COVID vaccine, expanded flu season and catchup of routine immunizations: How data analytics can help IIS prepare for the challenges ahead

Discovery Session
July 27, 2020
4pm EST
AIRA Discovery Session

- All phone lines are muted
- This meeting is being recorded and will be posted on the AIRA repository
AIRA Discovery Session

• **How do I ask a question?**
  • There will be time allotted for Q&A following each of the updates, to unmute your line press *6
  • Via WebEx:

    Select the chat icon next to the host and type question into the chat box.

    Select the hand icon next to your name and you will be called on.
Today’s Topics

• How IIS data is being used for data analytics
  • Wisconsin
  • Minnesota
Today’s Speakers

- Danielle Sill, Wisconsin
- Mayuri Kulkarni, Wisconsin
- Sydney Kuramoto, Minnesota
COVID-19 and Vaccine Reporting
Creating canned reports and publications

Danielle Sill, WIR Epidemiologist
Mayuri Kulkarni, WIR Research Analyst
AIRA Discovery Session
July 27, 2020
Learning Objectives

- Products used for data pulls
- Microsoft Publisher Reports
- Creating Reports Using SAS
- Impact of COVID-19 on Vaccination
TOAD, SAS, Business Objects
Microsoft Publisher Reports
Creating Microsoft Publisher Reports

SAS → Excel → Publisher
Linking files into a publisher report

Copy the graph or table you want to include in the report from the excel document. Click “paste” and then “paste special”.
Linking files into a publisher report

Once you click on “paste special” this window will pop-up. Click on the “paste link” radio button and choose *Microsoft Excel Chart Object Link*. 

*Inserts a picture of the clipboard contents into your document. The picture is linked to the source file so that changes to the file will be reflected in your document.*
Linking files into a publisher report

Whoever is in charge of pulling the report and disseminating it each week will go into publisher, and the pop-up at the top will appear if tables and graphs are linked. Click “yes” to update. Then, the updated links window will show you the progress in updating the links within the publisher document.
Weekly Respiratory Report

SEASONAL INFLUENZA VACCINATION
Percentage of Wisconsin residents who received one or more doses of influenza vaccine, by age group and influenza season

- 2015-2016
- 2016-2017
- 2017-2018
- 2018-2019
- 2019-2020 as of current week

Percentage of Wisconsin residents who received one or more doses of influenza vaccine, by race and ethnicity and region, 2019-2020 influenza season

- All of Wisconsin
- Northeastern
- Northern

Race categories include:
- Non-Hispanic
- Hispanic
- White
- African American
- American Indian/Alaska Native

Wisconsin Department of Health Services
Creating Reports using SAS
Creating Reports Using SAS

### School Immunization Assessment Results, 2014-2018*

<table>
<thead>
<tr>
<th>Year</th>
<th>Met Minimum Requirements</th>
<th>In Process</th>
<th>Behind Schedule</th>
<th>No Record</th>
<th>Health Waiver</th>
<th>Religious Waiver</th>
<th>Personal Conviction Waiver</th>
<th>All waivers and no immunizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>85.1%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>86.2%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2016</td>
<td>95.1%</td>
<td>0.9%</td>
<td>0.6%</td>
<td>3.1%</td>
<td>1.1%</td>
<td>2.2%</td>
<td>3.5%</td>
<td>1.2%</td>
</tr>
<tr>
<td>2017</td>
<td>93.6%</td>
<td>2.1%</td>
<td>2.1%</td>
<td>2.9%</td>
<td>1.2%</td>
<td>2.1%</td>
<td>4.2%</td>
<td>2.3%</td>
</tr>
<tr>
<td>2018</td>
<td>92.5%</td>
<td>3.1%</td>
<td>2.9%</td>
<td>1.9%</td>
<td>1.3%</td>
<td>1.7%</td>
<td>5.5%</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Change from 2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017-2018</td>
</tr>
<tr>
<td>Met Minimum</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Requirements</td>
<td></td>
</tr>
<tr>
<td>In Process</td>
<td>1.0%</td>
</tr>
<tr>
<td>Behind</td>
<td>0.8%</td>
</tr>
<tr>
<td>Schedule</td>
<td>-1.0%</td>
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<tr>
<td>No Record</td>
<td>0.1%</td>
</tr>
<tr>
<td>Health</td>
<td>-0.4%</td>
</tr>
<tr>
<td>Waiver</td>
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<tr>
<td>Religious</td>
<td></td>
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<tr>
<td>Waiver</td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>1.3%</td>
</tr>
<tr>
<td>Conviction</td>
<td>1.5%</td>
</tr>
<tr>
<td>Waiver</td>
<td></td>
</tr>
</tbody>
</table>

*Year refers to the start of the school year (Ex. data for 2014 refers to the 2014-2015 school year).

Note: All categories besides met minimum requirements are not available for 2014 and 2015, and change was calculated from most recent year available.

