About Beth Israel Deaconess Care Organization (BIDCO)

- BIDCO is a value-based, physician and hospital network and Accountable Care Organization (ACO) in Massachusetts
  - 649 bed AMC, major Affiliate of Harvard Medical School and 7 other hospitals
  - 2,500 physicians, including 900 full-time Harvard Medical School faculty exclusively affiliated with BIDMC
  - 600 PCPs
- Our ACO risk population includes Commercial, Medicare Advantage, Medicare and Medicaid.
- Our mission is to move health care forward by engaging providers in their communities to achieve success in a value-based delivery system
- We are committed to creating innovative, industry-leading best practices in the clinical, administrative, and financial aspects of health care
BIDCO physician and hospital network

Hospitals
- Anna Jaques Hospital
- BIDMC
- BIDH-Milton
- BIDH-Needham
- BIDH-Plymouth
- Cambridge Health Alliance
- Lawrence General Hospital
- New England Baptist Hospital

Physicians
- API (independent)
- CHA Physicians Organization
- HMFP
- Joslin Diabetes Center
- Lawrence General IPA
- Milton PO
- Whittier IPA
- Jordan Physician Associates
- NEBCIO

Updated as of January 2017
BIDCO by the numbers

2,500 Physicians (600 PCPs, 1,900 specialists)
225,000 Total Covered Lives
  » 60,000 Medicare assigned beneficiaries
  » 40,000 Medicaid assigned beneficiaries
  » 125,000 Commercial
100% EHR adaption rate across network
46 Different EHR platforms
150+ Individual EHR system/vendors installations
300+ Geographic locations
3.4 million Patient records
35.6 million Patient encounters
198 million Documented procedures
90+ Awesome employees!!
BIDCO as an ACO

- ACO state(s): Massachusetts
- Service area: Eastern Massachusetts
- Joint hospital/physician venture and governance structure
- Earned TME surplus across aggregate risk contracts in 2016 (last reported year)
- Top quality performer in CMS pioneer program
- Ranked #3 nationally in CMS pioneer program
Shared Risk Accomplishments to date

Improved Population Health Visibility and Quality Performance

- Ranked #1 Pioneer ACO in Mass. and #3 nationally
- Top-performing ACO in quality reporting
- Immediately improved data quality and reporting
- Unified clinical and claims data warehouse with a master patient-index that links patients across the care continuum and reporting engine for care teams
- Enabled real-time, advanced analytics that provide meaningful insights to share with physician and hospital network to improve patient outcomes and population health management

Improved patient outcomes

- Nearly doubled rate of performing fall risk assessments — far exceeding the average Pioneer ACO performance
- Tripled number of patients who received screenings for depression symptoms using a standard tool for assessing mental health status

Reduced health care costs

- Saved four percent of BIDCO budget for patient care, generating $17.3 million in savings for the Pioneer ACO initiative
- Decreased spending by 2% — a more rapid pace than national performance, which only decreased slightly (.02%)
Living the Transformation
Data Integration and Beyond
Contracting continuum

- Fee for service
- Pay for performance
- Shared savings
- Bundled payments
- Up/Down side risk/Capitation

Hospital/Physician financial risk

Reimbursement structure change
Better Information → Better Technology → Transform Health Care

**Goal I:** Achieve Adoption and Information Exchange through Meaningful Use of Health IT

**Goal II:** Improve Care, Improve Population Health, and Reduce Health Care Costs through the Use of Health IT

**Goal III:** Inspire Confidence and Trust in Health IT

**Goal IV:** Empower Individuals with Health IT to Improve their Health and the Health Care System

**Goal V:** Achieve Rapid Learning and Technological Advancement

Federal Health IT Strategic Plan
Opportunities for transformation

- **EHRs provide the foundation for real-time structured clinical data capture**
  - Rapid EHR adoption driven by “Meaningful Use” incentive programs
  - BIDCO early adopter, embraced EHR and data as catalyst for change
  - Build a Quality Data Center (QDC), a clinical data repository to aggregate all clinical encounter, lab, scheduling & ADT data

- **Analytics shift from lagged claims to real-time EHR**
  - BIDCO network has billions of direct care data points to assess and analyze

- **Disease Management and Population Health care models driven by “real-time” data**
  - Keeping populations healthy reduces costly hospital admissions and readmissions: “take care of risk populations before they are sick”

- **Geo-mapping populations and diseases based on demographic, economic, and social indicators**

- **Patient self reporting**
  - Patient portals, data-enabled home devices, Fitbits, wellness programs
How do we get there?

