AIRA
AMERICAN IMMUNIZATION REGISTRY ASSOCIATION

MARCH 2020 | ISSUE NUMBER 85

SNAPSHOTS

IMMUNIZATION REGISTRY NEWS *from* AMERICAN IMMUNIZATION REGISTRY ASSOCIATION (AIRA)

PRESIDENT'S REPORT

Dear Colleagues,

Spring has sprung! I hope you are all feeling the sense of reinvigoration that I usually do around this time of year. As the interoperability lead in Minnesota I spend a lot of my workday thinking about how to get data moved around to where it needs to be and, more importantly, how to put that data to use for something meaningful once it gets there. This edition of *SnapShots* does a really fantastic job of showing that so many of you seem to feel the same way. While it was not the only thing covered, I found it striking that all of these articles touch on data use in some way!

Below, you'll read about CDS measurement and how jurisdictions are putting that measurement data to use to improve their ability to support their jurisdiction's use of IIS data to ensure the health of its residents. You'll read about the Education Survey results and how we have identified some of our strengths as data related, but so too were some of our top challenges. So it's no surprise that some of our top priorities also revolved around data and the need for better guidance on data (use, sharing, quality…). And, probably my favorite part about *SnapShots*, you'll also read about what some of our colleagues are doing to use their data in interesting ways. If you missed the AIRA 2019 National Meeting, or just were not able to make it to this presentation, I hope you'll be as interested as I was in the article about how Oregon is putting its data to use in new ways as well as the value they got out of doing that..

Thanks so much to the people who sent in these articles! I know they got me thinking about data use from new perspectives. Be sure to send in your article ideas for the next edition of *SnapShots*. I can't wait to read all of the other amazing things you all are working on!

Regards,
Aaron Bieringer
AIRA Board President
MIIC Interoperability Lead and Implementation Coordinator
Minnesota Department of Health

TABLE OF CONTENTS

Welcome to *SnapShots*, the American Immunization Registry Association's newsletter about the progress, best practices, and accomplishments of Immunization Information Systems (IIS) across the country. We invite you to share news about your IIS. Email us at info@immregistries.org with information about a successful programmatic or technical innovation, major accomplishment, or milestone that your IIS has reached.

To subscribe, please visit www.immregistries.org. This information will remain confidential and will not be sold or passed on to other parties. *SnapShots* is produced quarterly by the AIRA Education Steering Committee. Editor: Katie Reed, N.Y.
AIRA • 1155 F Street NW, Suite 1050 • Washington DC, 20004 • Phone: 202.552.0208 • www.immregistries.org • Email: info@immregistries.org

OREGON'S RAPID FIRE RESPONSE TOOL

What's your plan when you've got a fork to fight a gorilla? Every day IIS are asked for more than they can give with the resources they have. High-tech displays to make data come alive at a moment's notice? Not in the budget. Adequate resources to ensure data quality and completeness are always perfect? Nope. Extra staff standing by in case of an emergency? We make do with what we've got, especially when outbreaks and epidemics not only threaten the lives and the health of citizens but also stretch to the limit what an immunization registry can do.

Immunization information systems are staffed by determined, resourceful people because they have to be. We find ways to get our job done, we improvise, we adapt, we make the best of it. We never give up because we can't; too many people's lives rely on our doing our job. So when the Oregon Immunization Program (OIP) saw how a faster data response to local outbreaks might make a real difference to epidemiologists in the field, the question wasn't "can we"; it was "how do we."

Like all IIS, Oregon responds to requests for data during local outbreaks, and like all IIS, lots of questions and conditions can delay our support. A data request usually has to come from local responders before it can be acted upon. There often isn't a routine way to draw data until what's needed is specified by the requestor. There are other, competing projects in the Immunization Program; where do outbreak requests fit? And heartbreakingly, we have to ask: Is the outbreak severe enough to warrant an all-in effort? There are obvious requests, such as a measles case, where the answer is yes, but what about a single case of pertussis or hepatitis A? How much sickness is enough to stimulate action?

While all this is going on, an outbreak could get worse as local epidemiologists rush to trace those who've been exposed and those who are ill and spreading disease. The faster they can get information, the better their decisions will be and the better position they'll be in to minimize the spread of disease.

When the Oregon Immunization Program saw how a faster data response to local outbreaks might make a real difference to epidemiologists in the field, the question wasn't "can we"; it was "how do we."

