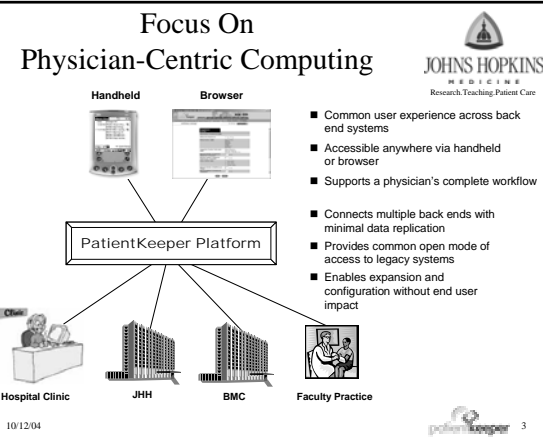


Putting Mobile Technology into the Hands of the Faculty

The PatientKeeper Experience

Mark J. Bittle
October 12, 2004



Good Morning!

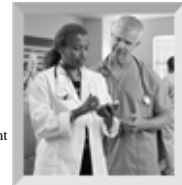
- Welcome and Introduction
- Technology's role in the "Business of Medicine"
- Background about PatientKeeper Deployment
 - Initial Goals, Metrics, Functionality, Integration
- Results
 - Deployment, Benefits Realized
- Next Steps
- Special Thanks
- Questions

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Benefits of Mobile Computing

- 1 Saves Physicians Time & Improves Workflow**
 - Provides accurate, up-to-date patient list
 - Allows immediate access to clinical data
 - Reduces dependence on desktops and terminals
 - Can shave 30-60 minutes off of inpatient rounding
- 2 Increases Revenue**
 - Eliminates lost charges
 - Reduces charge lag
 - Improves coding (both professional fees and inpatient billing)
- 3 Reduces Costs**
 - Improves nursing productivity
 - Reduces data entry and need for clarification of charges
 - Eliminates incorrect MRN numbers on transcriptions



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patientkeeper

"Reengineering the Corporation"

- A health care organization that cannot change the way it thinks about technology, cannot improve
- A health care organization that equates technology with automation cannot improve
- A health care organization that looks first for problems and then seeks technology solutions for them cannot improve substantially

Adapted from Hammer and Champy, *Reengineering the Corporation*

Except from: *Integrating Technology into the Business of Medicine*
Mark J. Bittle, JHU Spring 2002

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PatientKeeper Background

- Clinical Practice Association (CPA) Initiative
 - Operations Oversight Committee charged by CPA Board of Governors
 - Evaluate adoption of PDA technology in terms of improving physician practice efficiency
 - Will faculty use the PDA as more than a reference tool?
 - Can the technology be deployed in such a way as to improve faculty practice efficiency?
 - Reduce costs
 - Support faculty workflow
 - "Bridge-technology"
- Proactive evaluation of burgeoning technology platform

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Goals & Objectives




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- CPA View:
 - Reduce duplication of effort
 - Increase compliance
 - Initial focus on existing functionality that provides demonstrated value to faculty
 - Provide expandability and flexibility
 - Web access
 - Availability of Reporting
- Users:
 - Ease of use
 - Value-added
 - Incremental change (“small steps”)

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Goals & Objectives




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- Initial Focus:
 - Faculty Charge Capture:
 - Opportunities for improvement
 - Duplication of effort
 - Reconciliation
 - Accuracy
 - Of interest to the faculty
 - Value-added
 - Technology Available
 - Many vendors offering charge capture functionality

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Measuring Success




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- Metrics:
 - Accuracy of charge capture
 - Efficiency of charge capture process
 - Compliance
 - Qualitative assessment
- Evaluation:
 - Third party assessment

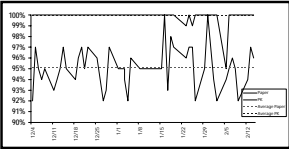
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Benefits Realized



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- Metrics demonstrated:
 - Improved Accuracy
 - Improved Efficiency
 - User Friendly with some exceptions
- PatientKeeper a partner throughout process



% of Accepted Records from Batch Report (Dec 4, 2001 thru February 14, 2002)
PatientKeeper vs. Paper-Based

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More Results Reduced Billing Costs



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Front Office:


- Nephrology – approx. (1) FTE “reallocated”
- Pulmonology – “approx” (1) FTE “reallocation” after expansion to Bayview Campus

Back Office:

- Dept of Medicine – PatientKeeper processes 51% of all electronic claims and has reduced (2) FTE for billing
- Electronic claims represent only 10% of the 700K CPT codes processed annually in the Dept of Medicine
- PatientKeeper reduces (1) FTE per 35,000 CPT codes processed

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User Satisfaction - Pilot Results



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I like the following about the ChargeKeeper process in my department.


