Business Intelligence – Concepts and Excel Tools

Get, Transform and Visualize your data to Drive Performance

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CCSI
Business Intelligence – A Four part series

› Fundamentals of Business Intelligence
  Wednesday October 17, 2018 12-1 pm

› Get and Transform your Data – Power Query
  Tuesday October 30, 2018 12-1 pm

› Data models and data visualization
  Wednesday November 7, 2018 12-1 pm

› Office Hours: Tuesday November 13, 2018 12-1 pm
Learning Objectives

‣ Gain a better understanding of the concepts related to business intelligence

‣ Become aware of the functionality in Excel that supports data analysis and data visualization including: tables, pivot tables, pivot charts, power query, power pivot, and data analytic expressions.

‣ Witness how the excel functionality can be applied in your organization through the demonstration of a BI productivity monitoring tool
Part 1: Fundamentals of Business Intelligence
The Challenges

- The need for timely and accurate information necessary to inform our decisions is increasing at a rapid pace
- Data informed decisions will be one of the keys to success in a value based environment
- Data is created in different applications, may be stored in different locations, and may have different formats
- It is becoming increasingly important to join data from different sources to create a “complete” picture of your environment
- Data must be provided to our end users in an easy to use and easy to understand visual format
Where to start

- **Create a strategy** for gathering, storing, analyzing and providing data to end users based upon the concept of Business Intelligence (BI)

- **Leverage your current resources** by using the BI tools that are currently in Microsoft Excel

- **Create a data informed environment** by providing information to your end users and by embracing the concept of self-service analytics
Business Intelligence

Business intelligence is a term that refers to skills, processes, technologies, applications and practices used to support evidence-based decision making in organizations. It can be defined as approaches for gathering, storing, analyzing, and providing data that helps users to gain insights and make better fact-based decisions.
Business Intelligence

Gathering Data
Processes and tools used to access, cleanse, integrate, and aggregate information used for reporting and analysis

Examples
• Writing a report from your EHR
• Downloading PSYCKES data
• Using a query tool to directly access a database
### Business Intelligence

<table>
<thead>
<tr>
<th>Storing Data</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining electronic information in a secure, central location so it can accessed by analysis and visualization tools</td>
<td>Relational databased Example: information in your EHR</td>
</tr>
<tr>
<td></td>
<td>Structured information in a table</td>
</tr>
<tr>
<td></td>
<td>Example: a report sent to a Excel or CSV file saved on a server</td>
</tr>
</tbody>
</table>
Business Intelligence

Analyzing Data
Process of interpreting the meaning of data by looking for patterns – similarities, disparities, trends, and other relationships that can support decision making and lead to insights

Examples
Using a bar graph to examine the percentage of clients that reported reduction in smoking after a smoking cessation intervention based upon the type of intervention
Business Intelligence

Providing Data to End Users

Process and tools used to provide data to end users in a dynamic, visual, and easy to understand manner

Examples

<table>
<thead>
<tr>
<th></th>
<th>Intakes</th>
<th>&lt; 10 days</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>24</td>
<td>22.00</td>
<td>91.67%</td>
</tr>
<tr>
<td>Jun</td>
<td>37</td>
<td>37.00</td>
<td>100.00%</td>
</tr>
<tr>
<td>Jul</td>
<td>29</td>
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</tr>
<tr>
<td>Aug</td>
<td>53</td>
<td>53.00</td>
<td>100.00%</td>
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<tr>
<td>Sep</td>
<td>50</td>
<td>46.00</td>
<td>92.00%</td>
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<tr>
<td>Oct</td>
<td>52</td>
<td>34.00</td>
<td>65.38%</td>
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<tr>
<td>Nov</td>
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<td>47.06%</td>
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<tr>
<td>Dec</td>
<td>21</td>
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</tr>
<tr>
<td>Grand Total</td>
<td>283</td>
<td>242.00</td>
<td>85.51%</td>
</tr>
</tbody>
</table>

Average days: 4.29
Business Intelligence

- Gain Insights and Make decisions
- Visualize Results
- Store Information
- Gather Data
An approach to data delivery and analytics that enables end-users with little or no background in data analysis to access and use data for decision making and to gain insights.
Outcome Metric 1: Initial evaluation performed within 10 days of initial contact  
Agency Goal: 100%

<table>
<thead>
<tr>
<th></th>
<th>Intakes &lt;10days</th>
<th>%</th>
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<tbody>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun</td>
<td>37</td>
<td>37</td>
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<td>Jul</td>
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<tr>
<td>Nov</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>Dec</td>
<td>21</td>
<td>13</td>
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<tr>
<td>2017</td>
<td></td>
<td></td>
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<tr>
<td>Jan</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td>283</td>
</tr>
</tbody>
</table>

Program:
- Central Clinic
- EastSide Clinic
- NorthSide Clinic
- SouthSide Clinic
- WestSide Clinic

Payer:
- BestCare MCO
- Blue Diamond
- Client
- FeelGood MCO
- GreatCare MCO
- Medicare
- UnitedCare
- WellCare

Average # of days: 4.29
## Business Intelligence Tools

<table>
<thead>
<tr>
<th>Pivot Tables</th>
<th>Pivot Charts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential functionality in Excel that allows you to summarize and filter large amounts of data into an easy to use and easy to understand format</td>
<td>Functionality that allows you to take the information in your pivot tables and create charts and graphs for a visual representation of your data</td>
</tr>
</tbody>
</table>
Business Intelligence Tools

**Get and Transform**
Excel features that provide fast, easy data gathering and shaping capabilities. Enables you to connect, combine, and refine data sources to meet your analysis needs.

**Power Pivot**
Add-in feature in Excel that enables you to import large amounts of data into Excel and create relationships, calculated fields, measures, and key performance indicators to be used for analysis.
External Data Source

- Get and transform your data

Get & Transform

Power Pivot

- Join data and create measures and KPI's

- Pivot Tables
- Pivot Charts

Excel

External Data Source
Demonstration
Creating a simple dashboard using:

- Get and Transform
- Power Pivot
- Pivot Tables
- Pivot Charts
Resources

- **powerpivot(pro):** [https://powerpivotpro.com/](https://powerpivotpro.com/)
  - Online training, books, blogs, training classes

- **Introduction to Get & Transform (Power Query) for Excel:** [https://support.office.com/en-us/article/get-transform-in-excel-881c63c6-37c5-4ca2-b616-59e18d75b4de](https://support.office.com/en-us/article/get-transform-in-excel-881c63c6-37c5-4ca2-b616-59e18d75b4de)

Questions?
THANK YOU FOR ATTENDING TODAY’S WEBINAR!

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