Mass Health Data Consortium
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Agenda

• Qlik Introduction
• Qlik for Healthcare
  – Epic
  – The Ebola Outbreak
• Qlik CSR Impacting Lives
  – Medair, Direct Relief, and Project ECHO
  – Healthcare Partnerships
• Wrap-up
• Q&A
Common Healthcare Analytic Issues

- Multiple data sources: EMRs, financial, operational data
- Uncontrolled data governance
- Poor end user adoption
- Lengthy installations

- No insight into current operations or conditions
- Need data to drive decision making
- Data is stale, no longer current
Secret Sauce: Qlik Data Indexing Engine

Traditional Data Visualization

- Linear, pre-defined thinking
- Insights missed in hidden data
- Months to change
- Data-centric

Qlik’s **Associative** Experience

- Follows the user
- All data always visible
- Minutes to change
- Insight driven

Diagram:
- Location
- Department
- Physician
- Hip Implant type
- Patient
- Hip Implant type
- Physician
- Patient
An Analytics Platform for Everyone

- Centrally Deployed Guided Analytics
- Self Service Data Discovery
- Collaboration & Reporting
- Visualization & Advanced Analytics
- Data Sourcing
- Embedded Analytics

One Platform supporting the full spectrum of BI and Analytics use cases

Answer the ‘what’ and the ‘why’, even if you’re not technical

Embedded analytics into core business processes

Analyze anywhere regardless of physical location or application you are using
Partnership With Purpose
To bring support to over 130 organizations

**Integration**
Epic allows direct use of the Qlik Analytics Platform within Hyperspace and with all data sources – including the ability to launch activities from Qlik such as Chart Review, Resolute Account Summary, or Cadence Appointment Desk

**Community**
The customer community enjoys the availability of Qlik application content and best practices on the Epic UserWeb

**Support**
Epic provides first line support on integration
Let’s See it in Action
Corporate Social Responsibility (CSR)
An integral part of the Qlik Culture.

We believe that through leveraging our people, products, and culture we have the power to make the world a better place. Our innovative CSR program – Change Our World – aspires to push the boundaries governing what people think business is capable of.
Medair – Global Humanitarian Relief
Direct Relief – Emergency Supply Chain
Direct Relief – Emergency Supply Chain
Defining Telemedicine

Project ECHO using Qlik for ECHO’s Time and Travel Savings Study

- Example study using iECHO data:
  - ECHO New Mexico (2006-15)
  - 9,707 patient presentations
  - 26 different disease states
  - 61 unique “spoke” locations
  - 2.43 million miles saved
  - 38,878 hours saved
  - Avg Savings: 250 Miles, 4 Hrs
We Benchmark the Maturity Across Your Enterprise

Value to Customer

- Inpatient Quality
- Clinical Doc Excl.

Level 4
- Descriptive, diagnostic, predictive, and prescriptive—depending upon requirement
- Smart data load from multiple data sources
- User-friendly, freeform analysis, and governed self-service
- Smart visualizations, visual data discovery in full data set
- Advanced collaboration (e.g., storytelling, cloud sharing, embeddable)
- Built for mobility
- Extendable, governed platform (e.g., Data-as-a-Service, open APIs)
- Industry-specific partnerships (e.g., pre-integrated partners like Epic EMR)

Level 3
- Diagnostic, why it happened
- Advanced visual analysis tool, more actionable insight
- Pre-built analysis and drill-down paths still limit agility to answer new business questions
- Easy-to-use self-service though not governed, not secured by IT
- Still significant upfront data design and technology infrastructure investments
- Limited mobility (not built for mobile)

Level 2
- Similar to Level 1 but with some interaction (e.g., drill downs, simple filters)
- Pre-defined analysis / drill-downs
- Often “dashboards” in EMR, ERP, and SC systems
- No governed self-service, still very IT dependent
- No built-in collaboration or APIs / extendibility

Level 1
- Static reporting, descriptive (i.e., reports what happened)
- Not actionable with large data sets
- Little to no analysis in reporting system, often done in disparate spreadsheets
- No built-in collaboration, APIs / extendibility, or governed self-service
- Hugely, time consuming

- Finance
- Pop Health

- PeriOps
- Telehealth
- Supply Chain

Reporting
Dashboards
Visual Analytics
Smart Analytics

Qlik Copyright 2015/16; Qlik Value Engineering Program
Then the Future Requirements Are Scored on Three Factors…

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<tr>
<th>#</th>
<th>Requirement</th>
<th>Strategic Importance</th>
<th>Effort / Cost</th>
<th>ROI</th>
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Size of bubble = Potential ROI score

Quality Scorecard (Dept. & Physician level)
Finance Dashboard
Surgical Dashboard
Supply Chain Dashboard
Telehealth Patient Cohort App
Telehealth Biometrics
Telehealth Adherence & Quality
Telehealth Encounters
Admits/Readmits (w/ Payers)
Chronic Care
Asthma
Physician Performance App
Rev Cycle
TBD/HR 1
TBD/HR 2

Priority I
Priority II
Priority III
Priority IV

Strategy Importance Score

Effort / Cost Score

Qlik & ABC confidential
Projected Payback Analysis

- $6.75 million in total benefits
- Total cost of xxxx
  - up-front license cost
  - license maintenance @ 20% of license purchase
  - training
  - consulting service in 2016
  - internal support costs per year for the 3 years
- Creates $3.18 million in Net Present Value / shareholder value
- IRR of 74%
- Payback within 6 months!
Healthcare Analytics Framework

“Analytics is just the starting point. It takes a team to work with physicians to redesign care”

- Introducing Qlik’s conceptual framework for value generation from analytics
Conceptual Framework for Value Generation from Healthcare Analytics

- Core values & capabilities
- Enablers & Execution
- Data & Information
- Value Generation

- Data & Information Governance
  - Data quality improvement
  - Data & Information
- Management & strategy
  - Leadership
  - Investment
- Clinical procedure optimization
- Compliance
- Clinical decision support
- Clinical process re-engineering
- Structure & Teams
- Local Priorities
- Analytics
  - Patient flow management
  - Population Health Management
- Training
  - Workforce planning
- Organization intelligence
- Enrollment & engagement
- Patient outcome improvement
- Financial optimization
- Project Management

- Value Generation
- Patient outcome improvement
- Compliance
- Workforce planning
- Financial optimization
- Investment
Care Quality Improvement: Sepsis Reduction

Core values & capabilities
- CMO/CIO joint sponsorship
- Part of drive towards patient-safety centric culture
- Strategic priority plus regulatory requirement/part of wider system healthcare strategy

Enablers & Execution
- Multi-disciplinary team project management (clinical lead, nursing, operations)
- Use of LEAN methodology/ internal LEAN expertise or IHI Quality Improvement
- Explicit definition of data requirements for measurement, process improvement and external benchmarking

Data & Information
- Working with central data/intelligence team with allocation of data-scientist skills
- Identification of data quality issues/gaps in data
- Informatics collaboration with other external stakeholders on public health data
- Assessment of potential for embedded analytics to generate compliance

Value Generation
- Data analysis identifies areas for improvement (process/medical supplies/training)
- Recommendations incorporated into operations and training
- Ongoing oversight and evaluation of impact on sepsis outcomes
- Implementation of embedded analytics via digital check-lists/alerts/sensors
Let’s See the Value Engineering App in Action
Summary

• Summary and Key Takeaways
• Learn more:
  o http://healthcare.qlik.com
  o http://www.qlik.com/company/social-responsibility

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