



AIRA
AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

AIRA 2019

Education Survey Summary Report



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Executive Summary

BACKGROUND

The American Immunization Registry Association (AIRA) is committed to promoting the development and implementation of immunization information systems (IIS). To support IIS, AIRA plans, develops, and facilitates educational opportunities within the IIS community. In early 2019, the Education Steering Committee developed a survey to evaluate the training and education needs of the IIS community. This report includes a summary of the survey results, which will be used to guide the development of new resources and educational opportunities within AIRA. A total of 131 respondents completed the survey, and responses were received from all member state and city immunization programs, the District of Columbia, and six territories and islands.

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

SECTION 1.

The Survey

The Education Steering Committee developed a survey to evaluate the training and education needs of the IIS community. The survey assessed the type of educational materials, products, services, topics, and education delivery methods that are preferred by the IIS community. The survey was developed in SurveyMonkey. In March 2019, the survey was distributed via multiple community emails to AIRA members and an article in the AIRA Monthly Update. To encourage participation by staff with different roles and levels of experience, the messaging encouraged IIS programs to have as many staff as possible with IIS, immunization, or programmatic roles complete the survey. AIRA staff also performed follow-up via emails and phone calls to encourage participation from all jurisdictions. The results of the survey will be used to guide future educational activities. Broad participation in the survey from IIS and immunization program staff and IIS partners was encouraged, and multiple submissions from an individual organization were both allowed and encouraged.

Previous AIRA education surveys were completed in 2014 and 2017. Reports with the findings are available on the AIRA website:

- AIRA Education Survey Summary and Plan for 2014–2015:
<https://repository.immregistries.org/resource/aira-education-survey-summary-and-plan-for-2014-2015/>
- AIRA 2017 Education Survey Summary Report:
<https://repository.immregistries.org/resource/aira-2017-education-survey-summary-report/>



SECTION 2.

About the Respondents

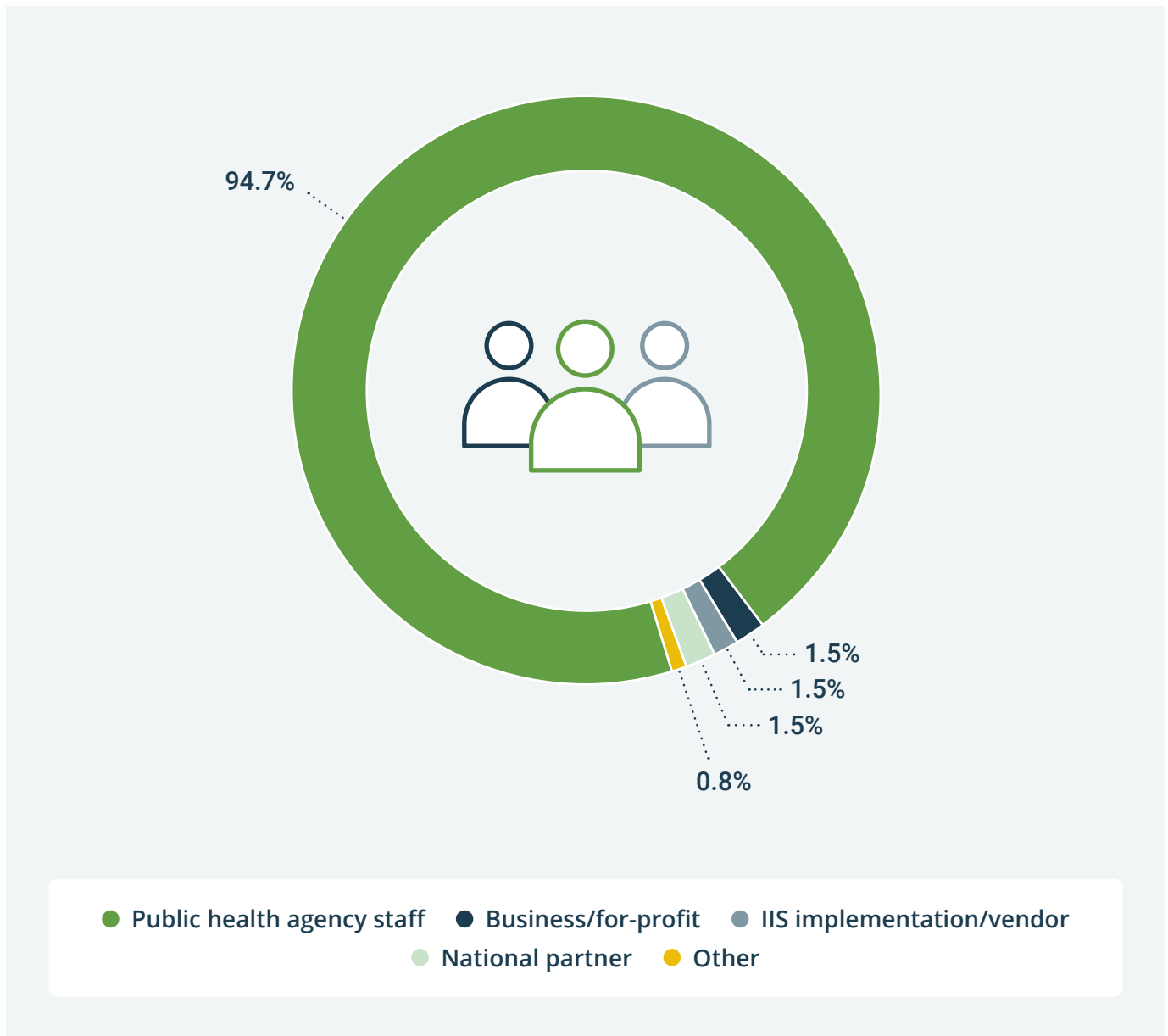
A total of 166 people responded to the survey. Thirty-five responses that contained only demographic data (the initial set of questions in the survey) and were removed from the analysis. One hundred thirty-one responses were analyzed, of which nearly 95% represented public health agency staff. Over 70% reported spending at least three quarters of their time on IIS activities, and 83% reported having three or more years of experience with IIS. Responses were recorded from all member state and city immunization program jurisdictions, the District of Columbia, and six territories and islands. Despite efforts to encourage broad participation from respondents outside of public health programs, only seven responses were from individuals not affiliated with a public health agency, including two individuals representing IIS implementers/vendors.

