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

2

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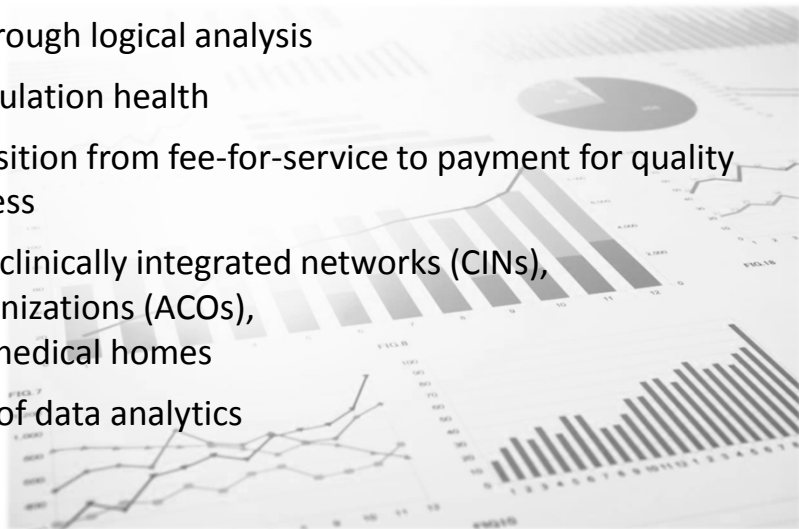
Distinguish Data from Information

- Data are facts

- Big Data – some data sets are so large or complex that traditional data processing applications are in adequate

- Information is the sense that is made from the data

- Knowledge is information or actionable insights from the information and data
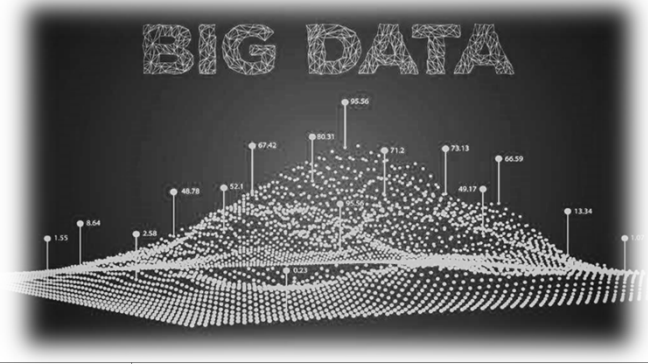
Some Types of Data Analytics

- 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.

5

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

6

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.

7

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 <u>right</u> care for the <u>right</u> patient at the <u>right</u> time by the <u>right</u> clinician and help make precision medicine possible.

8

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

11

Data Visualization 101

SCCE Tampa Regional Conference 2019

Presented by:

Tanja Gromadzki

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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

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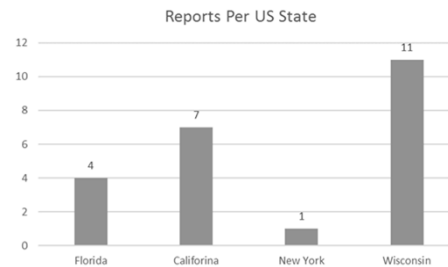## Why visualize data?

- **Visualizing Data helps us to…**
  - Tell a story
  - Sometimes easier to visualize data than numbers
  - Develop trends within the organization over time
  - Ensure the compliance program is consistent with industry benchmarks

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What charts are right for my data?

Pie Charts show percentages or proportions

Substantiation Rates

10%

90%

■ Substantiated ■ Not Substantiated
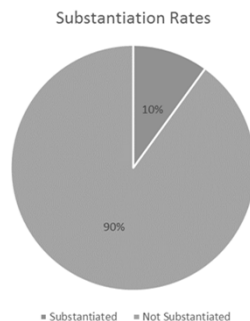
Bar Charts allow views to compare data for various different categories

Reports Per US State

	Florida	Califorina	New York	Wisconsin
	4	7	1	11

17

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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**

18

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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 depicts the trends
6. Develop interactive dashboards
7. Develop dashboards that refresh regularly
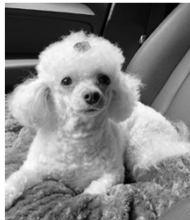
19

What are Useful Resources?

