Strategic Expansion of Analytics Capacity through Knowledge Management

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Conflict of Interest Disclosure

Joe Kimura, MD MPH
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Has no real or apparent conflicts of interest to report.
Learning Objectives

• Describe why the explosion in healthcare analytics will create knowledge management challenges for delivery systems that will lead to ineffective and inefficient analytics

• Describe the role of development a knowledge management strategy to help mitigate those risks

• Demonstrate how knowledge management can improve collaboration and sharing across siloed or geographically distributed teams

• Describe the importance of organizational culture in facilitating collaboration and knowledge sharing

• Illustrate how knowledge management techniques rooted in organizational culture can complement and enhance technology based approaches
## An Introduction to the Benefits Realized for the Value of Health IT

| **E** | ELECTRONIC INFORMATION/DATA: Increases the capacity of your analytics department to more data, more consistent data, and better data out to your organization |
| **S** | SATISFACTION: Improves the professional satisfaction of data analysts within the organization through the promotion of a collaborative culture |
| **S** | SAVINGS: Maximizes analytic capacity of existing staff within an analytics and reporting department |
Overview

• Background – A Case for Change
• Introduction to Knowledge Management (KM)
• Case Study: The KM Process
  – Assessment of the Current Environment
  – Strategic Plan
  – Tactical Plan
  – Implementation
• Final Thoughts
• Q&A
Background: A Case for Change

Analytics are a core competency of an adaptive learning delivery system.

- Change management in physician organizations is facilitated by shared data review
- ACOs must innovate, adapt, and improve (Continuous improvement = Continuous Learning)
- Data informed decision making is critical as reimbursement levels drop

Background: A Case for Change

• Healthcare analytics as an exploding area
  – Value based accountability for cost, quality, and patient experience
  – Global risk financial arrangements
  – Emphasis on operational process improvement

• The complexity of healthcare analytics is also exploding
  – Expanding data sources, data types, data volume
  – Increasing sophistication of data analytic methods
  – Increasing sophistication data visualization and reporting

• Highly competitive market for well trained analytic staff
  – Large time investment in onboarding new analyst
  – Ongoing maintenance of skills & knowledge is a challenge
Background: A Case for Change

- Past - Simple, silo-ed financial, quality, or operational reporting
- Today - Complex integrated reporting
- Demand and complexity require analytic staff to work better together

“Need to work together better”
“Duplicating efforts”
“Reinventing the wheel”
“Inconsistent across silos”
“Can’t find what we’re looking for”
Background: A Case for Change

- Non-profit alliance of six leading independent medical groups + VNA service
- ~ 1,000,000 adult and pediatric patients
- 1100 physicians across 35+ specialties
- 100% of physicians on Epic
- Enterprise Data Warehouse
- HIMSS Level 7
- NCQA Level III Advanced Medical Home Accreditation at 30 practice sites
- CMMI Pioneer ACO Organization
Background: A Case for Change
Distributed Analytic Resources
Road to Knowledge Management

- Concerns that analysts were duplicating each other’s work by re-creating code or re-running the same reports
- Investing too much time & resources replicating processes
- Challenges with **information organization & classification** across systems and across silos
- More consistent organization of information via an improved taxonomy?

**Common symptoms of KM challenges**

- “Need to work together better”
- “Duplicating efforts”
- “Reinventing the wheel”
- “Inconsistent across silos”
- “Can’t find what we’re looking for”
Introduction to Knowledge Management

Overview of key concepts and frameworks
What is Knowledge Management?

• Range of practices, processes, and activities that together encompasses how an organization approaches knowledge

• Levels and approaches to KM: top down vs. bottom-up, organizational vs. departmental

• Elements of KM are tied to:
  – Organizational structure
  – Organizational culture
  – Operational processes
  – Technology adoption
  – Information management
  – Organizational learning and professional development
Knowledge Management

Framework for systematically and consistently capturing and sharing organizational knowledge to achieve operational excellence.
Knowledge Management:

FIND or DISCOVER Information & Knowledge:
to promote the re-use, uptake, adoption, adaptation of organizational knowledge
Knowledge Exchange & Transfer

• Converting from tacit knowledge (in people’s heads) to explicit knowledge (articulated and captured, stored in a knowledge asset)

• Staff turnover – exiting staff, retirements, onboarding new staff

Areas to target:

• Organizational ways of working: typical or standard methods, practices for conducting everyday work

• Institutional memory: when and why key decisions were made, processes put in place, organizational changes

• What worked, what didn’t? What could be done differently in the future?
Knowledge Flow

• Look for gaps in or barriers to knowledge flow
• Where does knowledge flow break down? Why/how is it an impediment?
• “Open” vs. “closed” states within the organization
• Different models – spoke and wheel/hub vs. networked model
Why encourage knowledge sharing?

