Health information technology platforms for health care system research and operations

Ralph Gonzales, MD, MSPH; Professor of Medicine, Epidemiology and Biostatistics
Associate Chair, Ambulatory Care and Clinical Innovation Director, UCSF Program in Implementation Science

Disclosure: R Gonzales serves as a Scientific Advisor to Phreesia, Inc.
Patient-Facing Platforms

**Hardware (Form Factor)**
- Kiosk
- Computerized Tablet
- Mobile device/Cell phone

**Software/Apps**
- Macromedia Authorware... Flash
- Electronic medical record
- Interactive voice recognition software
Research Experience
Translating Evidence into Practice

Healthcare Intervention Settings

• Denver Health, Urgent Care (CDC) (kiosk)
• EDs, 16-sites national trial (AHRQ; VA) (kiosks)
• Geisinger Health System, 33 sites (CDC) (EMR)
• EDs, 4-sites NoCal (CHCF) (kiosk)
  • Acute care (UTI)
  • Preventive care (chlamydia; birth control)
• INSP, Mexico (UC-MEXUS) (cell phone; IVR)
• La Clinica, Oakland (R. Khanna; internal) (cell; IVR)

ACTIVE
• Pediatric offices; mental health (Ozer; NICHD) (tablet)
• Primary care; cancer screening (Walsh; NCI) (kiosk)
• Primary care; tobacco counseling (Satterfield; NIAAA) (tablet)
• Urgent care; miscellaneous (internal/Phreesia) (tablet)
• Amb care; primary care-specialty care integration (DOM; DSRIP) (EMR)
Bibliography


How to Make Change “Easy”

Predisposing Factors

Enabling Factors

Reinforcing Factors

Ideal Behavior & Practice

HEALTH
Practice Innovations: Keys to Success

Physician Adoption
• …reduce time/hassle factors?
• …generate more revenue?
• …enhance the patient relationship?

Patient Adoption
• …improve timely access to care?
• …reduce out-of-pocket health care costs?

System (payor) Adoption
• …reduce total health care costs?
• …reduce medical errors/improve quality?
• …enhance patient satisfaction?
Potential Roles for Point of Service Computerized Applications

- Registration; Co-Payments; Informed Consents
- Health Care Maintenance & Prevention
  - Tobacco counseling
  - Birth control & family planning
- Disease Screening Instruments
  - HIV/STDs; hepatitis B; HCV
  - Cancer
  - Chlamydia Screening
- Acute Illness Management
  - Expedite Triage and Testing
  - Uncomplicated URIs, UTIs
- Chronic Disease Management
  - Depression Care
  - Diabetes Care
Some Important Lessons

• Low health literacy/low SES patients may be your most important target

• Automate and integrate computerized interaction into standard workflow

• Introducing IT solutions into health care delivery has major social and cultural implications... understand these before proceeding!