SECTION 2. ABOUT THE RESPONDENTS

AFFILIATION

Of the 131 responses, nearly 95% were staff of a public health agency, 1.5% were staff of national partners (e.g., CDC, AIM, PHII, etc.), 1.5% were staff representing business/for-profit organizations, 1.5% were staff representing IIS implementers/vendors, and 0.8% indicated an “other” affiliation ([Figure 1](#)).

Figure 1 | Organizational Affiliation/Role (Q3)

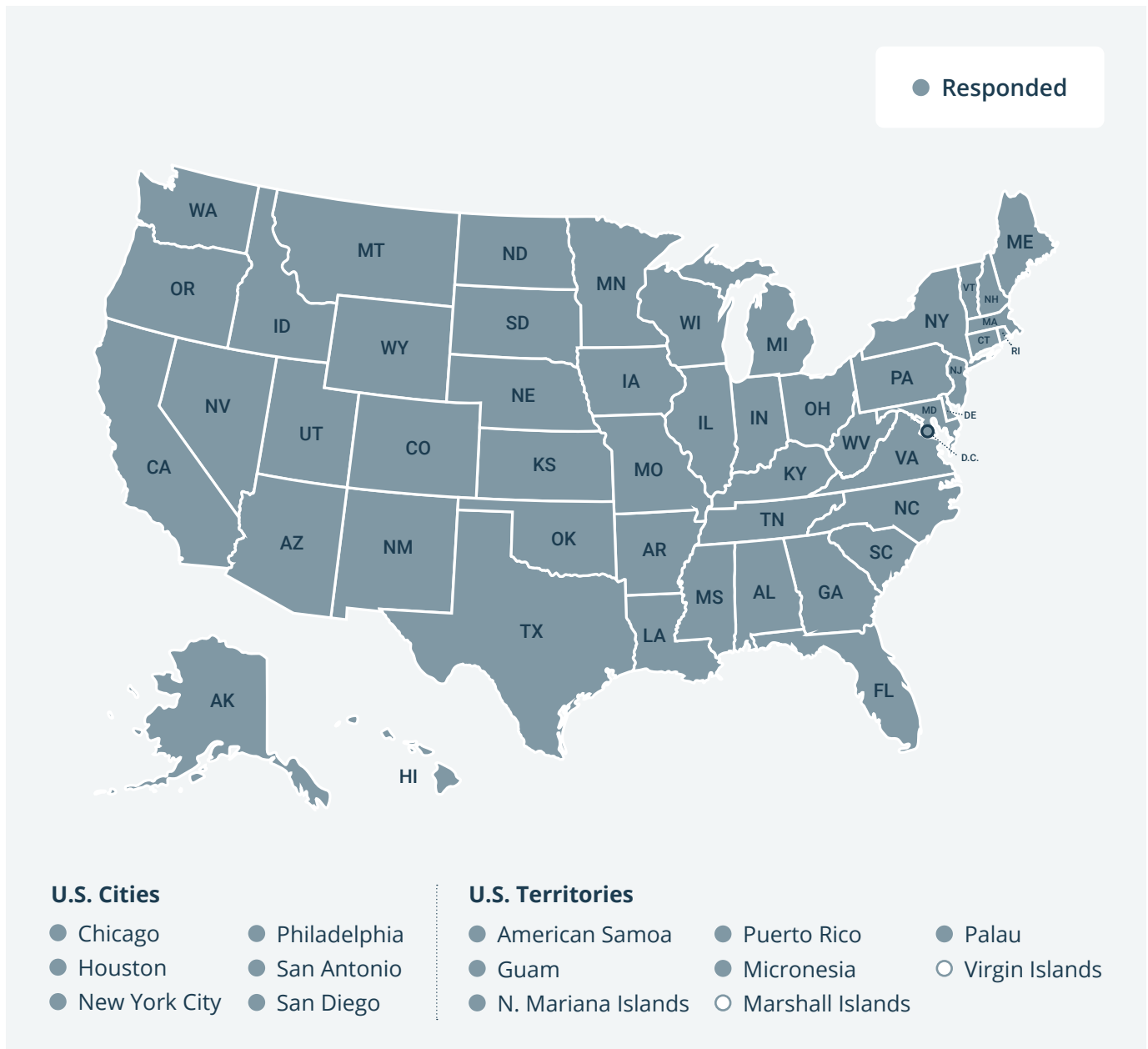


SECTION 2. ABOUT THE RESPONDENTS

JURISDICTIONAL REPRESENTATION

Among the individuals representing public health agencies, responses were received from all member state and