Defining your organization’s path in analytics

Creating an Analytics Center of Excellence

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Introductions

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Craff M and Fox W. How to create a data analytics center of excellence in healthcare - Building the framework for effective & agile decision-making. May 2022.  
Our purpose

To empower easy data-driven decision-making on important healthcare questions
Today's agenda topics

- What is an Analytics CoE
- Evaluating the current state
- Assembling the data team
- Benefits of creating an Analytics CoE
- Pitfalls and Key Success Factors
What is an analytics center of excellence?
A framework for thinking about data and creating a culture of using analytics

**People and processes to innovate & engage**

‘Personalized adaptive care’ story:
$2k reduction in costs per patient & increased capacity of case managers

**Training for as many people who want to learn**

‘Accidentally everyone’ story:
$0.5B incremental value per year & reduced product development time

**Technology to facilitate insights**

‘Speed and integration’ story:
Responsive web portal + integration allowed automated reporting & analytics

**Cross-functional input to improve outcomes**

68 days & 5 tries to find the right mental health provider / service

**Data fluency for everyone**

‘Job satisfaction & career growth’ story:
Up to 12% productivity gains through upskilling and training

**Outside perspective for objectivity & context**

‘COVID disparities’ story:
ED, PCP, preventive, Rx, telehealth, mental health

Milliman MedInsight®
Disappointing results from survey of 64 C-level executives of very large firms like American Express, Ford Motor, General Electric, General Motors, and Johnson & Johnson.

- Rather than seeing an increase in the number of data-driven companies over the past three years, the study showed a 16.4% drop from 2017 to 2019.
- Only 7.5% of these executives cite technology as the challenge.
- Main underestimated difficulties were holistic – people (62.5%) and process (30.0%).
- 40% identified lack of organization alignment and 24% cited cultural resistance.

Why culture is crucial
Despite the value offered, nurturing a data-driven culture isn’t easy.
Challenges along the way

“We waste at least $2 million a year arguing about who has the right figures”

“My spreadsheet says it’s only $1M!”
Database quality assurance

- Adaptable business intelligence platform
- Comprehensive and flexible
- Established analytic methodologies
- Data reliability – correctly formatted and stored, completeness, duplicates removal
- Data Confidence Model – process-oriented data intake, robust quality audits, data certification, rigorous peer review
Question 1
Which types of analytics are you using to inform your business decisions?

A. Descriptive
Why happened?
- Historical reporting
- Financial, operational
- Transactional

B. Diagnostic
Why is this happening?
- Performance measurement
- Competitive analysis
- Benchmarking
- Real-time analytics
- Early indicators / monitoring

C. Predictive
What will happen?
- Likely outcomes
- Trend insights
- Forecasting
- Predictive models
- Correlation analysis

D. Prescriptive
What actions are best?
- Outcomes analysis
- Scenario analysis
- Rapid feedback loops
- Small tests of change
The value of widespread data fluency
To make information accessible, quickly reveal insights, and avoid silos

- Risk management
- Revenue cycle management
- Cost management
- Value based contracting
- Strategic initiatives

- Staffing / Human resources
- Supply chain / inventory
- Information security / privacy
- Performance improvement
- Community partnerships

- Outreach to high-risk patients
- Chronic condition management
- Wellness / preventative care
- Patient education
- Telehealth
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Evaluating the current state
Score each category to make this actionable – identify strengths and gaps

Right tools and data sets
Awareness of tools to manage / process / analyze your data
Common language

Right mix of talent
Skills to translate analytics into insights and answers to key questions
Interdisciplinary collaboration

Setting goals & measuring progress
Small sprints, deliver value early, pivot as needed

Immersive training
Formal and informal training
Techniques, tips and tricks

Compelling storytelling
Setting, expectation, problem / gap, innovation, proposed resolution
Use analytic insights to describe each of these

Communicating outcomes
Sharing what was learned along the way
### Question 2

The process to optimizing analytics is evolutionary and occurs in stages. Some departments or business entities may be ahead of others. How might your employees score their current access to analytics capabilities, on average?

