Computer Tools for Data Presentation

Tania Hoffman
Regulatory Affairs Specialist
Allergan, Inc.

Outline of Topics

- MS Excel
- MS Word
- Adobe Acrobat
- MS Access
MS Excel

- Used by many technical groups to perform calculations
- Often integrated with laboratory instruments
- Output used in Regulatory Submissions
  - Charts
  - Graphs

Charts

1. tabulate data
2. use chart wizard
   - select column
   - add chart title & label axis
Charts

1. tabulate data
2. use chart wizard
   - select column
   - add chart title & label axis
Graphs

1. tabulate data
2. use chart wizard
   - select line
   - edit X axis
   - add title & label axis
Graphs

1. tabulate data
2. use chart wizard
   - select line
   - edit X axis
   - add title & label axis
Try it out yourself!

**Chart Exercise**
1. tabulate data
2. use chart wizard
   - select column
   - add chart title & label axis

**Graph Exercise**
1. tabulate data
2. use chart wizard
   - select line
   - edit X axis
   - add graph title & label axis

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**Chart Exercise**

Comparison of Types

![Chart: Comparison of Types](chart1.png)

**Graph Exercise**

Stability at Labeled Storage

![Chart: Stability at Labeled Storage](chart2.png)
Chart Exercise
1. Open Charts-graph.xls, select "Chart" tab
2. highlight the text and data
3. click on the chart wizard
4. In pop-up window
   a. select the type of column chart and subchart, click "Next >" twice
   b. fill in chart labels, click "Next >" then "Finish"

Graph Exercise
1. Choose "Graph" tab
2. highlight the text and data
3. click on the chart wizard
4. In pop-up window
   a. select the type of line, click "Next >"
   b. select "Series" tab
   c. with "Time" selected in series list, select "Remove"
   d. select x-axis (takes you back to data table)
   e. highlight "time" column & data, select "Enter" (takes you back to the pop-up)
   f. select "Next >"
   g. fill in chart labels, click "Next >" then "Finish"
5. save the file
MS Word

- Majority of Regulatory Submission
- Consistency in text format key
  - Ease of review
  - Meet electronic submission requirements
- Use "Styles" feature

"Styles" Feature

- Ensures consistent format across sections and reports in Regulatory Submission
- Used to generate "bookmarks" and "hyperlinks" in electronic submissions
"Styles" Exercise

- Use "Styles" pull-down feature
- Draft outline
  - Data Analysis Report
    - Introduction
    - Data Analysis
      - Types of Data
      - Analytical Methods
      - Statistical Analysis
    - Conclusions
- SAVE FILE AS DATA REPORT
MS "Styles" Exercise


Major sections:
• Introduction
• Data Analysis
• Conclusions

Add subsections to Data Analysis section
• Types of Data
• Analytical Methods
• Statistical Analysis

SAVE FILE - DATA REPORT

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Data Analysis Report

1. Introduction
This is the introduction section....

2. Data Analysis
This section includes three subsections: Types of Data, Analytical Methods, and Statistical Analysis.

2.1 Types of Data
This is the subsection describing the types of data.

2.2 Analytical Methods
In this subsection the types of analytical methods used to generate the data are described.

2.3 Statistical Analysis
In this section the results of the statistical analysis are detailed.

3. Conclusions
Tables & Figures

- Tables
  - Imported from Excel
  - Generated in MS Word

- Figures
  - Insert from file or picture
  - Edit in MS Word
  - "Drawing" Toolbar

MS Excel "Object" Table

1. With Excel file open, highlight & copy the table, then insert into MS Word using "Paste Special"

2. Select MS Excel Worksheet Object
   - Keeps Excel cells & formats
   - Allows editing of original MS Excel Worksheet
MS Excel "Object" Table

- With Excel file open, highlight & copy the table, then insert into MS Word using "Paste Special"
- Select MS Excel Worksheet Object
- Keeps Excel cells & formats
- Allows editing of original MS Excel Worksheet
MS Excel "Object" Table

- With Excel file open, highlight & copy the table, then insert into MS Word using "Paste Special"
- Select MS Excel Worksheet Object
- Keeps Excel cells & formats
- Allows editing of original MS Excel Worksheet

MS Word "Tables" feature

- All of these options
- MS Word advanced formatting & drawing
Converting Tables: MS Excel to MS Word

- Use copy / paste
- MS Word advanced formatting & drawing
Table Exercise

- Import from Excel
  - insert into MS Word using
    - "Paste"
    - "Paste Special"
- Create Table in MS Word
- SAVE FILE - DATA REPORT

Data Analysis Report

1. Introduction
   This is the introduction section...

2. Data Analysis
   This section includes the analysis section—Types of Data, Analytical Methods, and Statistical Analysis.

2.1 Types of Data
   This section describes the types of data.

2.2 Analytical Methods
   This section describes the types of analytical methods used to generate the data.

2.3 Statistical Analysis
   This section describes the results of the statistical analysis conducted.
Tables Exercise

**Importing from Excel**

1. Open `Charts-graph.xls`, select "Chart" tab
2. From the "Chart" tab, highlight the text and data then click "Copy"
3. Open `Data Report.doc` file
4. Place cursor under subheading "2.1 Types of Data" then "Paste"
5. Return to `Charts-graph.xls`, select "Graph" tab
6. From the "Chart" tab, highlight the text and data then click "Copy"
7. Return to `Data Report.doc` file
8. Place cursor under subheading "2.1 Types of Data"
9. From main menu, select "File" → "Paste Special"
10. In the pop-up window, select "Microsoft Excel Worksheet Object", click "OK"

**Create Table in MS Word**

1. Place cursor under "2.3 Statistical Analysis"
2. From main menu, select "Table" pull-down
3. Select "Insert" → "Table" → "OK"
4. Creates table with 5 columns / 2 rows
5. SAVE FILE - DATA REPORT

### 2.1 Types of Data

This is the subsection describing the types of data.