city immunization program jurisdictions, the District of Columbia, and six territories and islands ([Figure 2](#)).

Figure 2 | *Map of Jurisdictional Survey Responses (Q2)*

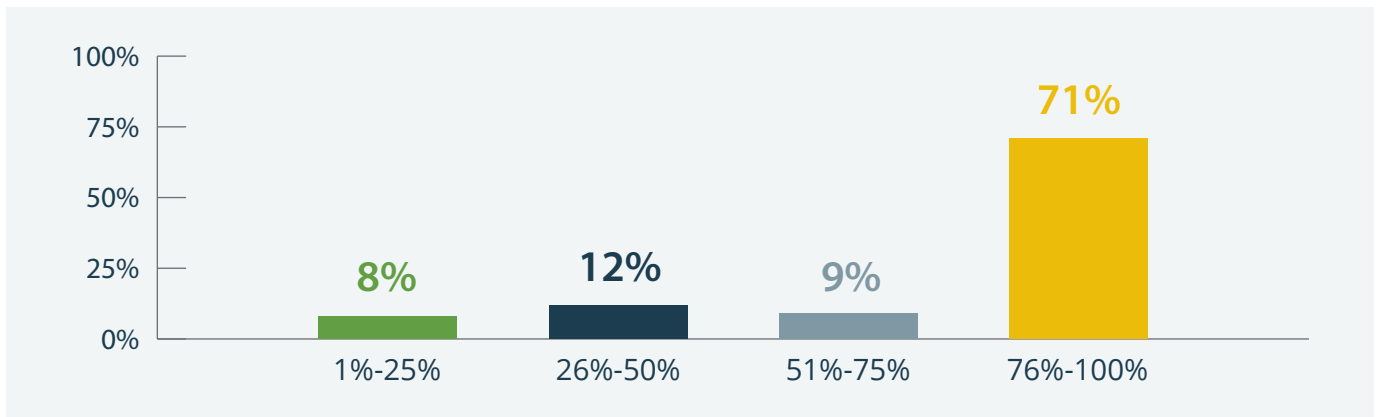


SECTION 2. ABOUT THE RESPONDENTS

TIME SPENT ON IIS ACTIVITIES

When asked about time spent on IIS activities and years of experience, 71% of respondents indicated that 76%–100% of their time is spent on IIS activities (Figure 3). Eight percent indicated they spend 1%–25% of their time on IIS, 12% indicated spending 26%–50% of their time on IIS, and another 9% indicated spending 51%–75% of their time on IIS.

