HCCA Compliance Institute

Conflicts of Interest and Big Data: What Can We Learn from Large Databases of Provider Disclosures?

Part I – Evaluating CDI at the Macro Level

March 27, 2017

Agenda

• Introductions
• Understanding Conflicts of Interest
• What is “Big Data”?
• Big Data Meets Conflicts of Interest: The “Open Payments” Database
• Other sources of Big Data useful for the analysis of Conflicts of Interest
• How Big Data analysis is providing a trove of data for Journalists
• Use of Big Data at the Macro level
  ➜ National and Regional Data Analysis

My Background

• 40 Years in Health Care
• MBA in Healthcare Management
• Medical Practice Manager
• Practice Plan Director at Temple, UCLA
• Consultant
• Co-Founder of HCCS
• VP HCCS/HealthStream
Understanding Conflicts of Interest

Who is at Risk?
• Any organization that regularly acquires pharmaceuticals or medical devices
• Any organization that employs or provides a practice location for physicians
• Any organization conducting research funded by the federal government
• Any non-profit organization

What is at Risk?
• The Financial Health of your Institution
  ➔ Research funding
  ➔ Purchasing decisions
• Your Tax Exempt Status
  ➔ Failure to accurately complete and file the IRS Form 990
• Your Reputation
  ➔ Hospital conflicts of interest become big local news stories
COI: Evolution of Thought

1980's
- Don't Dare Suggest I am a Crook!

1990's
- Money Can Affect Decisions
- EU implements Rule saying "You need a process!"

2000's
- Transparency and Conflict Management May be the Best Solution
- NIH implements Rules saying "You need a process"
- Elimination of mugs, pens, etc.

2010's
- Industry Codes
- ProPublica, Sunshine Act
- COI Management Systems

What is Big Data?

"Data of a very large size, typically to the extent that its manipulation and management present significant logistical challenges."

- Oxford English Dictionary

What is Big Data?

"An all-encompassing term for any collection of data sets so large and complex that it becomes difficult to process using on-hand data management tools or traditional data processing applications."

- Wikipedia
What is Big Data?

“The ability of society to harness information in novel ways to produce useful insights or goods and services of significant value”

- Viktor Mayer-Schönberger and Kenneth Cukier

“Big Data, A Revolution that will Transform How We Live, Work and Think”
Other Sources of Available Data

In addition to the CMS Open Payments Database:

- National Provider ID Database
- Medicare Part D: Prescriber Database
- Social Media: e.g. Google Search and Twitter!

Cleaning and Matching the Data

- CMS was prohibited from including the NPI in the Open Payments database BUT...
  - they included names and addresses
- The NPI database included names and addresses allowing a 93% match
- Numerous iterations with state and other licensing agencies brought us to 97% match

Use of the Data for Analysis

Pretty Maps!

General Payments by Zip Code

(Source: CMS Open Payments)
Use of the Data for Analysis

Matching Industry Payments to Medicare Prescribing Patterns: An Analysis
Ryann Grochowski Jones and Charles Ornstein
ProPublica March 2016

Use of the Data for Analysis

Top five drugs prescribed, and the $ spent to promote them:

- Blood thinner Xarelto ($28.4 million),
- Rheumatoid arthritis drug Humira ($24.9 million)
- Diabetes drug Invokana ($20.9 million),
- Hepatitis C drug Viekira ($19.2 million),
- Blood thinner Eliquis ($18.8 million),

Use of the Data for Analysis

Table 1: Rate of doctors who received payments, by specialty

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Total doctors with &gt;10,000 claims</th>
<th>Subset who received an industry payment</th>
<th>Percent who received a payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>65,451</td>
<td>48,750</td>
<td>71.2%</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>51,407</td>
<td>36,529</td>
<td>70.6%</td>
</tr>
<tr>
<td>Cardiology</td>
<td>13,517</td>
<td>12,300</td>
<td>91.1%</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>11,052</td>
<td>8,150</td>
<td>73.8%</td>
</tr>
<tr>
<td>Optometry/audiology</td>
<td>8,196</td>
<td>7,317</td>
<td>88.6%</td>
</tr>
</tbody>
</table>
Use of the Data for Analysis

Top Medicare Prescribers Rake In Speaking Fees From Drugmakers

Charles Ornstein, Tracy Weber and Jennifer LaFleur
ProPublica June 2013

Use of the Data for Analysis

- Nine of the top 10 prescribers of the Alzheimer’s drug Exelon received money from Novartis, the drug’s maker
- Eight of the top 10 for Johnson & Johnson painkiller Nucynta were paid speakers...
- As were six of the top 10 for Pfizer’s antidepressant Pristiq.

Charles Ornstein, Tracy Weber and Jennifer LaFleur
ProPublica
Use of the Data for Analysis

January 17, 2017

Financial Conflicts of Interest Among Hematologist-Oncologists on Twitter

Derrick L. Tao, BS; Aaron Boothby, BS; Joel McLouth, BS; Vinay Prasad, MD, MPH

Author Affiliations

Use of the Data for Analysis

A preliminary analysis of tweets by these doctors has shown that “a sizable percentage are tweeting about drugs that they have specific ties to”

- Vinay Prasad, assistant professor of medicine at Oregon Health & Science University

Use of the Data for Analysis: Closer to Home

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Payment Amount</th>
<th>Number of Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital A</td>
<td>$12,345,678</td>
<td>123</td>
</tr>
<tr>
<td>Hospital B</td>
<td>$9,876,543</td>
<td>98</td>
</tr>
<tr>
<td>Hospital C</td>
<td>$5,432,109</td>
<td>54</td>
</tr>
</tbody>
</table>

Once you match NPI data to Open Payments Data you can run Hospital Level Reports

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### Use of the Data for Analysis: Closer to Home

Allowing you to identify trends, such as significant increases in industry payments year over year.