• Foster innovation and creativity
  – “Better together”
• Improve, enhance, build on existing knowledge
• Improve connections between staff
• Internal transparency → increased trust
• Reduce duplication of efforts
• Single stream of information
Case Study: The KM Process

Assessment > Strategic Plan > Tactical Plan > Implementation
Timeline

• **February**  Current State Assessment
  • Interviews & analysis
  • Preliminary Current State Summary Report
  • Workshop (Half-day All Analyst Meeting)

• **March**  Future State, Gap Analysis, Strategy
  • Report on Current Gaps + Proposed Strategy
  • Workshop (Half-day All Analyst Meeting)

• **April**  Tactical Plan Development
  • Online Moderated Brainstorming & Rapid Development Cycle
  • Tactical Planning – Timing & Deliverables & Assessment

• **May**  Final Report & Handover

• **Q3, Q4**  Begin Implementation
  • Organizational changes
  • New framework for All Analyst group
  • Technical development
Current State Assessment

Lots of disconnect between silos....

We don’t know what we know or what we do across silos

Speed is starting to cause mistakes and issues

The issue is finding out [if a request has been done before].

You don’t even know what you don’t know.

We need to harness all of this tacit knowledge that we have somehow.

Re: meetings – if you miss it, it’s gone…

Lots of this knowledge is in [one person's] head [and nowhere else].

As long as no one leaves, we’re ok.

As someone new to the org… it would be very helpful to know what everyone is doing… [I] felt like transparency was missing….

Collaboration | Communication | Documentation | Duplication of efforts | File organization | KM and clients | Knowledge capture | Knowledge sharing | Organizational structure | Speed and pace | Training

You don’t even know what you don’t know.
Knowledge sharing across group boundaries is recognized and rewarded. (N=28)

Best practice guidance is widely available and integral to our work practices. (N=27)

Lessons are systematically and routinely learnt, shared, and applied. (N=27)

My colleagues willingly share their knowledge with me. (N=28)
Strategic Plan: Defining the Vision

Through effective knowledge management, analysts aim to efficiently and effectively identify, capture, transfer, share, re-use, and facilitate the application of key knowledge necessary for analysis to help achieve the Triple Aim:

- Improving Population Health
- Improving Patient Experience
- Decreasing the Cost of Care
Strategic Plan: Defined Goals

Strive for operational excellence

*Through the effective flow of knowledge, we aim to improve the ways in which analysts:*

- **Work together** through coordinated efforts across silos, through improved teamwork and collaboration, and by maximizing use of the group’s collective knowledge and expertise
- **Work independently** through direct access to key knowledge, knowledge assets, and each other

Support organizational use of data and analytics

- **By serving as subject matter experts within the organization, take a leadership role in guiding the appropriate use and adoption of data and analytics to support the delivery of health care and operational effectiveness**
Tactics Development

• Kick-off brainstorming workshop
  – All analysts
  – Half-day
• Rapid development cycle
  – Two weeks
  – Small groups (3-8)
  – Membership across traditional silos
  – Self-selecting groups
• Continued development of all tactics

Collaboratively-developed tactics
Rapid Development Process

Welcome Abby Clobridge (Administrator)

Latest News

October 15th, 2012
Since we provide this service free of charge and had more success than we anticipated we needed to define a deletion policy for unused domains. Starting by August 2012 we will delete all private subdomains which haven't been accessed for more than two years. To prevent your domain from being deleted it suffices to log in every 12-18 months to be on the safe side.

You can find more information at the TitanPad blog here and here.
You can also help us by deleting pads which you don't need anymore.

April 10th, 2010
Welcome to your free TitanPad Account! Please report bugs by sending email to <support@titanpad.com>.

If you have any questions, just email <support@titanpad.com> and we will respond to your inquiries.

We hope you enjoy TitanPad!
TitanPad Team

TitanPad – Real-time, web-based collaborative writing tool (similar to Google Docs)
http://titanpad.com/
Tactic: New Analytics Staff Development Program

Team members: Katie LeFleur, Siri Tello, Lauren Sinay, Charlene Wood, Kayal Chandrasekaran, Linda Powaznik, Liz Suwinski, Vera Yanovsky

Purpose: Develop a formal training program designed to train and acclimate new analytics staff members in consistent, systematic ways that break down barriers between silos. When and how often should formal training begin - whenever an analyst starts? Usually analysts start at different times.

