UC HEALTH

UC Health: *Better Together* Information Technology & Leveraging Scale for Value (LSfV)

> A Presentation to HIMSS So Cal December 1, 2015



UC Health By The Numbers

- 6 Medical schools
- **\$1.8B** NIH funding
 - 4th Largest healthcare delivery system in California
 - **5** Nationally-ranked medical centers
 - **12** Hospitals with >3,600 beds
- **165,000** Inpatient visits per year
 - **4.5M** Outpatient visits per year
 - **5,000** Faculty physicians
 - **\$9.7B** Total operating revenue (FY2015)

UC Health IT By The Numbers

- **5** IT organizations
- 2 Electronic health records Epic—4 sites, Allscripts—1 site
- **42,000** Health system employees supported
- >1700 IT employees
- ~\$450M IT annual spend

LSfV: Context

UC Health exists in a transformational era

- Declining rates of reimbursement
- Government and social pressure to address the cost of healthcare
- Regulatory obligations regarding quality, outcomes and use of technology
- Changing delivery models
- Extraordinary competitive pressures from non-profit and for-profit organizations
- Escalating patient and customer experience expectations
- Programs like the Center for Health Quality and Innovation (CHQI) are indications of internal transformation

LSfV: Commitment from IT

UC Health IT team is committed to support this transformational era

- Deliver the transformational technologies required to compete / excel
- Expand data and analytic tools to drive a new era of care, discovery and education
- Engage and enable the digitization of every segment of our operations
- Provide quality services at large scale and high value
- Improve the cost structure of IT to deliver more business value at lower unit costs

UC Health IT Vision

Make decisions jointly to improve alignment and leverage

• System selections, technology architectures, vendor partnerships

Increase consolidation of common IT infrastructure services

• Data centers, computing, storage, operations

Employ delivery models driven by business strategy and the IT marketplace, while moderating organizational risk

• Insourced, outsourced, centralized at UC, shared across UC

Support UC Health system-wide thinking

- Examples: EHR, Radiology, Supply Chain, Rev. Cycle, Info. Security
- Big Data, Population Health, Clinical Integration Network

Support both local and UC Health objectives

Increasing Collaboration



Bending the IT Expense Curve

IT LSfV initiatives progress along one of two pathways:

- 1. Early efforts are intended to <u>lower-the-curve</u> for fast value generation. Most of these efforts are advanced in partnership with Supply Chain, and result in higher discounts on purchased goods.
- 2. Beginning in mid-FY16, <u>bend-the-curve</u> efforts begin to slow expense growth over the longer-term by redefining IT service delivery models and sourcing.



Active Value Opportunities



Three FY16 Imperatives

1. Optimize IT Procurement/Big Buys

- Successfully complete FY16 negotiations
- Plan FY17 opportunities

2. Secure UC Health Information and Infrastructure

- Select a common Security Operations Center provider
- Establish aligned information security plans and standards
- Establish consistent compliance scorekeeping

3. Co-source a Shared Data Center

- Establish technical standards and governance models
- Implement and operate the shared data center, with at least three UC Health tenants operational

Now, Bending the Curve Together

Examples

- 1. Data Centers
 - First Major Sourcing Strategy
 - Significant Value over 5 Years
 - All UC Health Organizations Participating, Expanding Beyond
 - Leading effort to combining infrastructure services
- 2. Secure Text
- 3. Radiology Decision Support
- 4. Enterprise Imaging Solution
- 5. Information Security/Security Operations Center



Re-Envisioning the IT Function

- Our strategy is to create the UC Health IT function through incremental changes:
 - Establish core infrastructure standards, service delivery models
 - Share technology components: computing, storage and network
 - Build system-wide partnerships with key stakeholders
 - Align applications as opportunities for common decisions arise
 - Evolve UC Health IT governance and operational capabilities

Provide the Information Technology environment needed for UC Health to execute on system-wide strategies.

Onward and Upward

- Current Business Value Initiatives that Sharpen our Advantages
 - EHR Advantage
 - Business Advantage
 - Analytics Advantage

UC Health: EHR Advantage

- Workgroup formed
 - All five UC Health campuses participate
 - Physician and Nurse leadership
- Group defined potential projects / targets for EHR improvement
 - Narrowed to five topics, each will be managed by a UC Health Campus
- Current Projects
 - UCD Clinician Efficiency Metrics
 - UCI Scope of Practice Definition (Standardization)
 - UCSF Common / Optimum Order Sets, Epic Design and Usability
 - UCSD Integrating 'Choosing Wisely' Knowledge
 - UCLA Best Practice Documentation

UC Health: Business Advantage

Increasingly, IT Value comes from the right level of Business Engagement

- Keep a Focus on Business Priorities, Target Investment at Crucial Opportunities
- Engage Leadership in IT Planning and Approval Processes
- Oversee Sourcing, Shared/Federated Services Decisions
- Delivering ROI on invested money into the IT collaborative efforts
- Align with Evolving Organizational Governance Models to Support UC Health System Thinking

UC Health: Analytics Advantage

- Big Data
 - UC Health shared data warehouse
- Population Health
 - UC Health shared population management tools and staff
- Community Engagement
 - Clinically integrated networks focused on quality improvement
- Value-Based Care Advantage

UC can be a transformational catalyst to the entire healthcare ecosystem

UC Big Health Data Governance

UC Big Health Data Platform						
Platforms	Use Cases		Outputs/Visualizations			
Phenotypic (Epic)	Operational	Research				
Financial / Claims	- Readmissions	- UCRex	Reports	Information		
Image Repository	- Quality	- NCATS ACT		Discovery		
Bio-banking	- Patient Sat.	- OMOP				
'Omics	- Efficiency	- Cohort Discovery	Scorecards/ Dashboards	Alerts/Decision Support		
Clinical Research Datasets	- POP Health - etc.	- Patient Data Sets - etc.				
Patient Engagement			Statistical Analysis	Predictive Analytics		

Technology Foundation

Metadata MgmtMaster Data MgmtTerminology MgmtKB/Ontology MgmtLanguage ProcessingAnalytic ToolsBig Data TechnologiesGeospat Processing	al Machine Ig Learning
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Creating a knowledge network...



Adapted from "Convergence: Facilitating Transdisciplinary Integration of Life Sciences, Physical Sciences, Engineering, and Beyond," National Research Council.

... and driving better population health

Patient Evaluation for Heart Disease

- Patient and family history
- EHR Risk Calculator

Recommendation: Start statin medication



Precision Medicine Evaluation Tool

- Patient phenotype/genotype \rightarrow 14M UC Health records \rightarrow recalculate patient's risk score



Better Population Health

Precision recommendation:

- No medication, mitigating likely complications
- Patient to continue with healthy lifestyle