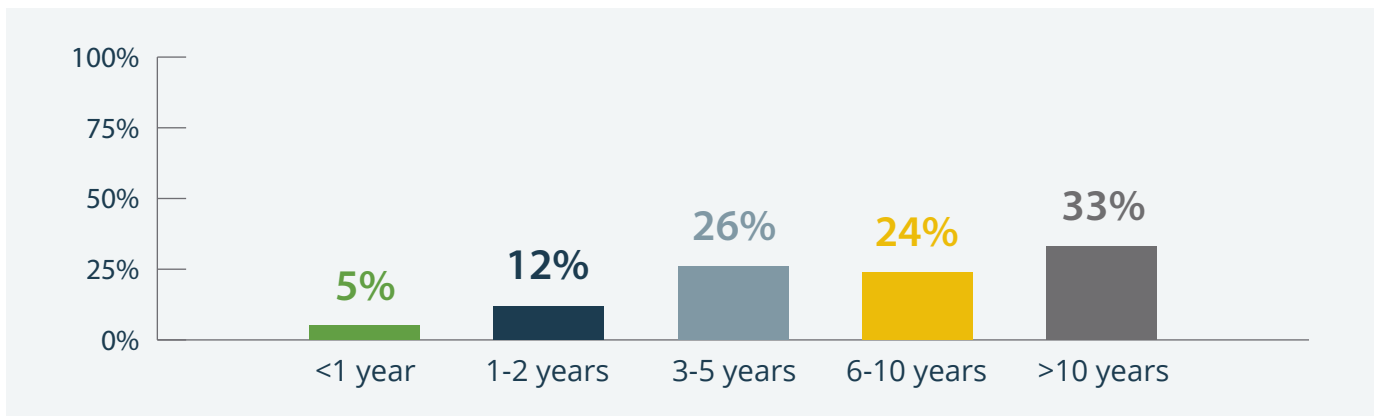
Figure 3 | Average Percent of Time Spent on IIS Activities (Q4)



YEARS OF EXPERIENCE WORKING WITH IIS

Respondents reported a range of years of experience working with IIS. Thirty-three percent had more than 10 years of experience; 24% reported 6–10 years of experience, and 26% reported 3–5 years of experience. Twelve percent had 1–2 years of IIS experience, and 5% had less than a year (Figure 4).

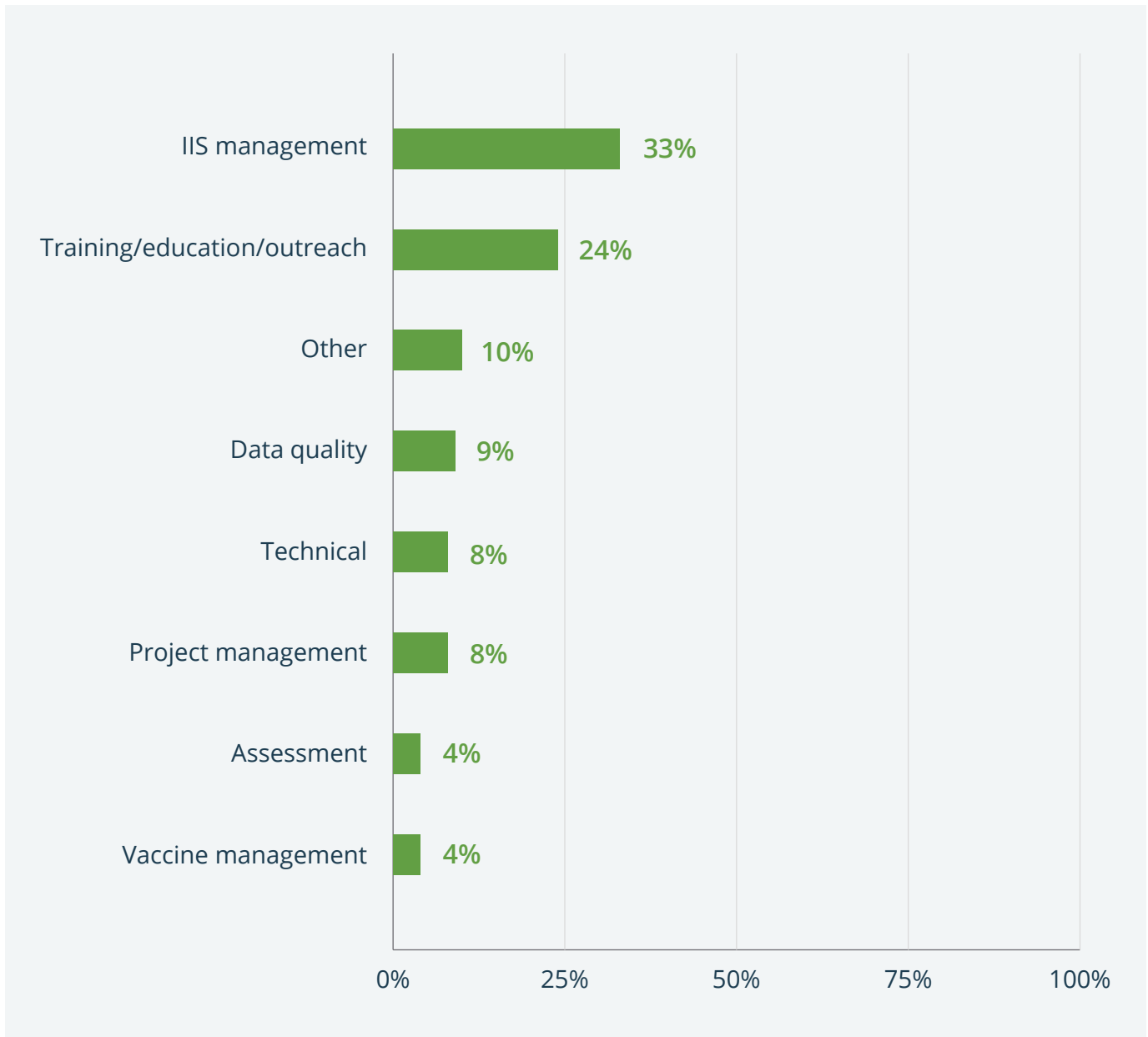
Figure 4 | Years of Experience Working with IIS (Q5)