Continued on page 3

OREGON'S RAPID FIRE RESPONSE TOOL *Continued from page 2*

Enter Oregon's pilot project, the Vaccination Rapid Response Tool, tested using measles vaccination coverage data. Why wait, we reasoned, to write extraction coding when we have a pretty good idea of what most responses require; couldn't we prepare that and then respond to special requests? We identified four tables we could build fast—in two hours!—that would provide responders with crucial information:

- Measles vaccination coverage by age group for children for an entire county
- Measles vaccination coverage by age group for children and ZIP code of residence
- Non-medical exemption reports for each school and daycare in a county, leveraging data from the OIP School Law program
- A list of every vaccinator in the county who administered at least one vaccine in the calendar year prior to the request

We identified four tables we could build fast—in two hours!—that would provide responders with crucial information.

All these data are sitting there, just waiting to be used! We got to work.

First challenge: how to derive population estimates for each county and ZIP code by age? We started with data from the Oregon Department of Education, which lists county student populations by grade. We converted grade to age: grade one equaled 6 years old, grade two equaled 7 years old, etc. These figures change very slowly from year to year, and since identifying individuals was not part of the project, they served as population estimates very well. Estimates of home- or private-schooled children were obtained from the School Law Program, as was the percentage of overall non-medical exemptions for a given school (this has been updated since to be vaccine-specific). Finally, we estimated population counts for children too young to go to school by using birth-certificate data. The full methodology for extracting all data can be found here.

The resulting product was…ugly. The four tables were long and dense and hard to read. And if the county was large or populous—i.e., lots of ZIP codes—the tables were worse. Still, all the good information was there, even if not in the most usable format. Mapping software would make it easier to utilize the data but also would slow down response, so we went with just the tables to meet our two-hour goal. If perfect is the enemy of good, as the saying goes, then pretty is the enemy of now.

Once the product was built, would it be useful, even readable, actionable? To find out, we engaged the help of seven Oregon counties with a wide range of outbreak response infrastructure, population size, and experience responding to outbreaks. Each county selected staff who would be part of outbreak response. We built a scenario for each county and asked them what they thought of the output.

Continued on page 4

OREGON'S RAPID FIRE RESPONSE TOOL *Continued from page 3*

Check out Figure 1 below: All but two attendees agreed they would request the information in the Rapid Response Tool in the event of a measles outbreak. The vast majority felt it would improve the effectiveness of their outbreak investigation and how it would be used. Predictably, the formatting makes the tool harder to use, and it isn't exactly compatible with current investigation practices. As you look at the results of the survey from left to right, a clear pattern of enthusiasm and support shows through, followed by questions about exactly how to use the tool in its current form. County responders like it, but there is work to do.

Figure 1

SURVEY RESULTS	If a measles outbreak occurred in my county or region, I would request the information contained in the Rapid Response tool.	The Rapid Response tool will improve the effectiveness of a measles outbreak investigation.	I have a clear idea of how information from the Rapid Response tool would be used in a measles outbreak investigation.	The contents of the Rapid Response tool are compatible with the way my county currently conducts measles outbreak investigations.	The formatting of the Rapid Response tool makes the data easy to use.
Strongly Agree	21	11	9	7	7
Agree	14	22	24	16	16
Kind of Agree	1	0	1	0	2
Neutral	2	5	5	10	11
Disagree	0	0	0	2	3
Strongly Disagree	0	0	0	0	0
Reponses Total	**38**	**38**	**39**	**35**	**39**

