Electronic Health Records in Physician Practices: Overview

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Background

- Lot of interest in EHRs as tool for quality improvement
- Administration goal: “personal” EHRs by 2014
- Different sectors making different progress
  - Hospitals: some progress on CPOE/EHRs
  - Large groups: substantial
  - Small groups: limited
  - Community health centers: some early adopters
- Limited information on EHRs

EHR: electronic infrastructure for major ambulatory care activities

- Viewing data
- Ordering prescriptions, labs, referrals
- Messaging with providers
- Documenting encounters
- Prevention and care management--forms
- Analyses, reports—on patients, provider performance
- Patient/provider messaging/e-Health (reminders, interactive patient data entry)
- Coding assistance for billing

EHR capabilities varied by vendor, practice

Objective

- To describe EHR costs, benefits, and factors affecting costs and benefits in physician groups
- To outline critical policy issues
- Co-Investigator: Ida Sim, MD, PhD

Methods

- Design: Cross-sectional qualitative study
  - Used semi-structured interview questionnaire
  - Qualitative methods best for study of emergent phenomena
- Purposeful samples of physician groups with EHRs
  - 9 large medical groups (>70), 18 solo/small groups (<10), 3 medium
- Funding: Robert Wood Johnson + CHCF
- Some info from related on-going EHR work
  - Tides Foundation + Commonwealth Fund
- Data from interviews with EHR leaders
  - 90 interviews, >80 hours of taped data
- Identified themes, patterns across groups

Key surface barriers to EMR adoption

- High initial costs
  - Costs $16k to $36k+/doc + initial productivity loss
- Slow & uncertain financial benefits
  - None to $20k/doc/year (i.e., $5/visit)
  - Must cover added on-going costs as well
  - Depend heavily on provider use
- Extra initial physician time costs

Barrier: High initial cost

- Initial costs: $16k-$50k/provider; median: 30k
  - $+ revenue losses due to lower initial productivity
- Hardware + Software: large & obvious
- But other costs also important
  - Vendor installation costs
  - Remote hosting—if subscription model
  - Information services staff, contractors
  - Training--trainers, travel, lost time
  - Temporary implementation staff
  - Lost productivity--Potentially large
  - Management time—opportunity costs
- On-going costs about 30% of initial costs

Barrier: Uncertain financial benefits

- $ benefits varied greatly: none to >$20k/physician
- Personnel savings varied greatly
  - Medical records and transcription, data entry savings possible: needs electronic documenting, electronic data exchange
- Revenue enhancement varied greatly
  - Electronic documenting → needs tight PMS integration, P4P
- Other potential financial benefits more difficult
  - Efficiency: many small changes in staffing
  - Space, supplies: small % of total; Utilization: if capitated
- SO: EHR financial risks slows adoption

Greater physician use → benefits

- Efficiency: savings from medical records, transcription, data entry staff reductions
- Revenue: better coding, service capture
  - More benefit from P4P
- Quality: better prevention, care management
- As important as CPOE use in inpatient

Physician EHR use varied

- Most providers kept electronic lists
- Some dictated progress notes
- Many used free text data entry
  - But not disease-specific templates (electronic forms)
- Some used basic templates based on guidelines
- Few used advanced templates
  - prompts & reminders, coded data
- Few used analysis & reporting (tracking) capabilities

Barrier: High initial provider time costs

- Many time-consuming tasks initially
  - To enter past data
  - Develop templates, documentation shortcuts
  - Generally ascend learning curve
  - Redesign workflow, tasks + more
- Some providers spent more time at work for months, years
  - → longer workdays and/or fewer patients seen (less income) → barrier to further use and benefits

Underlying barriers to use, benefits

- EHR technology challenging to use
  - Usability affects provider time; but proficiency goes up
  - Some good systems; bad systems = game over
  - No silver bullet—gradual improvement over time
- Electronic data exchange is inadequate
  - Lot of paper in/out small practices
  - Increases time costs—parallel processes
- Provider attitudes are mixed
  - Spectrum, improving over time

Underlying barriers (2)

- Financial incentives for QI lacking
  - "Pay for performance" very limited
  - Incentives vital to reimburse initial time, $ costs
  - Incentives focus leadership, provider attention
- Complementary innovations/changes difficult
  - Hard to use EHRs "out-of-the-box"
  - Technical support, workflow redesign, software customization, chronic care programs all needed
  - Can increase benefits, reduce time costs
  - BUT challenging, time-consuming initially

Organizational resources affect EHR changes, use, benefits

- Info systems staff expertise
- Management expertise
- Leadership & governance
- Experience with past process change
- Financial capital

Other factors:

- Type of payment (e.g., capitation, P4P)
- Affiliations

Smaller groups often lacked needed organization resources

- Large groups tend to have needed resources
- Medium-size groups (e.g., 10-40 providers)--vary in resources
- Small/solo groups (<10 providers)--fewest resources
- Most community health centers are medium or small in size, with limited resources
- How to help such organizations?

Policy changes can help EHR adoption, use for quality

- Financial incentives for QI
  - "Pay for performance" (P4P) focuses attention
  - Stimulates demand for support services
- Funding for support services organizations
  - To help with technical support, complementary change
- Community-wide electronic data exchange
  - Helps small groups most; data from ALL providers
- Funding for product comparisons, research
  - Dearth of information on what "works" & why

Community health centers: Same policy changes and….

- Capital financing
  - Access to capital
- Support for member-controlled application service providers (like CHAN), other collaboration
  - Builds on history of CHC collaborative efforts

Conclusions

- EHR costs substantial & immediate, benefits slowly emerge
- Provider use is a key driver of EHR benefits
- Must be “smart” to generate benefits→ complementary changes important
- Policy changes can hasten EHR use for quality improvement, efficiency

Thank you!

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