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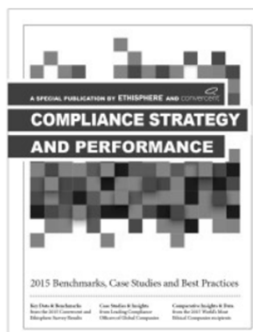
An Example

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An Example | Four Legged Friends Corporation

| **Waldo**
Florida | **Lola**
Florida | **Rocco**
Georgia | **Angel**
California | **Ash**
Florida |

Reports Received in 2018

Concerns raised that puppy stole several milk bones off the counter. **THEFT**

Concerns raised that Waldo steals milk bone. **THEFT**

Concerns raised that Marley disclosed the confidential location of the hidden treats. **Confidential Info Disclosed**

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

Concerns raised that Angel barks at her direct reports. **Inappropriate Beh.**

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

Concerns raised that Lola stole the starfish toy. **THEFT**

Concerns raised that Rocco stole Waldo's lunch. **THEFT**

Concerns that puppy stole another's toy. **THEFT**

Spreadsheet of Reports Received in FY18

ISSUE OVERVIEW	ALLEGATION	DATE OPENED	DATE CLOSED	DAYS OPEN	LOCATION	DISPOSITION	OUTCOME
Concerns raised that puppy stole a milk bone.	Theft	1/5/18	1/14/18	9	Florida	Substantiated	Documented Discipline
Concerns raised that puppy disclosed the confidential location of the hidden treats	Confidential information disclosed	2/15/18	3/1/18	14	Florida	Not Substantiated	N/A
Concerns raised that puppy discriminated against the newly hired cat.	Discrimination	4/13/18	6/9/18	57	Florida	Substantiated	Final Documented Discipline
Concerns raised that puppy barks at her direct reports.	Inappropriate Behavior	8/16/18	8/20/18	4	Georgia	Substantiated	Documented Discipline
Concerns raised that puppy stole several milk bones off the counter.	Theft	9/1/18	9/5/18	4	Florida	Substantiated	Documented Discipline
Concerns that puppy stole another's toy.	Theft	9/3/18	9/11/18	4	Florida	Not Substantiated	N/A
Concerns of a romantic relationship between puppies in the same group.	Conflict of Interest – Personal	9/22/18	11/11/18	50	Georgia	Substantiated	Documented Discipline
Concerns that puppy stole another's toy.	Theft	9/23/18	10/30/18	37	California	Not substantiated	N/A
Concerns that puppy stole another's lunch	Theft	12/1/18	1/5/19	35	Florida	Substantiated	Termination

Simple Analytics

LOCATION	NUMBER OF REPORTS
Florida	6
Georgia	2
California	1

ALLEGATION TYPE	NUMBER OF REPORTS
Theft	5
COI – Personal	1
Discrimination	1
Disclosure of Confidential Information	1
Inappropriate Behavior	1

DISPOSITION	NUMBER OF REPORTS
Substantiated	6
Not Substantiated	3

Total Reports Received in FY18: 9

Additional Data to Consider

- Reports by department?

- Type of case…
  - Anonymous?
  - Manager Escalation?
  - Risk of Retaliation?

- Closure Rates?

Slightly more complex

Cases by Location

Disposition Rates

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13
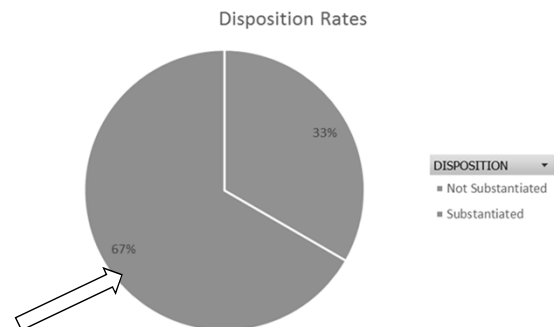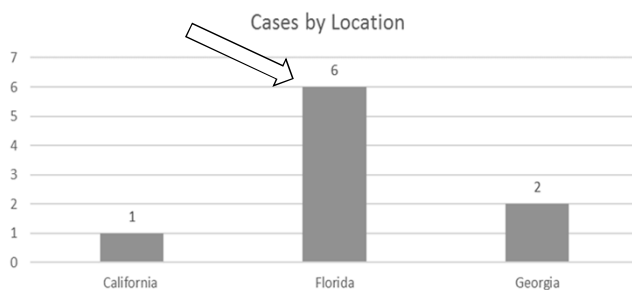
What does the data tell you?

Cases Received Per Month

Identify the Root Cause...

