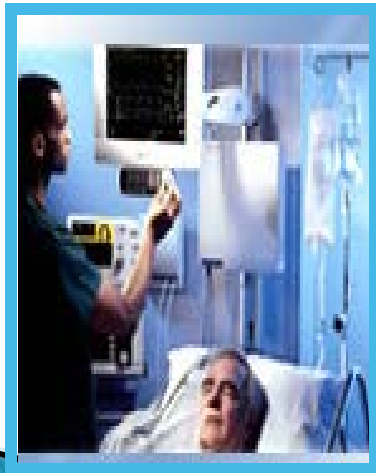
Trending across time and multiple parameters

5. Enabling A Single Source of Truth

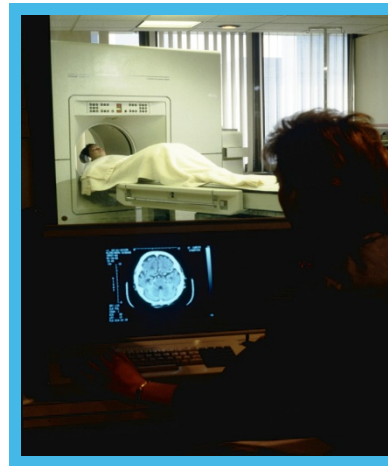
Removing the nurse from the role of a system integrator



➔ ... people to devices



➔ ... devices to workflow



➔ ... workflow to outcomes



6. Knowledge Management/ Research

- ▶ Knowledge exists in the work, not just in their head
- ▶ Calls for transformation as new knowledge is acquired



Data Guides the Way to Wisdom

▶ Data + Insight = Information



▶ Information + Analysis = Knowledge



▶ Knowledge + Perspective = Wisdom

Future Technology Developments

- ▶ Patient Centered Care
- ▶ Patient Transitions of Care
- ▶ Consumer Health



The Patient is the Center



High-Tech and High Touch Compassion and Computers

*"Computers are incredibly fast, accurate & stupid.
Human beings are incredibly slow, inaccurate & brilliant.
Together they are powerful beyond imagination."
– Albert Einstein*

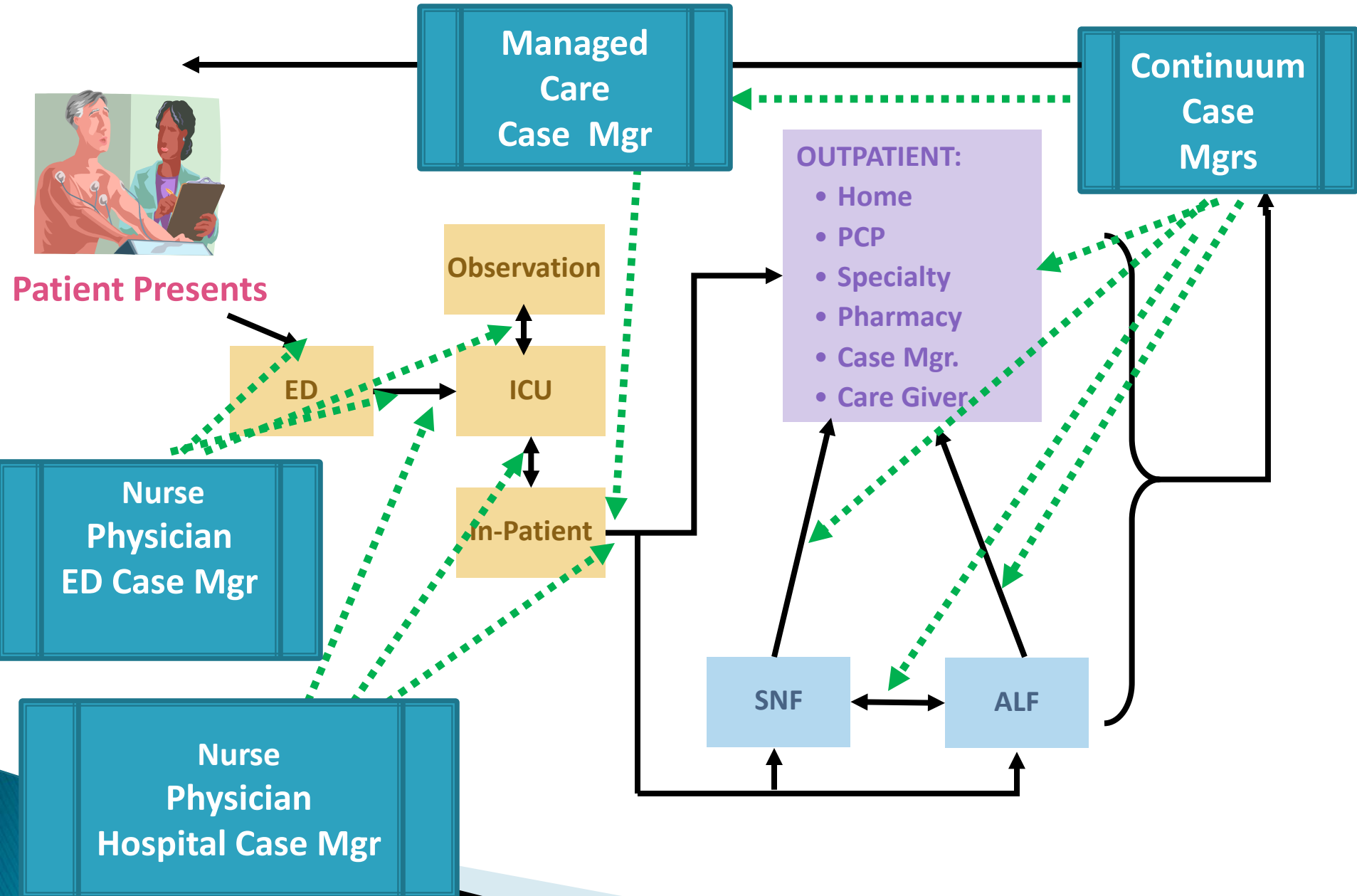
- ▶ Does this mean we need to look at more than caring, and consider how science and technology impact care?