<table>
<thead>
<tr>
<th>Type</th>
<th>Monomers</th>
<th>Dimers</th>
<th>Trimers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A</td>
<td>90</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Type B</td>
<td>85</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Type C</td>
<td>92</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time (mo)</th>
<th>Lot 1</th>
<th>Lot 2</th>
<th>Lot 3</th>
<th>Lot 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>99</td>
<td>101</td>
<td>97</td>
<td>100</td>
</tr>
<tr>
<td>1</td>
<td>98</td>
<td>100</td>
<td>99</td>
<td>99</td>
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<tr>
<td>2</td>
<td>99</td>
<td>100</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>3</td>
<td>97</td>
<td>98</td>
<td>96</td>
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</tr>
<tr>
<td>6</td>
<td>96</td>
<td>97</td>
<td>95</td>
<td>97</td>
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<tr>
<td>9</td>
<td>95</td>
<td>96</td>
<td>93</td>
<td>95</td>
</tr>
<tr>
<td>12</td>
<td>95</td>
<td>95</td>
<td>94</td>
<td>95</td>
</tr>
<tr>
<td>24</td>
<td>92</td>
<td>93</td>
<td>87</td>
<td>92</td>
</tr>
</tbody>
</table>

### 2.2 Analytical Methods

In this subsection the types of analytical methods used to generate the data are described.

### 2.3 Statistical Analysis

In this section the results of the statistical analysis are detailed.
Figures

- Originally photos or scanned document
- Insert into MS Word and lock ("anchor") to related text
Figures

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- Insert into MS Word and lock ("anchor") to related text
Figures

- Originally photos or scanned document
- Insert into MS Word and lock ("anchor") to related text

"Drawing" Toolbar

- Key features
  - Text Boxes
  - Autoshapes
  - Diagrams
  - WordArt
  - 2- /3- Dimensions
"Drawing" Toolbar

- Key features
  - Text Boxes
  - Autoshapes
  - Diagrams
  - WordArt
  - 2- /3- Dimensions

Figures Exercise

- Open DATA REPORT
- Find & Insert "Clip Art"
- "Anchor" picture to report title
- SAVE FILE - DATA REPORT
Figure Exercise

1. Open DATA REPORT
2. Place cursor above report title - Data Analysis Report
3. From main menu, select "Insert" → "Picture" → "Clip Art"
4. In the right hand windowpane, search on "business", click on selected picture to insert
5. Click on inserted picture
6. From main menu, choose "Format" → "Picture"
7. In the pop-up window
   a. Select "Layout" tab, choose one of the wrapping styles
   b. Click on "Advanced...
   c. Check "Lock anchor"
   d. Select "OK" → "OK"
8. SAVE FILE - DATA REPORT

Data Analysis Report

1. Introduction
   This is the introduction section....

2. Data Analysis
   This section includes three subsections: Types of Data, Analytical Methods, and Statistical Analysis.
Adobe Acrobat

- File format for electronic submissions
- Need full Adobe Acrobat (not free Reader)
- "PDF Maker" Toolbar
  - MS Word
  - MS PowerPoint
Adobe Acrobat

- File format for electronic submissions
- Need full Adobe Acrobat (not free Reader)
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  - MS Word
  - MS PowerPoint
Adobe Acrobat

Adobe Acrobat Exercise

- Open DATA REPORT
- Create "Table-Figure Heading" style
- Change Acrobat conversion setting
- Create Acrobat file
Adobe Acrobat Exercise

1. Open DATA REPORT
2. From main menu, select "Format" → "Styles and Formatting..."
3. From right hand windowpane, select "New Style"
4. In pop-up window
   a. name style as "Table-Figure Heading" then "Enter"
   b. in "Style for following paragraph," select "Normal" style
   c. click "add to template" → "OK"
5. Add Stability Graph & Anchor
   a. Open Charts-graph.xls, select "Graph" tab
   b. Point and click on graph, then copy
   c. Return to DATA REPORT, then paste
6. Add titles in section 2.1 Types of Data
   a. Table 2.1-1
   b. Table 2.1-2
   c. Figure 2.1-1
7. Assign "Table Heading" using style pull-down feature
8. Select from main menu "Acrobat" → "Change conversion setting"
9. In pop-up window
   a. select "Bookmarks" tab
   b. scroll down to "Table Heading" element
   c. check "bookmark" checkbox
   d. change level to "3"
   e. click "OK"
10. SAVE FILE - DATA REPORT
11. From tool bar, lick on "PDF Maker" icon, save PDF file ; "Data Report"
13. To see bookmarks, select "Bookmarks" tab on left

See next page
2.1 **Types of Data**

This is the subsection describing the types of data.

Table 2.1-1

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Table 2.1-2

<table>
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<tr>
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Figure 2.1-1

![Graph showing stability at labeled storage over time](image-url)
MS Access

- What is a database?
  - collection of specified types of similar data
  - name, address, phone number, fax number
  - produces fixed reports and limited searching
- What is a "relational" database?
  - relates similar information to better manage large databases
  - products, specifications, test results, manufacturing and expiration dates
  - produces large variety of reports based on specific information (variables) selected

Thank You For Your Attention