Checklist of tools and training needed, accesses required to various databases and applications and whom to contact for access

Beginner’s Check list:

1. Access to Business Object
2. Access to Clarity database
3. Access to Claims database
4. Access to Epic
5. Access to Data Warehouse collaboration page
6. Access to ASAR collaboration page
7. Access to Data Steward collaboration page
8. Access to Verisk Sightlines (if applicable)
10. Info on joining one of the Community Development groups, e.g., New Analysts
11. Access to Mytime
12. List of programs to look for on their computer (make sure they have all the programs they need, e.g., Toad, Crystal, etc.)
13. Get added to DWUG list in Outlook (or whatever the new group is called)
14. Attend a DWUG meeting; put faces to names.
15. List of important phone numbers (e.g., Help Desk, Weather Number etc.)
16. Phone numbers for all analysts? (updated each time a new analyst starts)

What should be covered in a Training Program - Overview of Atrius Organizational Structure:
Overview of Analytical Groups spread across departments and sites:
Introduction to Data Warehouse (Clarity, Claims, DataMart, Testing and Production Environments, Reference and Mapping Tables, Business Rules, Report Management Database)

I think also, on top of all of this - how it all fits together, creating a ‘big picture’ overview, why things are done the way they are.

LP 03/27 Add overview of EPIC
Overview of DASC and working groups
## Strategy and Tactical Summary – 2013/14

<table>
<thead>
<tr>
<th>Strategic Domain</th>
<th>Issues Addressed</th>
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</thead>
</table>
| Organizational Culture | • Analysts structured into siloes by organization  
                         • Chasm felt between some groups of analysts  
                         • Limited common ethos except personal relationships  
                         • Difficult for analysts to establish new relationships                                                                                                                                                             |
| Infrastructure         | • No common request system, no way of knowing who works on what  
                         • Broad geographic dispersion makes it difficult to collaborate  
                         • Analysts find it difficult to know background and experience of analysts in different silos                                                                                                                                 |
| Workflow & Processes   | • Unstandardized process for seeking help from others  
                         • Unstandardized process for training new analysts  
                         • Varying expectations about who is obligated to help whom                                                                                                                                                       |
| Investment in People   | • Very long 12-18+ month process to “train” a new analyst  
                         • Limited opportunities to continue to develop as an analyst                                                                                                                                                   |
## Strategy and Tactical Summary – 2013/14

<table>
<thead>
<tr>
<th>Strategic Domain</th>
<th>Tactical Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Culture</td>
<td>• Create Analytics Collaborative Group (AGC) Leadership Team</td>
</tr>
<tr>
<td></td>
<td>• Establish two peer groups based on Org Experience</td>
</tr>
<tr>
<td></td>
<td>• Redesign monthly meeting formats for greater value</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Central analytics space within SharePoint:</td>
</tr>
<tr>
<td></td>
<td>• Standardized request catalog</td>
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<tr>
<td></td>
<td>• Online analytics Knowledge Base</td>
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<tr>
<td></td>
<td>• Online moderated discussion board</td>
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<tr>
<td></td>
<td>• Expertise Directory</td>
</tr>
<tr>
<td>Workflow &amp; Processes</td>
<td>• Established process for analyst to seek answers to questions</td>
</tr>
<tr>
<td></td>
<td>• Use of online resources for self-service answers to questions</td>
</tr>
<tr>
<td>Investment in People</td>
<td>• New analyst onboarding process, curriculum, structure</td>
</tr>
<tr>
<td></td>
<td>• Ongoing professional development program (for all analysts)</td>
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</tbody>
</table>
Core Hybrid Structure of Analysts

[Diagram of analyst organization structure with names and roles]
Implementation (in progress)

- SharePoint: Collaboration space for all analysts (development underway)
Continued Efforts & Ongoing Challenges

• Governance: centralized vs. de-centralized vs. hybrid model
• Finding time to continue focusing on organizational development
• Incentives and rewards for knowledge sharing
• Iterative development process: continued work to assess, tweak, adapt
• Long-term assessment efforts
Final Thoughts

KM best practices & techniques
Best Practices in KM

• Focus on KM & organizational culture
• Communities of Practice
• Best Practices and lessons learned
• Tech-based tools
  – Expertise Directory
  – Knowledge Bases
  – Online discussion forum
• Taxonomies and user-generated tags
Best Practices: Technology to Promote Knowledge Sharing

• Asynchronous collaboration, knowledge sharing, knowledge exchange
• Expand connections between staff, between silos, between groups, across geographic lines
• Transparency and trust within closed groups
• **Consistent and systematic** adoption of tools
• Collaborative writing & collaboration spaces
• Shifting from email to online platforms
• SharePoint, collaboration, and knowledge sharing
Indications of KM Challenges

Are we making the most of staff members’ knowledge, skills, expertise, and know-how?

Are we making the most of existing tools and processes to share knowledge?

Concerns with upcoming retirements and institutional memory

We don’t know who does what

We’re not doing things consistently across silos

If only we knew what we know…

Reinventing the wheel

Challenges getting new staff up to speed

Concerns with duplicating each other’s work
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Questions?

Thank You!

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