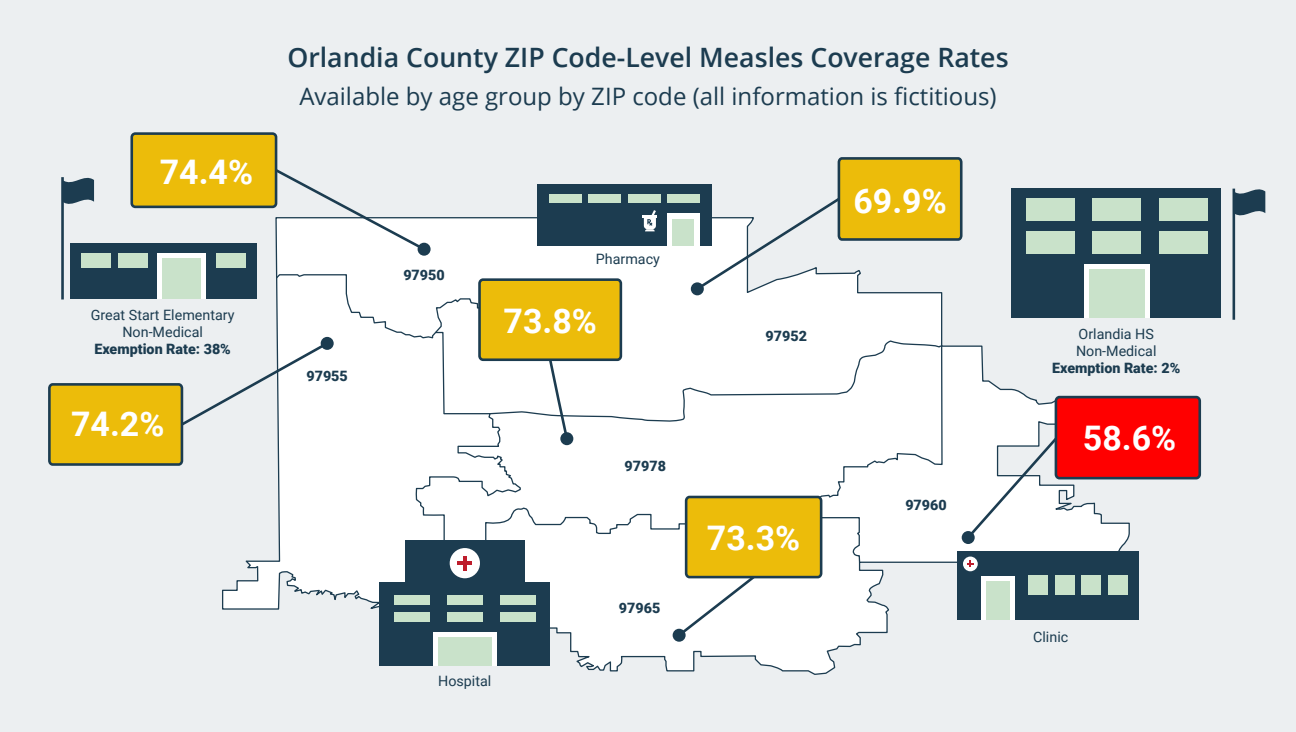
Since the Rapid Response Tool was piloted, plans have been made to improve it based on comments made by demonstration participants. As funding to support the work can be secured, the tool will be expanded to include five high-impact diseases: measles, mumps, hepatitis A, influenza and varicella. Data will be made available to counties automatically; they won't even have to make a request!

Continued on page 5

OREGON'S RAPID FIRE RESPONSE TOOL *Continued from page 4*

Counties can use the tables for any public health work, such as measuring the effectiveness of intervention campaigns. The OIP and other outbreak epidemiologists will also be made familiar with the data in order to assist counties with its use. In the final phase of development, mapping software will effectively display results in a readable format. Take a look at Figure 2 for a cartoonish idea of what Oregon has in mind, a dashboard of sorts for coverage and other information related to the disease selected that counties can access any time for any level of disease report, along with consultation about the data elements themselves. (Remember that all the data in Figure 2 is fictitious.)

Figure 2



Note: County and all data are fictitious. The percentages in yellow and red show the percent of the population vaccinated for measles, according to IIS data.