<table>
<thead>
<tr>
<th>Stage</th>
<th>Characteristic</th>
<th>Objective</th>
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<tbody>
<tr>
<td><strong>Stage 1</strong></td>
<td><strong>Analytically Impaired</strong></td>
<td>Get accurate data to improve operations.</td>
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<tr>
<td></td>
<td>The organization is plagued by missing or poor-quality data, multiple definitions of its data, and poorly integrated systems.</td>
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<td><strong>Stage 2</strong></td>
<td><strong>Localized Analytics</strong></td>
<td>Use analytics to improve one or more functional activities.</td>
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<td>The organization collects transaction data efficiently but often lacks the right data for better decision making.</td>
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<td><strong>Stage 3</strong></td>
<td><strong>Analytical Aspirations</strong></td>
<td>Use analytics to improve a distinctive capability.</td>
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<td></td>
<td>The organization has a proliferations of business intelligence tools and data marts, but most data remains un-integrated, non-standardized, and inaccessible.</td>
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<td><strong>Stage 4</strong></td>
<td><strong>Analytical Company</strong></td>
<td>Build broad analytic capability — analytics for differentiation.</td>
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<td></td>
<td>The organization has high-quality data, an enterprise-wide analytical plan, IT processes and governance principles, and some embedded or automated analytics</td>
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<td><strong>Stage 5</strong></td>
<td><strong>Analytical Leader</strong></td>
<td>Analytical master — organization has a cohesive analytical flow.</td>
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<td>The organization has a full-fledged analytical architecture that is enterprise-wide, fully automated and integrated into processes, and highly sophisticated.</td>
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Technology example – The MedInsight ecosystem

Achieving Integrated Analytics

- BENCHMARKS
- POPULATION HEALTH
- WASTE IDENTIFICATION
- COST & UTILIZATION

Scalable, powerful and efficient

Millions of Members

Billions of Claim Lines

5 Day Average Data Refreshes

30% of Insured Lives in U.S.

4,000+ Data Sets

PROCESSED MONTHLY

Industry Recognition

Best in KLAS Software & Services Awards
Ranked #1 in Payer Quality Analytics, 2019, 2020, 2021, 2022

Seattle Business Magazine
2019 Achievement in Digital Health Award

IDC MarketScape
Leader in the U.S. Payer Data Analytics Vendor Assessment

IDC MarketScape
Major Player in the U.S. Population Health Analytics Vendor Assessment

Milliman MedInsight®
PROGRESSION TO AN ANALYTICS CENTER OF EXCELLENCE

Simplify, accelerate and focus
The objective is to increase usage of analytics in a self-service manner

- Outsourcing is a key strategy – it is difficult to hire every role you need, or build every function from scratch
- Unbiased 3rd party to provide a cost analysis framework – data quality has to be scored and managed
- 3rd party benchmarks for each aspect of your key business drivers
- Aim to deliver ROI in phases – rapid cycle improvement, agile sprints
- Knowledge transfer to the community needs a strategy and maintenance

Every minute counts!
Leverage established industry-leading analytical tools rather than creating them from scratch so that you can focus on strategy and business performance.

Analytics Center of Excellence

Subject matter experts: World class consulting services
Portal and Data MART: Industry gold standard groupers and relational models
Education Services: Analytic training and certification programs, e-Learning and interactive coaching
Knowledge Community: Client meetups Research access

Milliman MedInsight®
Continuing education programs
Integrating analytics into problem-solving and decision-making

Program Objectives
- Onboarding – at all levels
- Continuing education / upskilling
- Expert – deep-dive methodologies, applied examples and considerations

Education Services

Common Language
To Facilitate shared understanding of data analytics across departments and disciplines

Analytics Adoption
To support the use of advanced analytic tools from Milliman MedInsight