Vet appointments

Dogs received new beds

Recall of their favorite treats

Potty Training Sessions Held
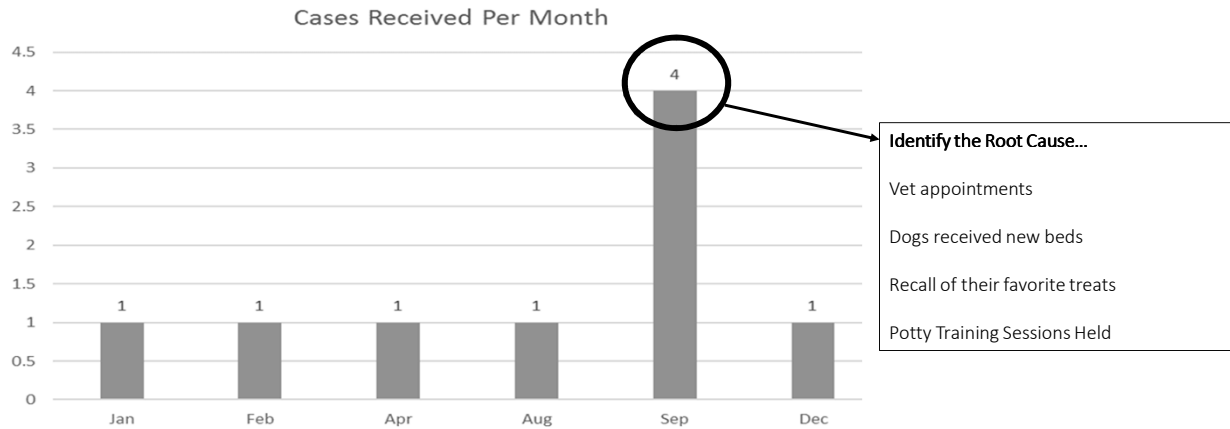
How does this apply in the corporate setting?

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

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14

FY18 Sample Dashboard for Four Legged Friends Corporation
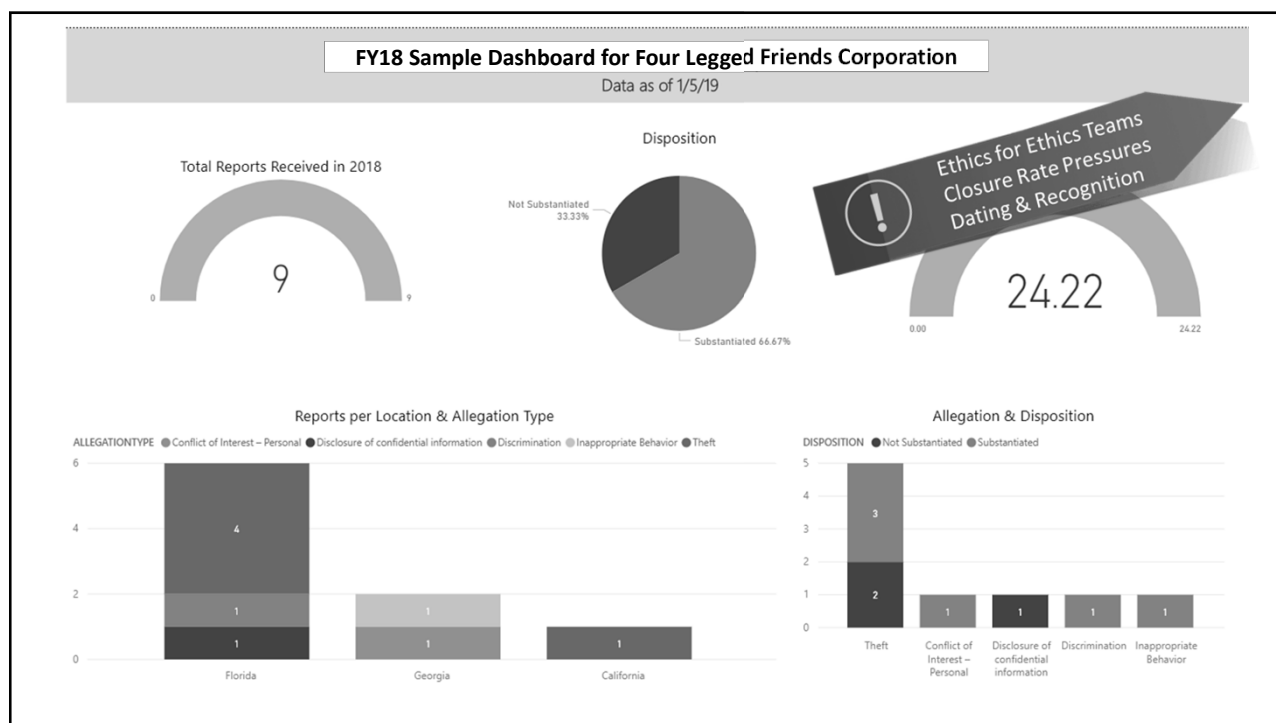Data as of 1/5/19

Total Reports Received in 2018

9

Disposition

Not Substantiated 33.33%

Substantiated 66.67%

Ethics for Ethics Teams
Closure Rate Pressures
Dating & Recognition

24.22

0.00   24.22

Reports per Location & Allegation Type

ALLEGATIONTYPE ● Conflict of Interest – Personal ● Disclosure of confidential information ● Discrimination ● Inappropriate Behavior ● Theft

Florida · Georgia · California

Allegation & Disposition

DISPOSITION ● Not Substantiated ● Substantiated

Theft · Conflict of Interest – Personal · Disclosure of confidential information · Discrimination · Inappropriate Behavior

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!

LET'S SOLVE THIS PROBLEM BY USING THE BIG DATA NONE OF US HAVE THE SLIGHTEST IDEA WHAT TO DO WITH

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