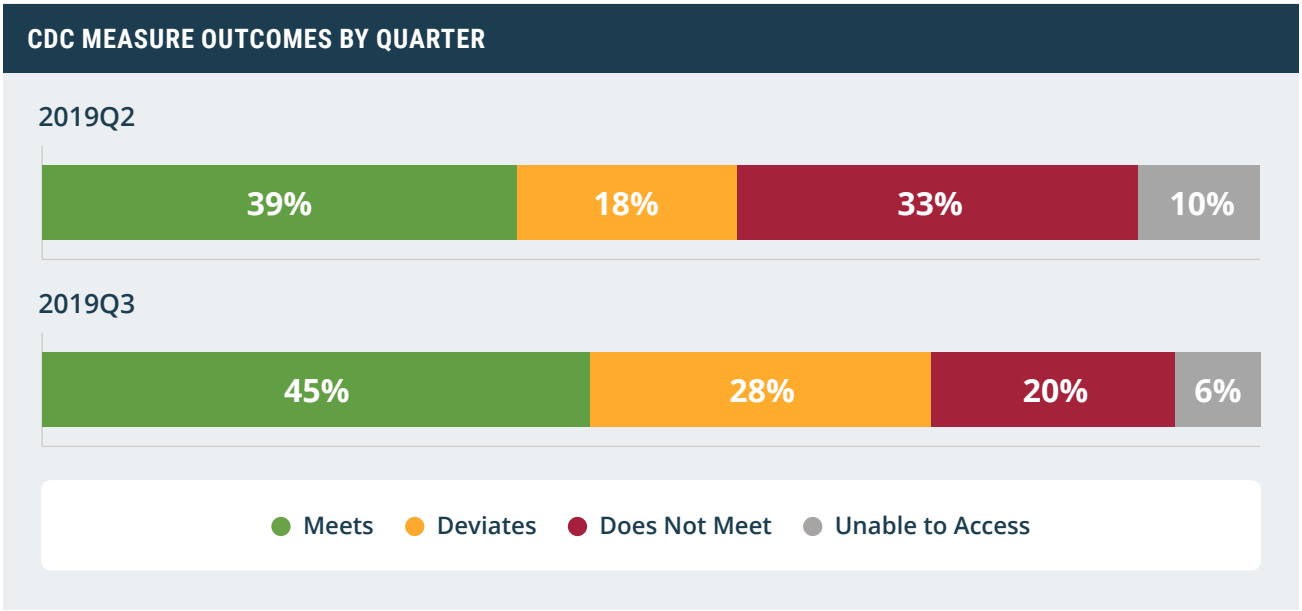
Oregon's Rapid Response Tool is an example of the positive impact an IIS can have in the face of competing demands and limited resources. Once the tool is fully operational, data will be delivered to a county as soon as needed, with no need for expensive infrastructure that may need to be funded and refunded. Deliverable, actionable, sustainable. Immunization information systems might not be able to reach for the sky as often as we would like, but there is plenty of gain to be made in the vast middle ground of what we do.

- Submitted by Andrew Osborn, *Oregon Immunization Program*

WOW… SIGNIFICANT CLINICAL DECISION SUPPORT IMPROVEMENTS ACROSS THE IIS COMMUNITY

All we can say is **WOW!** Thank you, members, for responding so quickly to the first Clinical Decision Support (CDS) Assessment reports! The IIS community continues to amaze as we all strive toward standards alignment.

Following the first-ever CDS Assessment reports released in Quarter 2, 2019, we saw significant improvements in just one measurement cycle. Quarter 3, 2019, CDS individual reports were released in AART in September, and the CDS aggregate report is now published on the AIRA repository here.



Wondering how to better align your CDS engine with ACIP recommendations? Here is Tennessee's journey.

The work that the American Immunization Registry Association does related to objectively measuring how the Tennessee Immunization Information System (TennIIS) meets CDS requirements, based on the Advisory Committee on Immunization Practices (ACIP) recommendations, is extremely valuable. Our Tennessee school immunization requirements follow the ACIP recommendations. By reviewing the CDS Assessment results, our team is made aware of the variances between the TennIIS forecast and ACIP recommendations and can make our users aware of variances and answer questions from providers. The CDS measurement results also help us with identifying system bugs so that we can work with our IIS vendor to address issues and prioritize those CDS engine changes that are most important to our program.

Continued on page 7

WOW… SIGNIFICANT CLINICAL DECISION SUPPORT IMPROVEMENTS ACROSS THE IIS COMMUNITY *Continued from page 6*

How did we accomplish this?

We compare the expected forecast dates from test cases with the actual dates returned by TennIIS and compile them into a single spreadsheet with groupings by vaccine family. Through this process, we create an easy way to interpret, understand, and share the information with our internal and external partners. This information also provides us with specific scenarios we are able to share with our IIS vendor to make recommended adjustments or changes. Keeping a list of the test cases that failed or deviated from the standard also allows us to monitor our progress toward CDS compliance and gives us examples we can use to evaluate the importance of upgrading to new releases.

We met with AIRA staff along with our vendor for an AART clinic at the AIRA 2019 National Meeting. This was an incredibly valuable experience because that interaction allowed us to convey our concerns and priorities to our vendor and AIRA staff, as well as discuss findings from our AART report that were unclear.

