Technology and Analytics Roadmap

Positioning for the Future

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Discussion Topics

- Introductions
- Background – Why is this topic important?
  - What is the importance of technology and analytics in healthcare
  - Indicators that change is coming about
- Essential components of technology and analytics
  - People
  - Process
  - Technology
  - Governance
- Technology and Analytics Success Factors
- Your organizational preparedness
Suzanne Rabideau – Principal, Rabideau Consulting
- Executive Leadership – Behavioral health (community provider and state agency)
- Licensed Professional Counselor and formal business training (MBA)
- Professional passions are to assist companies in achieving excellence through business process optimization – ultimately making a difference for individuals and communities

Brian Jung – Consulting Services Director, MSS Technologies
- Founder of MSS’ Knowledge Management Practice
- MSS Analytics Practice (based in Phoenix)
- Analytics/Knowledge Management Planning Services
  - Planning, Strategy and Business Process Optimization
  - Business Case Justification/Analytics Roadmap Development
  - Technology Vendor Product Evaluation/Selection
- Experience in working in both the healthcare and non-healthcare industries.
Background – What is the Significance of this Topic?

Health Care Delivery Systems – Generational Change
– National healthcare crisis
  • Ever increasing healthcare costs (% GDP)
  • Poor outcomes
  • Poor service / experience

What are some examples of how health care system is attempting to address these issues?
Change Indicators that are Present in the Healthcare Industry

- Center for Medicare and Medicaid Services (CMS)
  - Triple Aim – recent rules for Medicaid – Triple Aim language up front and center

- Move from volume purchasing to value purchasing
  - Medicare Accountable Care Organizations
  - Hospital recoupment for readmissions

- Integration of physical and behavioral health care
  - Cost factors of co-morbid conditions
  - Examples – AZ Specialty Health Plans
MORE - Indicators Change in the Healthcare Delivery System is Here

Arizona Payment Modernization Initiative
- New AHCCCS and ADHS policy on value based purchasing
- AZ Payment Reform Toolkit – Dale Jarvis
  - Change in payment and demonstration of outcomes

Certified Community Behavioral Health Clinics (CCBHC)
- Overview

Technology Expectation of Society
- Self service
- Immediate response
- Expectation for companies to know
- Examples of other industries
So…. what do these previously discussed changes have to do with Technology and Analytics?
Analytics Capability by Industry

- No Analytics
- Operational Analytics
- Advanced Analytics

Level of Sophistication

- Standard Reporting
- Ad Hoc Reporting
- Query Drill Down
- Alerts
- Simulation
- Forecasting
- Predictive Modeling
- Optimizing

- Healthcare Overall
- Small Retail
- Healthcare Financial
- Airline
- Financial
- Search Engine Companies
- Large Box Retail
- Healthcare Financial
- Financial
- Search Engine Companies
- Large Box Retail
Future Vision
Analytics Across the Care Continuum

- Home: Patient web portal to update information and participate in health screening
- Clinic Care: PCP wellness check and lab work
- Outpatient: Psychiatrist orders medications
- Inpatient: Emergency room for chest pains, anxiety attack and hallucinations
- Peer Support: Participation in peer support group
- Home Health: Peer support worker assists with daily living skills
- Hospice/Other: Visit with Probation Officer
# Adding Value through Advanced Analytics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Operational Analytics</th>
<th>Advanced Analytics</th>
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<tbody>
<tr>
<td>Reduction in duplicative testing</td>
<td>How many duplicative tests? How many used prior testing after notification?</td>
<td>Which providers are likely to order duplicative tests? Cost predictions for overall health care costs for providers who order duplicative tests?</td>
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<tr>
<td>Care coordination</td>
<td>Assigned individuals?</td>
<td>Which individuals need more care coordination to impact outcomes and reduce costs?</td>
</tr>
<tr>
<td>Managing chronic disease</td>
<td>Which individuals have chronic diseases? Treatment alerts for chronic diseases?</td>
<td>Which individuals are likely to adhere to treatment recommendations and which are not?</td>
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<tr>
<td>Safety</td>
<td>Number and type of adverse incidents?</td>
<td>Predict type and occurrence of adverse incident?</td>
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Technology and Analytics Discussion Items

