Data in Action! Interactive Data Visualizations

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BACKGROUND

Interactive data visualization dashboards are an innovative method to display data that allows a user to view information in a more impactful manner. APHL has begun to develop and implement dashboards to showcase the various survey data collected from members.

METHODS

APHL has worked in conjunction with Deloitte to develop dashboards to provide members with an interactive display of data and information. Dashboards have been developed and created in Tableau software drawing data from APHL surveys including; the Comprehensive Laboratory Services Survey (CLSS), the All-Hazards Preparedness Survey, and the APHL Member Expertise Survey alongside data garnered from the NewSTEPs Data Repository. The dashboards have been presented at numerous meetings to gather feedback and the final versions have been made available to members.

RESULTS

The Preparedness Dashboard (image 1) was developed utilizing data from the 2011 to 2013 All Hazards Survey and provides information on the national and statewide landscape of public health laboratory preparedness. Data and features found in this dashboard include:

- Preparedness funding breakdown for biological, chemical and radiological activities for state public health laboratories (PHLs)
- Breakdown of samples tested by clinical, food and environmental samples.
- Funding change from 2011 to 2013 for the nation or individual states
- Side-by-side funding comparisons of states with a funding allocation breakdown

The Public Health Laboratory Testing Dashboard (image 2) comes from the 2012 CLSS and provides information on testing performed in PHLs and PHL's trends in meeting the Core Functions. Data and features found in this dashboard include:

- A national overview of testing services provided or assured by state PHLs
- Individual state testing menus that provide a detailed description of tests that are provided or assured
- Aggregate trends of the percent of state PHLs meeting Core Functions from 2008 to 2012.

Image 1
Preparedness Dashboard

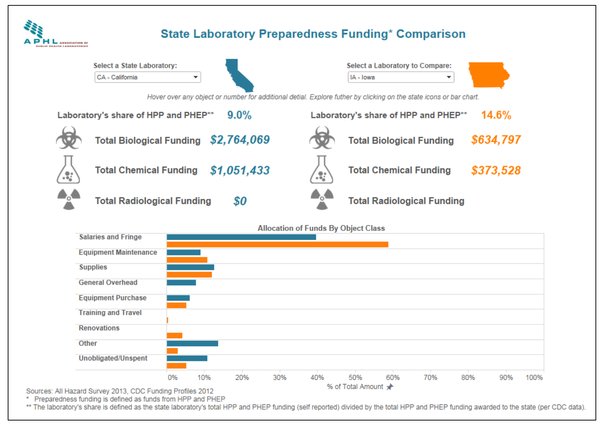

Image 2
PHL Testing Dashboard

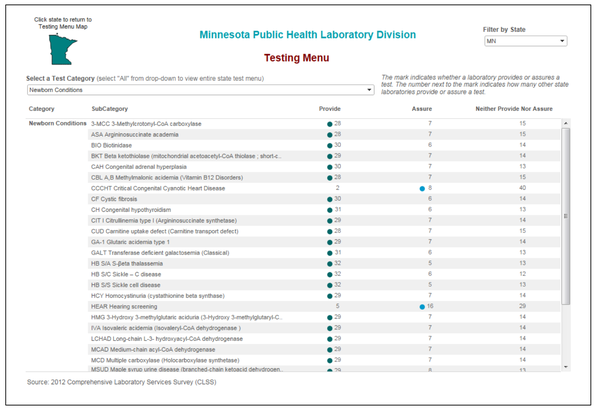

Image 3 is the 2014 National Newborn Screening (NBS) Landscape Dashboard. The data from this dashboard was part of the data collected in the NewSTEPs Data Repository and provides users with information on the national NBS landscape as well as regional and statewide information. Data and features found in this dashboard include:

- Total births for the nation, region, and states as reported in the National Vital Statistics' *Births: Final Data for 2013*
- Period of time in which state NBS programs retain dried blood spots
- Initial screening fees for the state NBS programs
- Number of core Recommended Uniform Screening Panel disorders included on the state NBS programs' panel

The APHL Member Expertise Dashboard (image 4) contains data from the APHL Member Expertise Survey and provides users with information on APHL member expertise. Data and features found in this dashboard include:

- Querying lists of APHL members by expertise areas and subcategories
- Ability to take queried lists and easily export that information into an excel spreadsheet
- Information on languages spoken
- Contact information

Image 3
2014 National Newborn Screening Landscape Dashboard

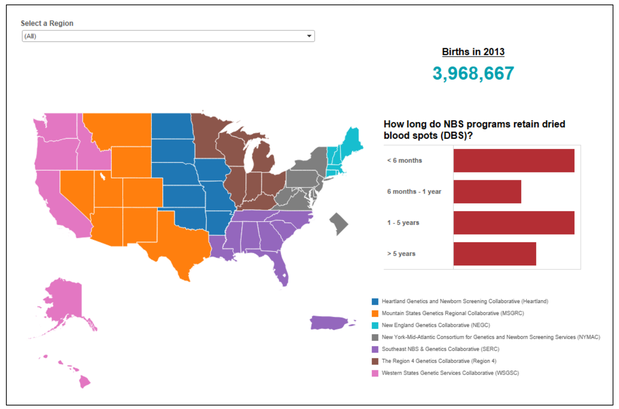

Image 4
APHL Member Expertise Dashboard

CONCLUSION

Interactive dashboards are a valuable member resource that highlight the work that member laboratories are involved with while providing filtered information per laboratory. This innovative display of data not only benefits the PHLs but also partners who are interested in characterizing PHLs. APHL is gathering feedback to create dashboards that include, but are not limited to APHL survey data, utilize best practices and most up-to-date software for creating dashboards and provide members with access to dashboards online.

For More Information

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