DATA ANALYTICS’ INCREASING IMPORTANCE IN COMPLIANCE

Presented by:
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Just What is Data Analytics?

- The analysis of data through logical analysis
- Data analytics and population health
  - Are keys in the transition from fee-for-service to payment for quality and cost effectiveness
- Increasing numbers of clinically integrated networks (CINs), Accountable Care Organizations (ACOs), and patient-centered medical homes
  - Employ some form of data analytics
Distinguish Data from Information

- Data are facts
- Big Data – some data sets are so large or complex that traditional data processing applications are inadequate
- Information is the sense that is made from the data
- Knowledge is information or actionable insights from the information and data

Some Types of Data Analytics

- Descriptive Analytics—condensing data sets into meaningful information that can assist in decision making
  - Looks at what is happening now
- Predictive Analytics—builds models on the basis of data that can help forecast the future
  - What might happen
- Diagnostic Analytics—looks at past performance to determine what might happen and why
- Prescriptive Analytics—provides decision makers with models that offer guidance in the form of recommendations
How and Why is Data Analytics Becoming Increasingly Pervasive in the Compliance Space

• The Centers for Medicare & Medicaid Services (CMS) discussed “Enabling Technologies” in the final rule for ACOs, released on June 4, 2015.

• Enabling Technologies at least include:
  o Electronic Health Records (EHRs), other health information technology (IT) tools, telehealth services, including remote patient monitoring, electronic exchange of health information, and other electronic tools to engage beneficiaries in care.

Additional Health Information Technologies

• Clinical Decision Support Systems (CDSS)
• Computerized Physician Order Entry (CPOE)
• E-prescribing
• Other electronic tools that engage beneficiaries in their care, e.g., smart phones coupled with mHealth applications and social media
How HIT Facilitates Data Analytics and Analysis

- The Rule requires public reporting and transparency and what an ACO must report, including with respect to shared savings and losses information.
- The Rule’s focus on HIT raises the spectra of additional compliance considerations, given the emphasis on the enabling technologies and greater need for data sharing.
- How will organizations meet the quality and savings requirements?
- Given the misalignment of incentives between fee-for-service and medicine and payment for quality and cost-effectiveness, compliance professional need to be on guard.

How HIT Makes Personalized or Precision Medicine Possible

- An ACO must establish processes that promote evidence-based medicine
  - Patient engagement and the development of an infrastructure to internally report on quality and cost metrics required for monitoring and feedback
  - Coordinate care across and among primary care physicians, specialists, and acute care providers and suppliers.
- These processes can help in identifying the right care for the right patient at the right time by the right clinician and help make precision medicine possible.
Effect on Compliance Professionals

- Need to understand how all of this works and be able to track whether the HIT tools and infrastructure accomplish the stated objectives
- Need to understand how the secure, private sharing of information, reporting on the quality data and aggregating data across providers and sites to track quality measures work and be able to monitor them
- Need to be able to determine if the applicable privacy and security laws and regulations are being adhered to
- Need to understand whether the quality data is appropriately being reported

Effect on Compliance Professionals (cont.)

- Need to understand are the decision support tools functioning as anticipated
- Need to understand that the evidence-based medicine guidelines are employed and being adhered to
- Need to understand certain aspects of technical standards for data sharing
- Need to understand the stakeholder incentives employed
Evolving HIT

- mHealth applications/wearables in the transmission of health information
  - Including patient generated health data (PGHD)
- Social media and the interaction with evidence-based medicine
  - Cybersecurity considerations and ransomware

Data Visualization 101

SCCE Tampa Regional Conference 2019
Presented by:
Tanja Gromadzki
But First...Pop Quiz

Yes or No...

My team currently leverages data analytics.

What is it?

A Simple Spreadsheet

A Complex Dashboard
The Platforms

Excel  Power BI  Tableau

Why visualize data?

• Visualizing Data helps us to...
  o Tell a story
  o Sometimes easier to visualize data than numbers
  o Develop trends within the organization over time
  o Ensure the compliance program is consistent with industry benchmarks
What charts are right for my data?

**Pie Charts** show percentages or proportions

**Bar Charts** allow views to compare data for various different categories

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Dos & Don’ts | Pitfalls in Data Analytics

- Analytics and dashboards are only as good as the raw data itself
  - Inconsistent processes may cause the data output to be unreliable or may cause the user to spend more time updating and “manipulating” the data to ensure consistency and usefulness when visualizing the data
- **Labeling the data can greatly impact the message**
  - Properly and accurately labeling the data helps audience to understand what trends are being depicted.
- Choosing the right colors
- Avoid distorting data
- Don’t overwhelm the page with data or KPIs
- Keep the message of the data in mind
**Where to start?**

1. Review industry guides & benchmarks (Ex: DOJ, Navex, Convercent)
2. Gather your data
3. Create & Organize the data within a simple spreadsheet
4. Add value with bar graphs, pie charts, etc.
5. Begin adding more complex visualizations to depict the trends
6. Develop interactive dashboards
7. Develop dashboards that refresh regularly

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**What are Useful Resources?**
An Example | Four Legged Friends Corporation

Waldo
Florida

Lola
Florida

Rocco
Georgia

Angel
California

Ash
Florida
Reports Received in 2018

Concerns raised that Waldo steals milk bone.