Industry Awareness
To increase awareness of challenges and success factors in population health and best practices in advanced data analytics

Learning Community
To explore and learn from case study examples, real-world outcomes, and action-planning approaches
**Education services**

On-demand, custom training tailored to your needs

**Health Analytics Certifications**
- Adopt industry best practices from experts in the field
- Enhance your understanding of healthcare topics today and in the future

**Technical Certifications**
- Answer business questions through real-world use cases
- Empower adaptability and knowledge with a variety of tools
- Digital e-learning courses available 24/7

**Skills Labs & Classes**
- Optimize your query building and receive real-time feedback and tips
- Connect your own data with the power of analytic best practices

**Primers**
- Build confidence in understanding and drilling into data
- Understand the synergy between MedInsight products

Additional new content is continually being developed, based on both client requests and industry trends.
MOBILIZING TOWARDS A DATA-FLUENT FUTURE STATE

Education services

Implementation Training
- Portal Navigation
- User Defined Dimensions and User Defined Fields
- Query Tools
- Dashboards
- Client Support
- Data refreshes
- Data quality audits
- Ticketing System
- Continuing Education
- Documentation
- Training Videos
- Newsletter Updates

Digital Courses
- Financial Performance
  - 102: Healthcare Finance: Health Claims Data
  - 103-4: Analytics Basics: Cost Management and Efficiency
- 201: Health Cost Guidelines Grouper
- 301-306: Advanced Health Data Analytics
- Care Management
  - 105: Analytic Basics: Data Driven Care Management
  - 203: Chronic Conditions Hierarchical Groups
  - 206: Guideline Analytics
  - 401-406: Population Health Analytics series
- Evaluating Value and Quality of Care
  - 204: Health Waste Calculator
  - 205: Evidence Based Measures

Instructor-Led Skills Labs
- Cost and Utilization
- Health Waste Analysis
- Utilization Management
- Provider Comparison
- Site of Care
- Quality of Care
- Custom topic as requested

Certification
- Personal progress
- % completion
- Assigned courses
- Transcript
- Course certificates
- Managerial reports
- Course completion
- Users by group
- Average % score
- Evaluation
- User feedback

Self-Service Materials
- Monthly webinars, such as:
  - The Drive to Value-Based Results with MedInsight
  - Top 5 ways to leverage Milliman data assets for strategic healthcare market analysis
- Training Studio
- Research & Innovation
  - Research databases
  - Data integration
- Brief navigation videos, e.g.:
  - Navigating Your MedInsight Portal
- Use cases and Q&A
Question 3
What stands in the way of becoming data-driven in your business?

UNDERSTANDING CURRENT STATE

What are the barriers?
- A lack of:
  - Time or budget
  - Skills
  - Data
  - Tools / technology
  - Strategy alignment

What would make it easier?
- Analytics technologies
- Business interpretation
- Data fluency / training
- Organizational / Leadership commitment
Assembling the data team
Cross-functional use of data analytics and integration into problem-solving and decision-making
Vision for enterprise adoption
Each department has their own level of analytic maturity, so outline a strategy to speed up analytic synergies between them all and plan a roadmap for adoption.
Manage the flywheel of success

Success

Efficient use of team

Better decisions and improved business outcomes

Happier, less frustrated employees
Benefits in action
CEO wants to know what drove trend of 10% for ACA Individual but only 5% for Group

Malik (Analyst) can easily anchor to PMPMs for current and prior year that everyone agrees on and then can quickly and efficiently evaluate changes in membership (age/sex and morbidity), utilization vs unit price, changes by service category and chronic condition.