Interim Reporting Follow Up Training

Training
- EHR Specific
- Specific providers, groups
  - Clinical Education
  - Escalation/non-compliance
  - Quality Programs
  - Clinical Pathways

Issues identified
- Themes
- Outliers of significance
- Root cause identified
- Corrective action plan determined

Patient Visit: Provider enters data into EHR

Lab/Rad Integration
Baseline Provider Education on Quality Measures

QDC

Follow Up
Corrective Action
Data Validation

Quality Reports Shared with Providers
Quality Reports Generated

Define measures
Define thresholds for corrective action
Evaluate reports for appropriateness

QUALITY MEASURES
Define "QDC" acronym.

Julia Berk, 4/18/2017
We’ve connected all the plumbing, but is the water drinkable?

• Ability vs. reality of useful EHR data capture
  ▪ Requires clinical practice workflow transformation to maximize data value.

• All systems store data differently, no fully embraced Health Information Exchange standard
  ▪ Structured, unstructured but coded, unstructured

• Vision of interoperability still not archived
  ▪ Vendor support lacking, fragmented access to EHR data

• Data mapping, normalization, and validation difficult at best
  ▪ NDC, LOINC, ICD, Snomed, CPT

• Competing quality measure requirements and priorities
  ▪ MU, ACO, PQRS, PCPRI, AQC
  ▪ Need standard, unified quality measures that leverage EHR data

• Real-time performance reporting
Data integration approach

1. **Identify main sources of data integrity flaws**
   Find way to combine data from various disparate health IT systems and EHR platforms used by diverse BIDCO network

2. **Develop a technology-based solution**
   Improve data integrity flaws with the most profound and broad-reaching impact on quality to ensure data transferred is uniform and high quality

**Solution:** Develop a standard process to validate each EHR data payload

- **Locate** EHR-specific data elements to satisfy various measures and reporting requirements
- **Normalize**, codify, and map EHR data elements to a unified BIDCO construct
- **Validate** data with caregivers and practice staff
- **Improve** practice workflows to maximize data capture opportunities
Solutions

• Create actionable data
  ▪ Reports based on what happened yesterday, not 90+ days ago
    • Gaps in care, performance heat maps, un-blinded peer-based scoring
    • Build confidence in the data - Be sure its QC’d and correct, stand behind it

• Complete the circle
  ▪ Get data back to practices in a usable format
  ▪ EHR Optimization Team
  ▪ Education

• Rinse and repeat

• Move the needle
Next frontier: why Care management?

• As BIDCO evolved to assume more risk, the need to better monitor and manage individual patient care with real-time data followed:
  
  • More advanced progress towards value-based contracts, more $ at-risk
  • 250,000+ at-risk lives → need to support robust care management
  • Over 100 EHRs = challenge to see a complete picture for the population or the patient, as a network or as a care manager
  
  • Partnered with Arcadia Health Solutions to replace existing Care Management platform for a new tool with a stronger data foundation for clearer insights for CM team
Quality data foundation

Building the data asset

Transparency in data quality

Actionable data

Continued integration of additional data sources:
• ADT feeds
• Labs
• Radiology
• Hospital inpatient data

Goal of supporting workflows around Care Transitions and Care Management

• Iterations of data quality reviews
• Ensure that the required data elements are available for end users and care managers
• Continuous feedback
Platform design process

• Selecting a partner began a design process driven by users, focused on existing features, short-term results and iterative collaboration

• Design Requirements
  ▪ Non-negotiables: had to replace existing features
  ▪ Conscientious of end-to-end workflow for patient care
  ▪ Not focused on perfection / intuitive UI - functionality over form

• Minimum Viable Product, High-Level Approach
  ▪ Goal for Version 1: simple, spend time on feedback and improvements
  ▪ Set expectation of iterative process, partnership

• Unanticipated Challenges
  ▪ User feedback was most important (i.e. no auto-save)
  ▪ Other bug fixes
  ▪ Solution: Weekly Feedback Reviews
Current Use and Future Expansion

**Today: current usage**

- Rolled out to pilot group of care managers
- Care Management workflow presented side-by-side with clinical and claims data – integrated patient record
- CMs assigning and documenting care management tasks within tool’s 360 degree view of patient
- CMs can view scheduled tasks and panel detail to prioritize to caseload

**Future state**

- Roll out to all care managers
- Integrate Milliman EBGs into care management workflow
- Custom care plan / goal creation and tracking
- Data-driven identification of patients that are good candidates for CM
- Ability to integrate program data from other sources
Steps to innovate

• Don’t fear transitioning away from what’s NOT working
• Define what success looks like at each stage, and celebrate small wins
• Arm teams for needs now, anticipate needs of tomorrow
• Invest in a good engine and architecture, complement with good UI
• Incorporate user feedback early and often
• Find a partner – care management is all about what’s possible as a team
Summary

• Providers better understand their patient population, developing more effective interventions
  ▪ Interventions not only improve health outcomes but also drive down the cost of care

• Everyone involved gained confidence in the quality of data used for analysis and reporting
Questions and discussion