Realizing the Dream of a Genomic Information Exchange

Barriers that Must be Overcome
Disclosures

• Mass General Brigham, my employer, receives royalties from sales of GeneInsight software
The Dream

Clinical Genetic Laboratories

Research Programs & Knowledge Repositories

Routing Hub for Tests and Interpretations

Patient Record
Genetics
Other Clinical
CDSS

Hospitals

Fundamentally Accelerated Rate of Care Improvement

Institutional and Cross-Institutional Continuous Learning
The Dream

Value Grows with Number of Participants

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Value Grows with Number of Participants
Stakeholder Adoption Hurdles

- Technical Feasibility
- Clinical Benefit
- Financial Viability

Considered for Prioritization Relative to Potentially Hundreds of Other Needs
Value Propositions

Routing Hub for Tests and Interpretations

- **Clear** Will strengthen test value and distribution
- **Clear** Will increase impact

- **Fundamentally Accelerated Rate of Care Improvement**
- **Applications that Move Value Levers Needed to Catalyze Adoption**

- **Clinical Genetic Laboratories**
- **Research Programs & Knowledge Repositories**

- **Patient Record**
  - Genetics
  - Other Clinical

- **CDSS**
- **Hospitals**

**Institutional and Cross-Institutional Continuous Learning**
Institutional Costs

- Assigning **clinical** IT personnel
- Working with vendors / paying for integration
- Updating clinical workflows & associated training
- Validating new processes
- Maintaining integration over time
- Monitoring and maintaining quality over time

Fundamentally Accelerated Rate of Care Improvement

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Institutional and Cross-Institutional Continuous Learning

Hospitals
Example Hospital Value Levers

All Hospitals
• Patient acquisition
• Service line expansion
• Clinician panel size
• Fee for service revenue
• Value based care metrics
• Quality improvement
• Liability risk reduction
• Burnout reduction

Research Institution
• Grant revenue
• Thought leadership
How Research Can Help

• Engage hospital decision makers to determine what applications/value propositions could trigger grant-independent institutional investment in genetic information technology infrastructure
  • CEOs, CFOs, COOs, CMOs, CIOs
  • Include leaders of large, medium and small institutions

• Fund projects must likely to produce applications that spark this institutional investment

• Study the economic dynamics of genetic IT infrastructure projects
  • Catalog both value creation and cost reduction opportunities
  • Focus standards funding on reducing cost and/or increasing value of implementing highest value applications