CONTENT AREA OF FOCUS

Respondents represented a wide variety of content areas of IIS. Thirty-three percent worked in IIS management (i.e., the management of staff or resources), and 24% worked in training, education, and/or outreach (Figure 5). Ten percent reported working in “other” content areas, which included help desk, testing, and clinical consulting, and several individuals reported that they did a mix of many content areas.

Figure 5 | Content area of focus (Q6)





SECTION 3.

IIS Operational
Landscape

TOP SUCCESSES

Respondents were asked to list up to three areas in which they feel IIS are very successful. No priority was given to the three answers, and not everyone provided three answers. There were 310 total successes reported from 122 respondents.

“Provider(s)” was the most mentioned phrase/key word in responses, with 62 mentions. The term “provider(s)” was used in a variety of contexts, including provider participation, communicating with providers, ease of use for providers, buy-in from the provider community, and onboarding providers.

EXAMPLES:

- Increased participation by *providers*
- Moving *providers* forward in the onboarding process
- *Provider* confidence in IIS data

“Data” (35) was the second most common term. The term “data” was distinguished from the commonly used phrase “data quality” in this analysis. “Data” was used broadly, and some examples include analysis of data, availability and quantity of data, submission of data, and provider access to and confidence in IIS data.

EXAMPLES:

- Using *data* for research
- Capacity to collect all core *data* elements

Report/reporting (25) was the third most common term. The term “report/reporting” was used to reference several activities, including providers reporting data to the IIS, reports created by the IIS (e.g., assessment), provider access to reports in the IIS, integration with school immunization reporting, and reporting vaccine inventory.