Refer to SharePoint for results for each school within your jurisdiction.
Creating Reports Using SAS

Child* Immunization Rates, 2014-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>DTaP (4 doses)</th>
<th>Polio (3 doses)</th>
<th>MMR (1 dose)</th>
<th>Hib (3 doses)</th>
<th>HepB (3 doses)</th>
<th>Varicella (1 dose)</th>
<th>PCV (4 doses)</th>
<th>4:3:1:3:3:1:4 series</th>
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</thead>
<tbody>
<tr>
<td>2014</td>
<td>69.4%</td>
<td>83.3%</td>
<td>82.6%</td>
<td>79.2%</td>
<td>83.3%</td>
<td>79.2%</td>
<td>75.0%</td>
<td>63.9%</td>
</tr>
<tr>
<td>2015</td>
<td>63.1%</td>
<td>80.3%</td>
<td>82.2%</td>
<td>81.5%</td>
<td>82.2%</td>
<td>78.3%</td>
<td>71.3%</td>
<td>59.9%</td>
</tr>
<tr>
<td>2016</td>
<td>70.4%</td>
<td>81.8%</td>
<td>79.9%</td>
<td>81.8%</td>
<td>81.1%</td>
<td>73.6%</td>
<td>75.5%</td>
<td>63.5%</td>
</tr>
<tr>
<td>2017</td>
<td>65.4%</td>
<td>84.3%</td>
<td>81.1%</td>
<td>85.0%</td>
<td>81.7%</td>
<td>78.4%</td>
<td>73.9%</td>
<td>60.8%</td>
</tr>
<tr>
<td>2018</td>
<td>69.9%</td>
<td>80.8%</td>
<td>78.8%</td>
<td>84.0%</td>
<td>81.4%</td>
<td>76.3%</td>
<td>76.9%</td>
<td>64.7%</td>
</tr>
</tbody>
</table>

<table>
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<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>4.5%</td>
<td>-3.5%</td>
<td>-2.3%</td>
<td>-1.0%</td>
<td>-0.3%</td>
<td>-2.1%</td>
<td>3.0%</td>
<td>3.9%</td>
</tr>
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</table>
Impact of COVID19 on Vaccination
Total Administered Doses in Wisconsin

*Doses Administered Data as of end of week 27 (July 5th)

Data Source: Wisconsin Immunization Registry
Number of Immunizations Administered per week in Wisconsin
All Ages: 2020 Compared to 5-year Average

Data Source: Wisconsin Immunization Registry
Percent Decrease in Immunizations by Age Group
(March–June Data: 2020 vs. 5-Year Average)

- Birth-12 months: 17.9%
- 12-23 months: 23.8%
- 4-6 Years: 44.9%
- 2-3 Years: 45.7%
- 13-18 Years: 54.5%
- 11-12 Years: 49.6%
- 7-10 Years: 55.5%
- 19-26 Years: 37.0%
- 60 Years and older: 25.7%
- 27-60 Years: 19.5%
Number of Child Immunizations Administered per week in Wisconsin Birth–3 Years Old: 2020 Compared to 5-year Average

Data Source: Wisconsin Immunization Registry
Administered vaccinations in children from Birth–3 years old in Wisconsin saw the **sharpest decline** (-46%) the week of 3/23.
Number of Immunizations Administered per week in Wisconsin
4–18 Years Old: 2020 Compared to 5-year Average

Data Source: Wisconsin Immunization Registry
Number of Adult Immunizations Administered per week in Wisconsin 19 Years and Older: 2020 Compared to 5-year Average

Data Source: Wisconsin Immunization Registry
MIIC Data & Data Analytics

Sydney Kuramoto | MIIC Informatician

July 27, 2020

PROTECTING, MAINTAINING AND IMPROVING THE HEALTH OF ALL MINNESOTANS
▪ Tableau
▪ SAS/Excel
▪ Data in Action
▪ COVID-19
Tableau
Catch-Up Vaccination

- Monthly Dashboard
- Compare trends by
  - Week/Month
  - Vaccine Group
  - Provider Type
  - Age groups
2019-2020 MIIC Immunization Comparison (Administered Vaccinations)

Tableau Dashboard Demo
Planning Ahead: Seasonal Flu and COVID-19

- Creating routine dashboard
- Monitor vaccination administration
  - County
  - Age group
  - Provider type
- Planning for access/dissemination
Catch-Up Vaccination

- MMR Administration data
- Weekly updates:
  - Public web page
  - IIS Regional Coordinators
• Mid-season report
• Update existing or create template queries to run “just in time” queries
• Considering queries/graphs for routine web updates
▪ Update existing or create template queries to run “just in time” queries

▪ Planning to create routine web updates and sharing of data for COVID-19 dashboards
What are we doing with the data?

- Monitoring trends in catch-up vaccination
- Identify providers that administer flu vaccine for flu and COVID-19 outreach
What can we do with the data?

- Examine trends of previous flu seasons to prepare for upcoming season
- Prepare to monitor vaccination administration in real-time and use to make decisions
Data Management

- Developing plan for COVID-19 vaccine data
- Topics include:
  - Reports
  - Queries
  - Talking Points
  - Data Requests
Thank you.

Sydney.Kuramoto@state.mn.us
Questions, Comments, Discussion?
Questions, Comments, Discussion?

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Thank you to our presenters, and thanks to all of you for joining us!

A brief evaluation survey will be sent out following this webinar

The next Discovery Session will be scheduled soon and will likely be in October