<table>
<thead>
<tr>
<th>Category</th>
<th>2013 Amount</th>
<th>2014 Amount</th>
<th>2015 Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>$503,782</td>
<td>$1,644,339</td>
<td>$3,528,904</td>
</tr>
<tr>
<td>Ownership</td>
<td>$21,418</td>
<td>$30,741</td>
<td>$178,178</td>
</tr>
<tr>
<td>Associated</td>
<td>$1,056,354</td>
<td>$2,563,578</td>
<td>$2,330,541</td>
</tr>
<tr>
<td>Totals</td>
<td>$1,581,555</td>
<td>$4,238,659</td>
<td>$6,037,624</td>
</tr>
</tbody>
</table>

### HCCA Compliance Institute

Conflicts of Interest and Big Data: What Can We Learn from Large Databases of Provider Disclosures?

Part II – Evaluating COI at Your Institution

March 27, 2017

### Topics

- Background
- Reviewing Conflict of Interest Disclosures
- Using Data to Identify Highest Risk Disclosures
- Open Payments Analysis
- Results & Future Actions
About Carolinas HealthCare System

- One of Most Comprehensive Public, Not-for-Profit Systems in Nation
- More than 7,600 Licensed Beds at 900 Care Locations
  - Includes Physician Practices, Outpatient Surgical Centers, Hospitals, Freestanding Emergency Departments, Urgent Care, Behavioral Health, Rehabilitation Centers, Nursing Homes, Home Health Agencies, Hospice and Palliative Care
- Almost 12 million Patient Interactions Annually
- Employs Nearly 60,000 People

Who Needs to Disclose

- Any Position with Responsibilities for a Material Segment of the Operation, Management or Oversight of Carolinas HealthCare System
  - Physicians
  - Mid-Level Providers
  - Director Level and Above
- More than 5300 Teammates Received Questionnaire
  - 2500 Physicians

My Background

- 25 Years in Health Care
  - 6+ Years with Carolinas HealthCare System
  - 18 Years with Revenue Cycle Consulting Company
- Application Development
  - Hospital & Physician Contract Management
  - Budgeting & Cost Accounting
  - Work Plan Management
**Analytical Tools**

- Microsoft SQL Server
- Microsoft Access

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**Create COI Database**

- Created SQL Server Database to Store and Track 5000+ Respondents
- Automated Weekly Process to Upload Files

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**Key Performance Indicators**

- Response Rates
- Disclosures

### Questionnaire Disclosure Rate

- 9% Without Disclosure
- 91% With Disclosure
Review Process

- Establish Guidelines for Identification of Potential Conflicts
- Initial Reviews by Corporate Compliance
- Escalate Potential Conflicts to Conflict Of Interest Oversight Council
- Create Management Plans (if applicable)
- Administrative Follow-Up

Analysis to Create Review Guidelines

- North & South Carolina Regional Analysis
- Consulting Services & Speaker Engagements

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>CBS</th>
<th>CBS Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers</td>
<td>2655</td>
<td>124</td>
<td>4.6%</td>
</tr>
<tr>
<td>Payments</td>
<td>$44.7MM</td>
<td>$3.2MM</td>
<td>5.9%</td>
</tr>
<tr>
<td>Mean</td>
<td>$11,018</td>
<td>$13,433</td>
<td>5.9%</td>
</tr>
<tr>
<td>Median</td>
<td>$9,000</td>
<td>$9,056</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$736,000</td>
<td>$821,571</td>
<td></td>
</tr>
<tr>
<td>Greater Than $200K</td>
<td>24</td>
<td>2</td>
<td>8.3%</td>
</tr>
<tr>
<td>Greater Than $100K</td>
<td>124</td>
<td>9</td>
<td>7.3%</td>
</tr>
<tr>
<td>Greater Than $50K</td>
<td>269</td>
<td>18</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

Analysis to Create Review Guidelines

- Understanding Compensation for Consulting Services & Speaking Engagements
Analysis to Create Review Guidelines

- Commitments of Time for Consulting Services & Speaking Engagements

Open Payments Analysis

- Integrate Open Payments Data
  - Use NPI to Match Carolinas HealthCare System’s Physicians with Open Payments Data
  - Match and Compare Self-Disclosures using Drug and Medical Device Manufacturers
  - Non-Disclosures & Under-Reported Differentials Greater than $5,000
- E-Mails to Physicians
  - Link to Open Payments Site

Data Transformation for Oversight Council Review

- Convert Answers for Each Question (Multiple Rows) in Report to Single Row for Ease of Review
Results & Future Actions

- Questionnaire Revisions
  - Open Payment Data Manufacturers Listed in Questionnaire to Improve Exact Matches
  - Coordinate Responses to Open Payments Categories
    Consulting Fees, Speaking Engagements, Royalty or License, Education, Honoraria, Charitable Contribution, Travel & Lodging, Food & Beverage
- Policy Revisions
- Standard Operating Procedures