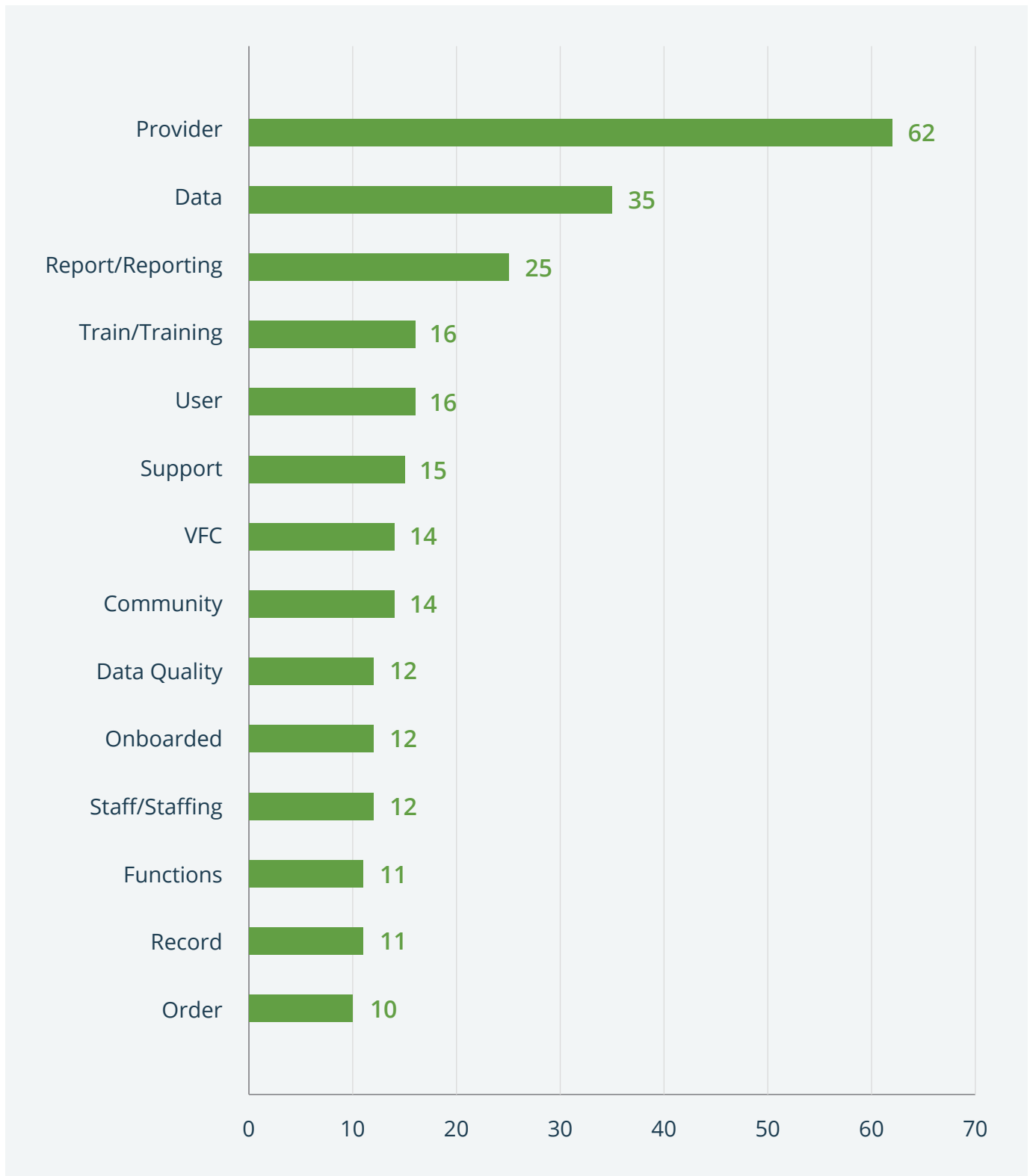
EXAMPLES:

- End-user access to *reports*
- IIS’s extensive reporting capabilities, which addresses required *reporting* needs and program needs
- Integration of school immunization *reporting*

Fourteen words or phrases were repeated in at least 10 responses ([Figure 6](#)). See [Appendix A](#) for a word cloud depiction of responses.

SECTION 3. IIS OPERATIONAL LANDSCAPE

Figure 6 | Top successes, most mentioned key words and phrases (Q8)



TOP CHALLENGES

Respondents were asked to list up to three top challenges they or their IIS colleagues face (or more generally, challenges they think IIS are facing). No priority was given to the three answers, and not everyone provided three answers. There were 331 total challenges reported from 122 respondents.

Staff/staffing was the most mentioned phrase/key word with 46 mentions. “Staff/staffing” was used in terms of staff at the IIS and staff at the provider’s office.

EXAMPLES:

- *Staff* turnover leads to lack of skilled/experienced *staff*
- Lack of *staff* time to monitor and address data quality

“Data” (41) was the second most common term. The term “data” was distinguished from the commonly used phrase “data quality” in this analysis. The term “data” was used in a variety of contexts, including challenges with users reporting data, data completeness, data exchange, data extracts, and data migration. There were also issues with using data for population analysis, to inform policy in real time, and to use for programmatic decision making.

EXAMPLES:

- Ability to use *data* for population analysis
- Actively using *data* from the IIS to inform policy in real time
- Satisfying various stakeholders’ request for different *data* needs

“Provider” (36) was the third most common term. Examples of challenges mentioned in relation to providers include not reporting data to the IIS, recruiting providers, providers’ use of electronic health records (EHRs), lack of a requirement for providers to participate in the IIS, and onboarding providers.