Overall, we have seen significant improvement in the accuracy of earliest date and recommended dates for both adolescents and adults, specifically related to meningococcal and zoster forecasting. For more information about Tennessee's process or its journey to increase alignment with ACIP recommendations, please contact David Baron.

AART clinic signups are happening now!

AART clinics will be held onsite at the AIRA 2020 National Meeting. One session will be offered for each IIS, so please coordinate with your colleagues to choose an appointment that works best for all of you and register today!

AART clinics are an opportunity to receive one-on-one feedback from AIRA technical staff. The entire IIS team, including your vendor representatives, is encouraged to attend a 30-minute clinic to learn how to use AART assessment reports to better understand how to align with national standards and inform planning. This is also your opportunity to get specific questions or challenges answered by AIRA technical staff to help prioritize and move forward with IIS enhancements.

Need help now?

AIRA's technical assistance team is ready to assist you in understanding your AART dashboard and results, help you prioritize work, and support your movement toward better alignment with standards. Do not hesitate to contact us for technical assistance. We can quickly answer a question or dive deeper into topics such as assisting you and your IIS technical development team to better understand issues and make plans to more fully align with standards. Fill out a Technical Assistance Request or contact Kristi Siahaya for more information.

- Submitted by David Baron, Nathalie Hartert, *Tennessee TennIIS Team,* ***and Kristi Siahaya,*** *AIRA*

WHAT YOU TOLD US: AIRA 2019 EDUCATION SURVEY SUMMARY REPORT

AIRA is excited to announce that the AIRA 2019 Education Survey Summary Report is now available. In early 2019, the AIRA Education Steering Committee assessed the educational needs of the IIS community. This report includes an analysis of the results, which will be used to guide the development of educational opportunities.

HIGHLIGHTS FROM THE 2019 EDUCATION SURVEY

- IIS strengths include strong provider relations and robust, integrated data.
- Limited staff, data submission and use, and issues with providers (e.g., turnover) are top challenges for IIS.
- The top priorities for IIS include data quality, data (e.g., exchange, entry, analysis), and working with providers.
- There is widespread need for additional best practice guidance for topics including data quality, technical capacity, data use, and data sharing.
- The results of the survey demonstrate an interest in efficient and effective training. AIRA should prioritize disseminating information via live webinars, annual meetings, and self-paced online training.