Patient Transitions of Care



- ▶ Patients/Families Transitioning Through the Diagnoses/Venues
- ▶ Nurses as Integrators of Patient Transitions
- ▶ Technologies to Support

Transitions Impact Patient Care



Consumer Health

- ▶ Staying Healthy, Prevention
- ▶ Choosing Quality & Safer Care
- ▶ Understanding Diseases
- ▶ Technologies to Support

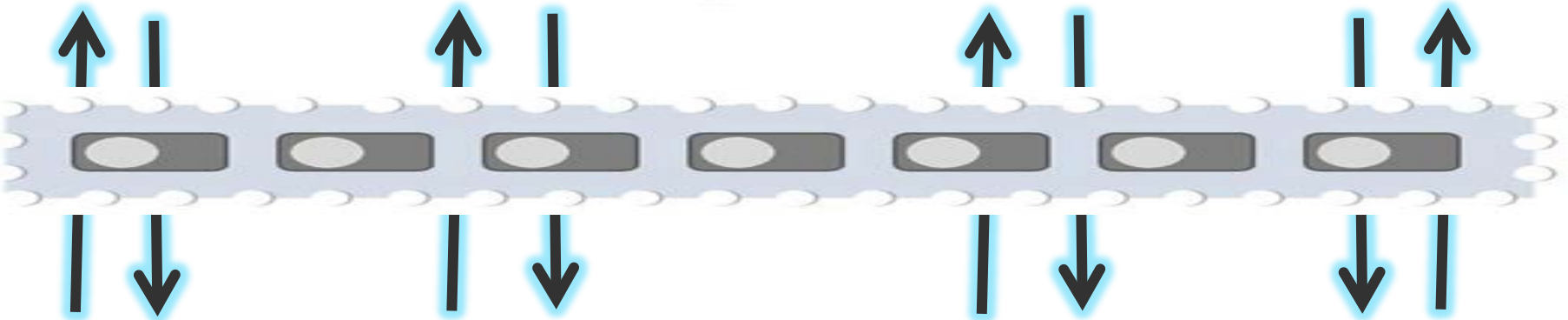


The PHR in the Middle

Information from so many sources....



Interoperable HIT Standards



Electronic Quality Measures Using Quality Data Sets



Getting From Here to There:

- ▶ Informatics Competencies of CNO/Nursing Leadership to Lead
- ▶ Lead integration of clinical/technology
- ▶ Futuristically lead informatics



- ▶ Include Informatics Literacy in
 - Undergraduate and Graduate Schools of Nursing
- ▶ Certification as CNO/Nurse Manager etc.

“To remain viable as a profession in the changing world of healthcare, technology must multiply within nursing, not just around it.

In addition, nursing must become fluent and vocal in technology and about it.”

British Novelist
J.G. Ballard



Thank you
Questions & Comments

*The evolution of
transforming
healthcare with
technology and
science continues....*