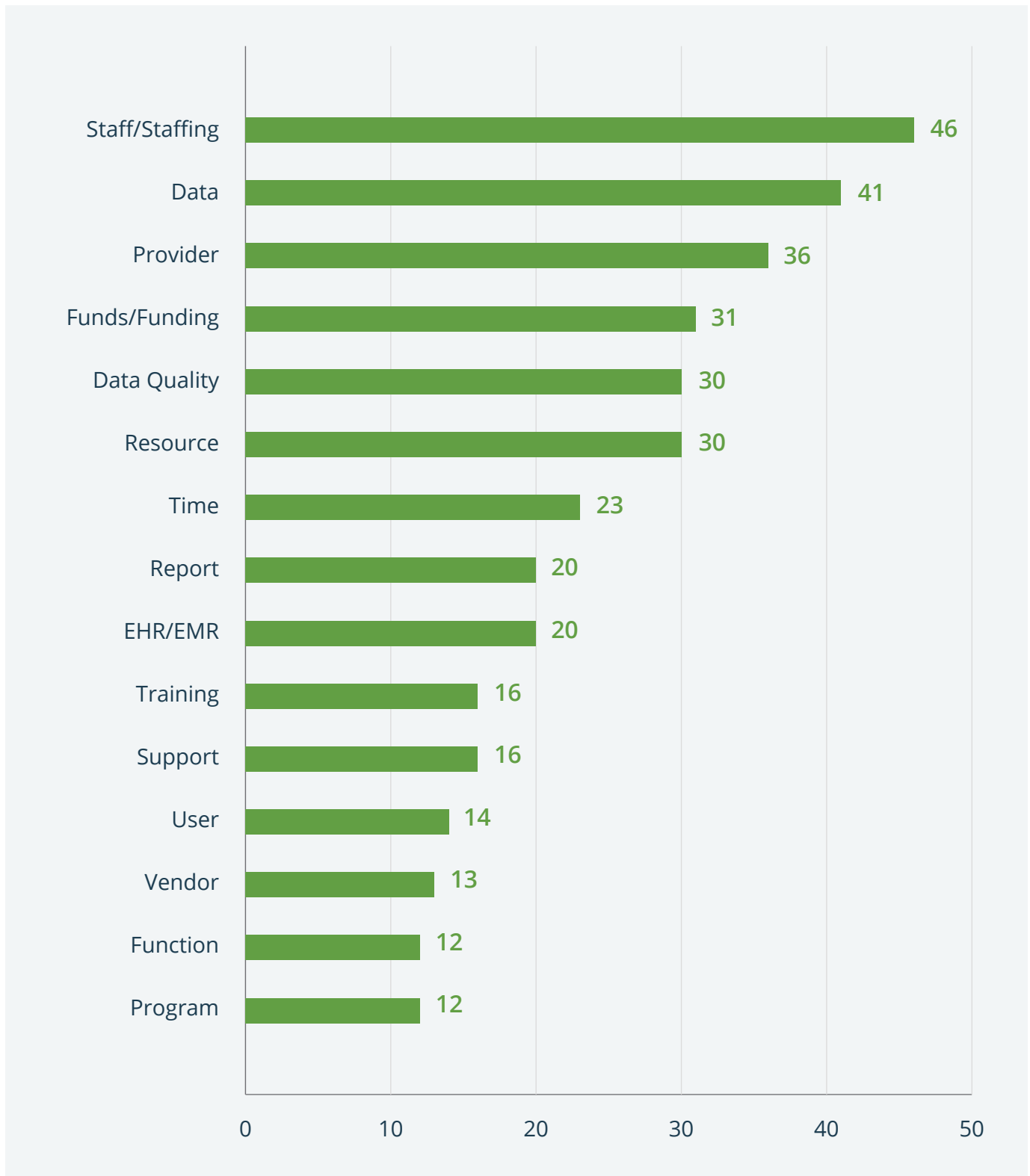
EXAMPLES:

- Attracting new *providers*
- Educating users at *provider* offices
- Lack of technical knowledge and no IT resources at small *provider* offices

Fifteen words or phrases were repeated in at least 10 responses ([Figure 7](#)). See [Appendix A](#) for a word cloud depiction of responses.

SECTION 3. IIS OPERATIONAL LANDSCAPE

Figure 7 | Top challenges, most mentioned key words and phrases (Q7)



TOP PRIORITIES

Respondents were asked to list up to three priorities for IIS in 2019. Respondents were asked to indicate their first priority, second priority, and third priority. One hundred eleven respondents provided a first priority; altogether there were 310 total priorities reported from these individuals.

The most mentioned first priority was data quality (17 mentions). This was followed by: data (13)¹ and provider (10). When all priority responses were combined (first, second, and third priorities), provider rose to the top with 37 mentions. This was followed by data quality (36), and data (35) (Figure 8). See Appendix A for word clouds depicting responses for top priorities and all priorities responses combined.