1. How does your organization define Analytics?

2. What is the current shared vision for Analytics among your organization’s Executive Team?

3. What value does your organization see in having outcome measures and Analytics?

4. What value will your organization’s external stakeholders receive from Analytics and outcomes?

5. Have discussions been held regarding staffing and technical infrastructure needed to support analytics for your organization?
Essential Components of Technology and Analytics Roadmap

All Components are Required

- **People**
  - Enable Leadership Vision
  - Consider Organizational Impact of Changes

- **Process**
  - Identify Best Practices
  - Evaluate Key Business Processes
  - Identify Process Gaps and Opportunities for Improvement

- **Technology**
  - IT Alignment to Vision and Process
    - Transaction Processing
    - Analytics and Reporting

- **Governance**
  - Develop Business and IT Support Model
People

What has to happen to improve your organization’s understanding of information?

How do you mature the decision-making capabilities of your organization?

Communication
- About future, what’s changing etc.
- Input on the work processes from those who perform the work

Organization Change Management (OCM) Approach
“A structured approach to **successfully transition** individuals, teams, and organizations from a current state to a desired future state.”
People Typically Resist Transition Because They...

- **Are not willing . . .**
  - Have a general fear of change
  - Are in their comfort zone
  - Believe this will fail as past changes have failed

- **Are not able . . .**
  - Have not been trained
  - Don’t have the skills to work in the new environment

- **Do not know . . .**
  - Lack of communications
  - Do not understand the business drivers for the change
  - Cannot relate this to a personal benefit
Prosci Study: Project Success Factors

Statistics: Projects with effective change management were nearly six times more likely to meet or exceed their project goals.

Greatest Success Factors:
1. Active and visible executive sponsorship
2. Structured change management approach
3. Frequent and open communications around the need for change
4. Dedicated Resources for change management
5. Employee Participation

Greatest Obstacles:
1. Ineffective Change Sponsorship from Senior Leaders
2. Resistance to the Change from Employees
3. Poor Support and Alignment with Middle Management
4. Lack of Change Management Resources and Planning

Study Background:
- 2007 Best Practices in Change Management study investigated project success factors, obstacles and “what would you have done differently?”
- 426 companies participated; 59 countries
- Conducted by Prosci: learning center focused on OCM
How Much OCM is Needed?

**Complexity of Change:**
- Degree of People Impact = Risk
- Process Complexity / Degree of Change
- Big Bang vs. Phased
- Team Experience
- Locations / Geography / Scale
- Risk Level

**Environment:**
- Corporate Culture
- Degree/Effectiveness of Sponsorship
- Capacity for Change
- Sophistication
- Historical Projects
- Formality of Program Management
- Resources: Quantity, Availability, Experience
Processes

Operational Processes
- Processes to disseminate operational (clinical) best practices and expectations
- Focus on outcomes and reduction in variances of practice

Measurement Systems Processes
- Electronic records – constructed to collect data to support clinical practice and oversight capabilities

Performance Improvement Processes
- Use of data by Executive and Operational Structures (e.g. committees) to prioritize improvement areas and accountability

Example – Transitions of Care

Operational Processes
- Protocols for transitioning from facility care to community care
  - Expected points of contact
  - Expected points of assess and intervention

Measurement Systems Processes
- Notifications of transition
- Documentation of contact
- Measurement of functionality

Performance Improvement Processes
- # and % of those with transitions
- # and % stabilized in community after transition
- Functioning levels
- Satisfaction / experience with care
Technology

- Transactional Systems  (e.g. EHR, finance systems, HR)
- Enterprise Data Warehouses
- Data Marts
- Health Information Exchange
- Metrics to Support Business Objectives
- Staff Skill Sets - Analytics Staff
Governance

- Executive Sponsorship
- Leadership
- Program Sponsorship
- Data Governance
- Set Vision for Technology to Address … Business Needs
- Set Resource Priorities
Technology & Governance Components

