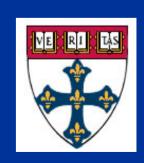
Adoption of Health IT among those that serve the poor: Implications for disparities in care

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Outline

- Motivation
- New national survey of EHR adoption
- Quality in hospitals that serve the poor
- Do EHRs make a difference?

Motivation

- Care for poor, minorities highly concentrated
- Concerns that HIT efforts may worsen disparities
 - Worries about the emergence of a "digital divide"
- Few empirical data
 - Prior studies focused *solely* on outpatient care
 - Results mixed
 - No relationship: DesRoches NEJM; Jha JECP
 - Worse access: Hing et al, JCPUS
- No data on hospitals that serve the poor

EHR Adoption in U.S. Hospitals

- New survey of all acute-care hospitals in the U.S.
- Asked about presence/absence of key clinical functions
- "EHR" definition based on expert panel process

Defining Hospitals that Serve the Poor

- No gold standard or direct measure
- Used Disproportionate Share Hospital (DSH) Index
 - Standard metric used by federal government
- Alternative approaches abound
 - Medicaid proportion
 - Public hospitals

Hospital Characteristics by DHS Index

	Highest DSH Lowest DS Quartile Quartile			
Patient Population (Mean)				
Proportion of Medicare	40%	53%		
Proportion of Medicaid	27%	9%		
Proportion Black	18%	4%		
Proportion Hispanic	4%	0.6%		

Hospital Characteristics by DHS Index

		Highest DSH Quartile (%)	Lowest DSH Quartile (%)
	Small	29	39
Hospital Size	Medium	51	55
	Large	20	5
Teaching Hospital		15	3
	For-Profit	24	14
Profit status	Private non-profit	50	74
	Public	26	12

Adoption of key functions by DSH Index

Clinical Functionality	Highest DSH Quartile (%)	Lowest DSH Quartile (%)
Electronic Clinical Documentation		
Medication Lists	62	74
Physician Notes	26	33
Discharge Summaries	60	69
Advanced Directives	40	53

Adoption of key functions by DSH Index

Clinical Functionality	Highest DSH Quartile (%)	Lowest DSH Quartile (%)	
Results Viewing			
Diagnostic Test Images	44	57	
Diagnostic Test Results	63	71	
Radiology Images	77	85	

Adoption of key functions by DSH Index

Clinical Functionality	Highest DSH Quartile (%)	Lowest DSH Quartile (%)	
Decision Support			
Clinical Reminders	35	40	
Drug-Lab Interaction Alerts*	49	54	
Computerized Order Entry			
Prescribing Medications	29	32	
EHR			
Comprehensive or Basic	9.7%	11.5%	

DSH Index & Quality

	Quality of Care		
	Estimate	P-value	
Acute MI	-0.5%	<0.001	
CHF	-1.0%	<0.001	
Pneumonia	-0.9%	<0.001	
Surgical Care	-1.5%	<0.001	

DSH Index & Quality

	No EHR		EHR		Interaction
					p-value
	Estimate	P-value	Estimate	P-value	
AMI	-0.7%	<0.001	0.7%	0.01	0.02
CHF	-0.5%	0.038	0.5%	0.39	0.35
Pneumonia	-0.6%	<0.001	0.6%	0.06	0.04
Surgical Care	-1.0%	<0.001	0.3%	0.48	0.05

Summary

- Modest difference in adoption of HIT based on proportion of poor patient
- Hospitals that care for more poor patients have lower adoption levels for each function
 - Despite being large, urban, teaching hospitals

Summary

- Higher DSH Index associated with worse quality
 - One cause of disparities in care
- EHR adoption seems to eliminate disparities based on DSH Index
 - May be an early adopter effect
- Tracking this group will be a priority
 - EHRs may be an important equalizer