- Hospital unit price trends were 20% for ACA and 3.6% for Group
- No material differences in other drivers

Malik can then quickly show the results by hospital and compare ACA vs Group

- ACA unit prices were 25% below Group but gap is narrowing
- One large system had a 32% increase but there were larger ACA increases for many hospitals

Malik then reviews filed ACA rates and can show that competitors have not increased rates as much, and this is disadvantaging our competitive position. Meeting set with Provider Network team to determine what resources they need to improve hospital contracting outcomes, CEO is involved, and they agree to create more VBCs for ACA.
A few examples of success

<table>
<thead>
<tr>
<th>Affordability</th>
<th>Cost Drivers</th>
<th>Risk Management</th>
<th>Care Management</th>
<th>Optimizing Wellness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compare the 58 measures of low value care tracked by Health Waste Calculator to geographical overutilization trends.</td>
<td>Understand how quality, access, use, and cost vary geographically between providers and compare to benchmarks / trends.</td>
<td>Consolidate internal reporting capabilities with a single source of truth that can be reconciled to your financial systems.</td>
<td>Rapidly identify patients who are heavy utilizers, avoidable ED visits, and risk-adjusted readmissions.</td>
<td>3-5 year strategic plan to manage a pre-diabetic population proactively.</td>
</tr>
<tr>
<td>Achieve PMPM reduction &amp; quality improvement using evidence-based measures &amp; HWC.</td>
<td>Measure referral patterns, length of stay, follow-up after discharge, readmission using provider scorecards – acute &amp; post-acute.</td>
<td>Use individual &amp; aggregated risk scores by payer type, impact-ability scores, &amp; integrate social determinants of health factors.</td>
<td>Inform care intervention using chronic condition hierarchical groupers, &amp; identify comorbidities to manage patients more holistically.</td>
<td>Identify primary care spend, outcomes &amp; leakage to specialists.</td>
</tr>
<tr>
<td>Evaluate hospital contracting using GRVUs and Medicare repricer to identify opportunities.</td>
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<td></td>
<td>Determine how to address the gap in ambulatory care and unavoidable ED care among Medicaid enrollees and dual-eligible patients.</td>
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Pitfalls to avoid and key success factors

Pitfalls

- Don't wait months or years for perfection
- Don't create an amazing resource that no one knows how to use
- Don't let departments argue about which data is correct
- Don't skimp on talent, resources and authority for the team
- If the user can't get results out quickly, they will create more focused solutions
- Failing to shut down department-specific datamarts

Key success factors

- Make sure it is usable right away
- Start with a core group of super users and train them well
- Have clear reconciliation to financials and other foundational data
- Need to be able to add dimensions and metrics quickly and efficiently so departments don't do it on their own
- Leadership supports data analytics and a single source of truth
Building your analytics center of excellence

No two organizations are exactly alike – here are some best practices to keep in mind along the way.

<table>
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<td><strong>Building your analytics center of excellence</strong></td>
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A well-honed analytics strategy can be used to build trust in health data that leads to optimized healthcare delivery and better patient outcomes.

<table>
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<tr>
<th>The right mix of talent</th>
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<tbody>
<tr>
<td>▪ Emphasizing the cross-functional skills and perspectives to achieve key insights &amp; accessible answers</td>
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<table>
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<th>Training for excellence</th>
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<tbody>
<tr>
<td>▪ Data fluency training &amp; best practices to accelerate practical use of information for competitive advantage</td>
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</table>

<table>
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<tr>
<th>Making use of the right tools &amp; data sets</th>
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<tr>
<td>▪ Timely insights, improved data quality, scalable disciplined data structure, and simple tools.</td>
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<th>Setting goals &amp; measuring progress</th>
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<tr>
<td>▪ A phased plan can help you communicate the larger narrative of the benefits of analytics excellence</td>
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<th>Using analytics to tell a story</th>
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<tbody>
<tr>
<td>▪ The right analytics can deliver powerful stories, with layers of information and insights</td>
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</table>

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<tr>
<th>Strategic outsourcing to maximize your team</th>
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<tr>
<td>▪ Agile sprints can deliver repeat value within a short period of time to build and sustain momentum</td>
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</table>
Thank you

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