- Analytics Program
- Data Governance
- Data Quality
- Master Data Management
- Program Governance
- Data Presentation
- Data Integration
- Data Management
Technology & Governance
Components of an Analytics Program

- **Program Governance**
  - Cross functional Team led by I.T., responsible for planning, prioritization, funding, and communication of progress and value.
  - Guides change management processes
  - Business Intelligence Competency Center

- **Data Governance**
  - Program where a Business Team is focused on the management of all data assets – define standards, process, rules, stewardship, risk and compliance

- **Data Quality**
  - Processes around the identification and repair of data quality issues, may be an outcome of Data Governance Program

- **Master Data Management**
  - Processes to ensure master data is managed centrally and consistently, may be function of Data Governance Program
Technology & Governance
Components of an Analytics Program

**Data Integration**
- Processes that support the movement of data between systems and provide efficient loading of information for Business Intelligence systems

**Data Management**
- Tools and Standards to manage the Storage, Access and Reliability of Data Assets

**Data Presentation**
- Processes and tools for analyzing, reporting, viewing and discovering
Analytics Roadmap Approach

Analytics Vision
- Conduct facilitated sessions with Stakeholders
  - Develop Common Definitions
- Define who/how analytics will be used
- Develop Organization Value Propositions for internal & external stakeholders

Analytics Requirements Validation
- Conduct Work Sessions to Validate End User Enterprise Analytics Requirements
- Assess User/Information Access Interaction
  - Reporting
  - Analysis
  - Dashboards
  - Scorecards
- Finalized Business User Reporting & Analytics Requirements

Analytics Technology Approach
- Assess Current Infrastructure Approach
- Verify Data Requirements to include:
  - Quality
  - Transformation
  - Aggregation
  - Timeliness
  - Staging
- Formulate Future State Architecture
- Document ETL/EAI Requirements
- Document Tool(s) Requirements

Analytics Roadmap Development
- Assess Technology Alternatives & Finalize Recommendations
- Identify Associated Resource Requirements
- Define Logical Deployment Sequence
- Conduct Executive Presentation Summarizing Project Results
Technology & Analytics Roadmap Alignment

**Functional Requirements**
- What are the business problems/issues to be solved or the opportunities to pursue?
- What are the key data points that need to be tracked?
- How are the requirements aligned with systems and at what levels?
- How will the improved exposure of metrics impact organization decision-making & culture?

**Business Systems**
- Are the organization’s transaction based systems supporting the business needs of the organization?
- Are current transaction systems collecting the right information needed to support the desired metrics?
- What is the availability of information? Are there data quality issues?
- What is the proper approach to staging data for analytics and reporting?

**Information Access**
- How will users interact with analytics and reporting information being deployed in order to drive process improvement?
- What are the optimal methods/channels to deliver required analytics and reporting information (ex: Dashboards, Analysis, Operational Reporting)?
- What is the optimal technical deployment strategy to support improved information access?
Technology and Analytics Program: Success Factors

- Organizational Awareness, Readiness and Support
  - Ensures Business Engagement
  - Clear value propositions
  - Commitment to implementation and training requirements

- Predictable Delivery Model
  - Consistently deliver value from program
  - Enough agility to meet the needs of organization

- Vigorous attention to Data Quality
  - Develop active data governance programs
  - Measure and report quality

- Cross Functional Program Leadership
  - Ensures Business Ownership
  - Development of cross functional governance teams (program and data)
Technology and Analytics Program: Success Factors

- **Clear and Publically known Sponsorship**
  - Highlights importance of program
  - Provides support for funding at the highest levels
  - Potentially provides high level business champion

- **Measurable Improvements**
  - Utilize maturity models for benchmarking progress
  - Actively communicate progress and value
  - Encourage your customers to advocate on behalf of the program

- **Success has very little to do with technology, tools or development**
Opportunities

Use the following, rate your organization
- 1 No activity
- 2 Planning
- 3 Deploying
- 4 Early successes
- 5 Maturing

Preparing for the changes coming about
Advancing technology and analytics
The FUTURE is NOW

Given our discussion today, what two actions can you take to support advancing technology and analytics in your organization?
Thank you

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