Concerns raised that Marley disclosed the confidential location of the hidden treats.

Concerns raised that Rocco discriminated against the newly hired cat, Ash.

Concerns raised that Angel barks at her direct reports.

Concerns raised of a romantic relationship developing between a puppies in the same patrol group.

Concerns raised that Lola stole the starfish toy.

Concerns raised that Rocco stole Waldo’s lunch.

Concerns that puppy stole another’s toy.

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### Spreadsheet of Reports Received in FY18

<table>
<thead>
<tr>
<th>ISSUE OVERVIEW</th>
<th>ALLEGATION</th>
<th>DATE OPENED</th>
<th>DATE CLOSED</th>
<th>DAYS OPEN</th>
<th>LOCATION</th>
<th>DISPOSITION</th>
<th>OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concerns raised that puppy stole a milk bone.</td>
<td>Theft</td>
<td>1/5/18</td>
<td>1/14/18</td>
<td>9</td>
<td>Florida</td>
<td>Substantiated</td>
<td>Documented Discipline</td>
</tr>
<tr>
<td>Concerns raised that puppy disclosed the confidential location of the hidden treats</td>
<td>Confidential information disclosed</td>
<td>2/15/18</td>
<td>3/1/18</td>
<td>14</td>
<td>Florida</td>
<td>Not Substantiated</td>
<td>N/A</td>
</tr>
<tr>
<td>Concerns raised that puppy discriminated against the newly hired cat.</td>
<td>Discrimination</td>
<td>4/13/18</td>
<td>6/9/18</td>
<td>57</td>
<td>Florida</td>
<td>Substantiated</td>
<td>Final Documented Discipline</td>
</tr>
<tr>
<td>Concerns raised that puppy barks at her direct reports.</td>
<td>Inappropriate Behavior</td>
<td>8/16/18</td>
<td>8/20/18</td>
<td>4</td>
<td>Georgia</td>
<td>Substantiated</td>
<td>Documented Discipline</td>
</tr>
<tr>
<td>Concerns raised that puppy stole several milk bones off the counter.</td>
<td>Theft</td>
<td>9/1/18</td>
<td>9/3/18</td>
<td>4</td>
<td>Florida</td>
<td>Substantiated</td>
<td>Documented Discipline</td>
</tr>
<tr>
<td>Concerns that puppy stole another’s toy.</td>
<td>Theft</td>
<td>9/3/18</td>
<td>9/11/18</td>
<td>4</td>
<td>Florida</td>
<td>Not Substantiated</td>
<td>N/A</td>
</tr>
<tr>
<td>Concerns of a romantic relationship between puppies in the same group.</td>
<td>Conflict of Interest – Personal</td>
<td>9/12/18</td>
<td>11/11/18</td>
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<td>Documented Discipline</td>
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<td>9/23/18</td>
<td>10/30/18</td>
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<td>California</td>
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<td>Concerns that puppy stole another’s lunch</td>
<td>Theft</td>
<td>12/1/18</td>
<td>1/3/19</td>
<td>35</td>
<td>Florida</td>
<td>Substantiated</td>
<td>Termination</td>
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Simple Analytics

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<tr>
<th>LOCATION</th>
<th>NUMBER OF REPORTS</th>
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<tbody>
<tr>
<td>Florida</td>
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<td>Georgia</td>
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<tr>
<td>California</td>
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Total Reports Received in FY18: 9

<table>
<thead>
<tr>
<th>ALLEGATION TYPE</th>
<th>NUMBER OF REPORTS</th>
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<tbody>
<tr>
<td>Theft</td>
<td>5</td>
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<td>CDI – Personal</td>
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<tr>
<td>Discrimination</td>
<td>1</td>
</tr>
<tr>
<td>Disclosure of Confidential Information</td>
<td>1</td>
</tr>
<tr>
<td>Inappropriate Behavior</td>
<td>1</td>
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<table>
<thead>
<tr>
<th>DISPOSITION</th>
<th>NUMBER OF REPORTS</th>
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</thead>
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<td>Substantiated</td>
<td>6</td>
</tr>
<tr>
<td>Not Substantiated</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Data to Consider
- Reports by department?
- Type of case...
  - Anonymous?
  - Manager Escalation?
  - Risk of Retaliation?
- Closure Rates?

Slightly more complex

Cases by Location

![Cases by Location Chart]

Disposition Rates

![Disposition Rates Pie Chart]
What does the data tell you?

Cases Received Per Month

- Identify the Root Cause:
  - Vet appointments
  - Dogs received new beds
  - Recall of their favorite treats
  - Potty Training Sessions Held

How does this apply in the corporate setting?

- Reduction in Workforce (RIF)
- New Locations Opening/Closing
- Reorganization of Team Structures
- Geopolitical Changes
- Training Sessions
- Compliance Visits
Takeaways

Keep in mind that getting started is always the most challenging.

Start off with simple metrics.

Ensure reporting is consistent and data is clean.

Use data to make inferences and to tell a story.

Keep the messaging in mind.

Trends develop over time.

Don’t let the analytics overwhelm you!