- More convenient than old method
- Easy to use, very efficient
- Efficient
- Makes it easier to find patcom #'s and patients
- Decreased the amount of time doing charges
- It's portable
- Ease of billing, access to patient charges at all times
- More accurate billing

I dislike the following about the ChargeKeeper process in my department.

- Nothing
- Need “sync” box in office
- Takes longer
- Issues with longer stay patients:
 - Billing lists get very long for a particular patient who has been here a long period of time
 - The charges for previous day show up – this is a problem when the patients are here for months
 - If you have a patient on your list for a long time, it takes longer to change screens

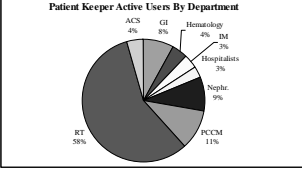
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Moving Forward



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- Initial Users:
 - Nephrology, Dept. of Medicine
 - Respiratory Therapy
- Current Users: 175 as of Sept. '04
 - Department of Medicine
 - Nephrology
 - Medicine ACS
 - Hospitalists
 - Pulmonary Critical Care
 - General Internal Medicine
 - Gastroenterology
 - Surgery
 - Pediatric Surgery (10/15)
 - Respiratory Therapy




Patient Keeper Active Users By Department

Department	Percentage
RT	38%
PCCM	11%
Nephro.	9%
GI	8%
Hematology	4%
IM	4%
Hospitalists	3%
ACS	2%

N = 175
Faculty = 84
R.T. = 91

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Key Timeline




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- Pilot using V1.0 PatientKeeper completed in June 2001
 - Users at the time wanted to continue
 - PatientKeeper outstanding partner
- CPA Board of Governors voted to adopt PatientKeeper in 2002
- PatientKeeper deployed to additional users
 - Ongoing since 2003
- Installed V2.6
- Expanded functionality to display lab results
 - January 2004
- Submitted documentation regarding compliance with new Clinical Data standards approved by Medical Board
 - Sept. 8, 2004
- Outpatient Deployment
 - Late Fall 2004

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Implementation Highlights




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- All users are currently using wireless devices
- Users are able to “sync” their devices wirelessly from most units in the hospital
- Lab Results implementation mimics EPR user interface – reduces training time and provides consistent look and feel between systems
- Web-based charge capture and patient management tool also available from any terminal
- Users are able to transfer patient lists from one user to another

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Current Integration




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System	Type	Inbound/ Outbound
IDX	Billing	Outbound
SMS	ADT Registration	Inbound
Keane	Billing	Outbound
MEDITECH – Bay View (Pending)	ADT Registration	Inbound
EPR Lab	Laboratory Results	Inbound

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Charge Capture Improves Both Inpatient and Outpatient Workflows



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Inpatient

Hospital Census → Physician's Patient List → Charge Entry → Holding Bin → IDX Billing System

Apply Code Edit Rules (dotted arrow from Charge Entry to Holding Bin)


Outpatient

Schedule → Charge Entry → Holding Bin → IDX Billing System

Apply Code Edit Rules (dotted arrow from Charge Entry to Holding Bin)

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“Reengineering the Corporation”



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“The real power of technology is not that it can make old processes work better, but it enables organizations to break old rules and create new ways of working.”

Hammer and Champy

Excerpt from: Integrating Technology into the Business of Medicine
Mark J. Bittle, JHU Spring 2002

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Special Thanks!!



- JHMCIS: many, many deserve thanks including,
 - Steve Mandell, Cele DiGiacomo, Alan Coltri, Jon Feldman, Diana Smith, Shane Harris, etc, etc, etc.
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- CPA
 - Wayne Smith, Martha Weiner, Joyce Slater
- Patient Keeper:
 - David Chernov, George Dealy, Dan Noonan



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Speaker Background



- Mark J. Bittle, MBA, CHE
 - Responsibilities:
 - Administrator, Ambulatory Operations, JHOC/JHH
 - Director, Practice Management, JHUSOM/CPA
 - Administrator, Ambulatory Operations, GYNOB
 - Doctoral Candidate, JHU BSPH
 - Project Manager for Patient Keeper Deployment
 - Co-led with Wayne Smith, Senior. Director Information Technology, JHU SOM, CPA

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THANK YOU!

QUESTIONS?



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