STRENGTH OF IIS

- Strong provider relations
- Robust, integrated data

CHALLENGES FOR IIS

- Limited staff
- Data (e.g., submission and use)
- Provider relations

TOP PRIORITIES FOR IIS

- Data quality
- Data (e.g., submission and use)
- Working with providers

EDUCATION/ASSISTANCE NEEDS

- Data quality
- Technical capacity
- Data use and data sharing

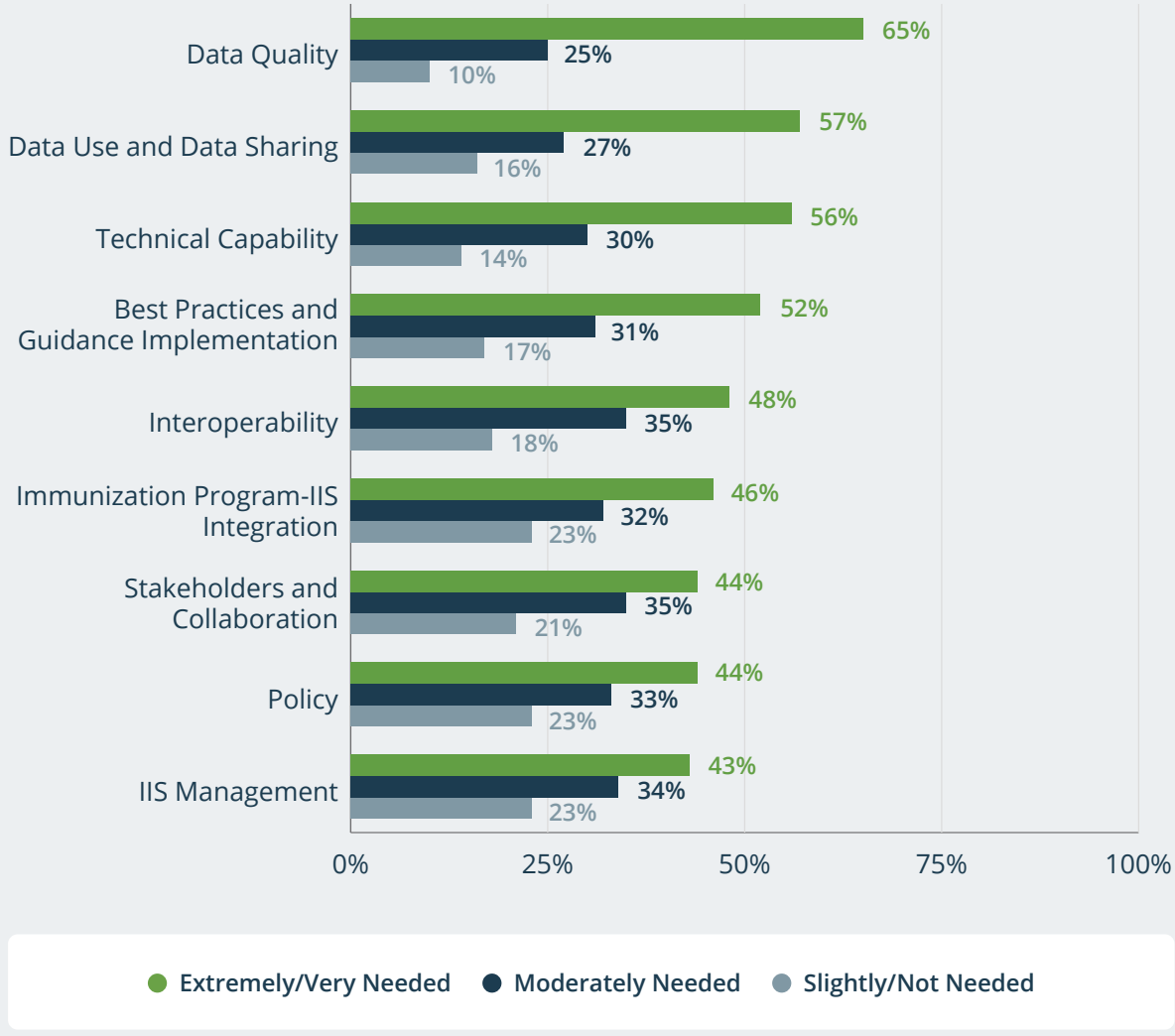
PREFERENCE OF SHARING INFORMATION

- Live webinars
- Annual meetings
- Self-paced online training

Continued on page 9

WHAT YOU TOLD US: AIRA 2019 EDUCATION SURVEY SUMMARY REPORT *Continued from page 8*

Respondents were asked to rate their education and assistance needs using a five-point Likert scale ranging from extremely needed to not needed. There were 126 responses to this question. Data quality was the top reported need, with 90% of respondents rating this as extremely, very, or moderately needed.



Continued on page 10

WHAT YOU TOLD US: AIRA 2019 EDUCATION SURVEY SUMMARY REPORT *Continued from page 9*

The survey also asked about more specific subtopics, and there were 13 subtopics for which at least 60% of respondents indicated a need for education/assistance/information.

#	TOPIC	SUBTOPIC	%
1	Data quality	Tools and strategies for data validation for assessment of incoming data	71%
2	Data use and data sharing	Quality improvement activities and measures	70%
3	Best practices and guidance implementation	Using AIRA guides to inform your work	67%
4	Data use and data sharing	Best practices supporting data use	67%
5	Stakeholders and collaboration	Working with non-traditional immunizers	65%
6	IIS management	Prioritizing activities with limited resources	63%
7	Policy	Learning more about federal regulations	63%
8	Data use and data sharing	Innovative use of IIS data	62%
9	Stakeholders and collaboration	Provider participation	62%
10	Technical capacity	Leveraging innovative technology	62%
11	Best practices and guidance implementation	Implementing MIROW best practices	61%
12	Data quality	Patient deduplication	61%
13	Data quality	Tools and strategies for data validation for data at rest	61%

The Education Steering Committee has decided to focus its work on four of these subtopics in the next year:

- Tools and strategies for data validation for assessment of incoming data
- Using AIRA guides to inform your work
- Best practices supporting data use
- Prioritizing activities with limited resources

We want to thank those of you who responded to the survey. We heard from 131 respondents, and responses were recorded from all member state and city immunization program jurisdictions, the District of Columbia, and six territories and islands.

- Submitted by Beth Parilla, *AIRA*