Innovations in Digital Health
Barriers to Health System Adoption, Emerging Trends and Opportunities

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Disclaimers and Disclosures

  - AVIA is a network of 25 health systems with > $100B in revenues
    - Our mission is to advance care delivery transformation by helping leading health systems to identify and deploy digital solutions, and by providing strategic focus, process discipline, and a collaborative approach to deliver measurable results

- Boards and advisory roles:
  - Aetna, Inc. – health insurer, board member
  - PATH – international NGO for global health innovation, council chair
  - ConsejoSano – hispanic health education, industry council chair
  - Lucro – digital platform for vendor selection, advisory council
  - Sommetrics – airway management, advisor

- *No financial relationships with any other products, services or companies included in this presentation. AVIA is described.*
Tesla vs Google
Applying This To Healthcare

• Business models for innovations in care delivery
  • Sell to
    • Health plans
    • Employers
    • Delivery systems
    • Consumers / patients
  • Products – Point solutions vs platforms

• Four key barriers:
  • Reimbursement models
  • Installed base and culture of healthcare
  • Fragmentation of disruption
  • Regulation and scope of practice
Sampling of major trends

- **Dramatic shift to care in the home and community**: Address social determinants of health, self-management, draw on community resources
- **Value Based Care**: ACOs, risk-based contracts, bundled payments
- **In-home palliative care**: Early enrollment, 24x7 access, nurse + social worker
- **Behavioral health**: Integrated into primary care, address provider scarcity
Sampling of opportunities ignored

• **e-Consult model to leverage capacity and save money:** Use of templated exchanges between PCPs and specialists avoids 40%-60% of specialist referrals
  - SF General Hospital, Mayo, LA DHS, Kaiser Permanente – *implementation depends on drivers*
  - Lack of software platforms, modules

• **TeleICU:** Hub and spoke model for monitoring remote ICU patients, detecting problems, guiding interventions

• **Hospital at Home:** Care in home for mild cases

• **Grand Rounds:** Focused application of expert knowledge to resolve diagnostic, treatment variation from best practice
Barrier: Reimbursement models

- “50% value-based care”?
- Threshold for break-through?

- ROI versus “move the needle” *(especially for digital solutions)*
- Real calculus by COO and CFO
- Low CapX requirements constitute a *barrier*

- **Bottom line:** there is no usual process for considering disruptive new approaches
Barrier: Reimbursement models

9 hospital Integrated Delivery Network (healthcare system) in New Mexico with 30 years of managed care experience, 400,000 lives
Barrier: Installed base and culture

• Hard and soft installed bases:
  • IT / EHR systems -- test case = Decision Support
  • Staff configuration -- test case = Mobile

• “Deep” installed base:
  • Physical facilities
  • Inherited culture

• Cultural challenges:
  • “First do no harm”
  • Clinical trials vs A-B testing
  • “Mother may I”, hierarchical systems vs. distributed initiative and problem-solving
Barrier: Installed base and culture

• Fight physician burn-out
• Increase panel size
• ROI in first 6 months

• Crosses the line to satisfy providers
• Makings of a platform
• Health is a huge sector – challenges of early success

Google Glass Startup Augmedix Secures $17 Million Strategic Investment from Five Leading Healthcare Systems

Posted on Apr 25, 2016 in Transformation

Major Healthcare Systems, including Sutter Health, Dignity Health, CHI and TriHealth, to Scale Augmedix EHR Charting Service Across Their Organizations with a Mission to Rehumanize the Doctor-Patient Relationship

Augmedix, Inc., today announced that it has closed a $17 million strategic round of funding that includes investments from five major health systems. The new funding will support the company’s mission to rehumanize the doctor-patient relationship and improve the efficiency of healthcare delivery.
Barrier: Fragmentation of disruption

- Cacaphony of innovation
  - More than 100 apps for breastfeeding
- Intake, assessment, decision-making, implementation
- Emergence of health system venture funds
- Contrast: how Salesforce affected marketing across sectors
Barrier: Fragmentation of disruption

• The average hospital takes 23 months from seeing a digital need, to scaling a solution  *American Hospital Association + AVIA Survey: January 2017*

• Growing list of complex opportunities, and no solution

• 25+ health systems, 325 hospitals, >$100 m gross revenues

Linking your strategy to digital opportunities

Implementation planning and support

• Where and how to operationalize
• Business case and ROI
• Sample project plan
• Single sign on, Epic integration
• Patient populations for phased rollout
• Marketing campaign and messaging
• Success metrics and reporting
Barrier: Regulation and scope of practice

- Regulation protects, but also creates “rice bowls”
- Disruption that lowers the cost of care, increases patient access and improves patient experience often breaks these rice bowls
- Professional scope of practice makes it very difficult to innovate in the best use of human potential
- Regulation of digital health is improving, being clarified now. Telemedicine and telehealth may be emerging from a long period of constraints
- Consumer convenience, trust and preference may drive changes as well
• VA exempt from state regulation of telemedicine
• Began national program in 2002.
  • Almost 1 million vets have received tele-services
  • Decreases in ED, hospital utilization averaged 23-56% for population using these services
  • 1/3 of population served is rural, high proportions of low SES
  • >30 diagnoses served, with strongest results seen for depression and PTSD
• The wheels grind slowly, and Churchill may well be right!