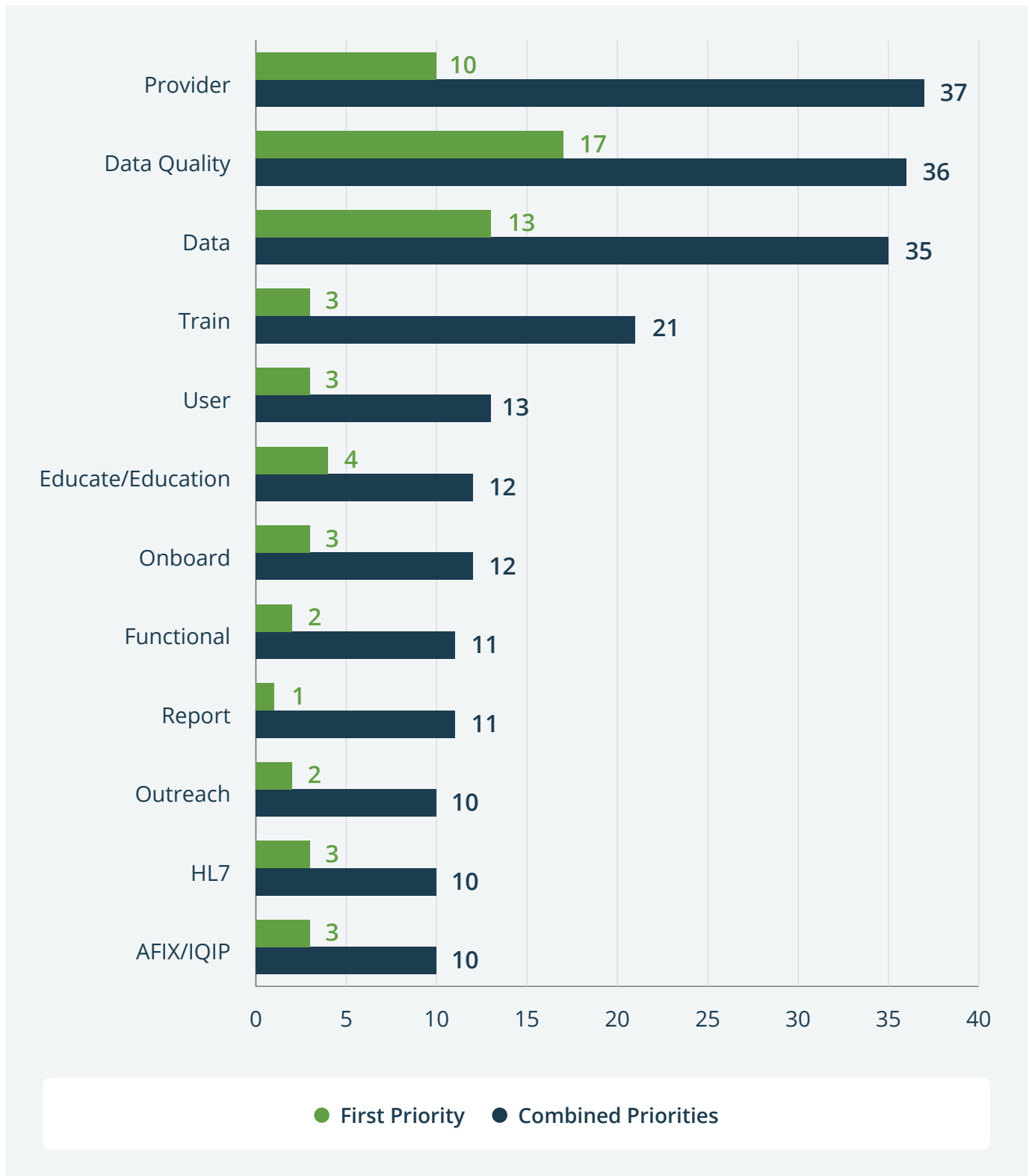
THE FOLLOWING ARE RESPONDENT STATEMENTS THAT REFLECT THESE PRIORITIES:

1. Improving data quality and completeness
2. User data quality review
3. Data analysis
4. Data cleansing and migration
5. Data dictionary
6. Data use for programmatic decision making
7. Educate, train, and onboard providers/users as seamlessly as possible
8. Increasing new provider participation
9. Moving more providers from direct data entry to HL7
10. Perform outreach to providers with patients not “up to date” for the 4313314 series

¹The term “data” was distinguished from the commonly used phrase “data quality” in this analysis. The word “data” was used in terms of several issues, including data analysis, data use, data cleansing, data migration, data dictionary, and deduplicating data.

SECTION 3. IIS OPERATIONAL LANDSCAPE

Figure 8 | Top priorities, most mentioned key words and phrases (Q9)





SECTION 4.

Education and Assistance Needs

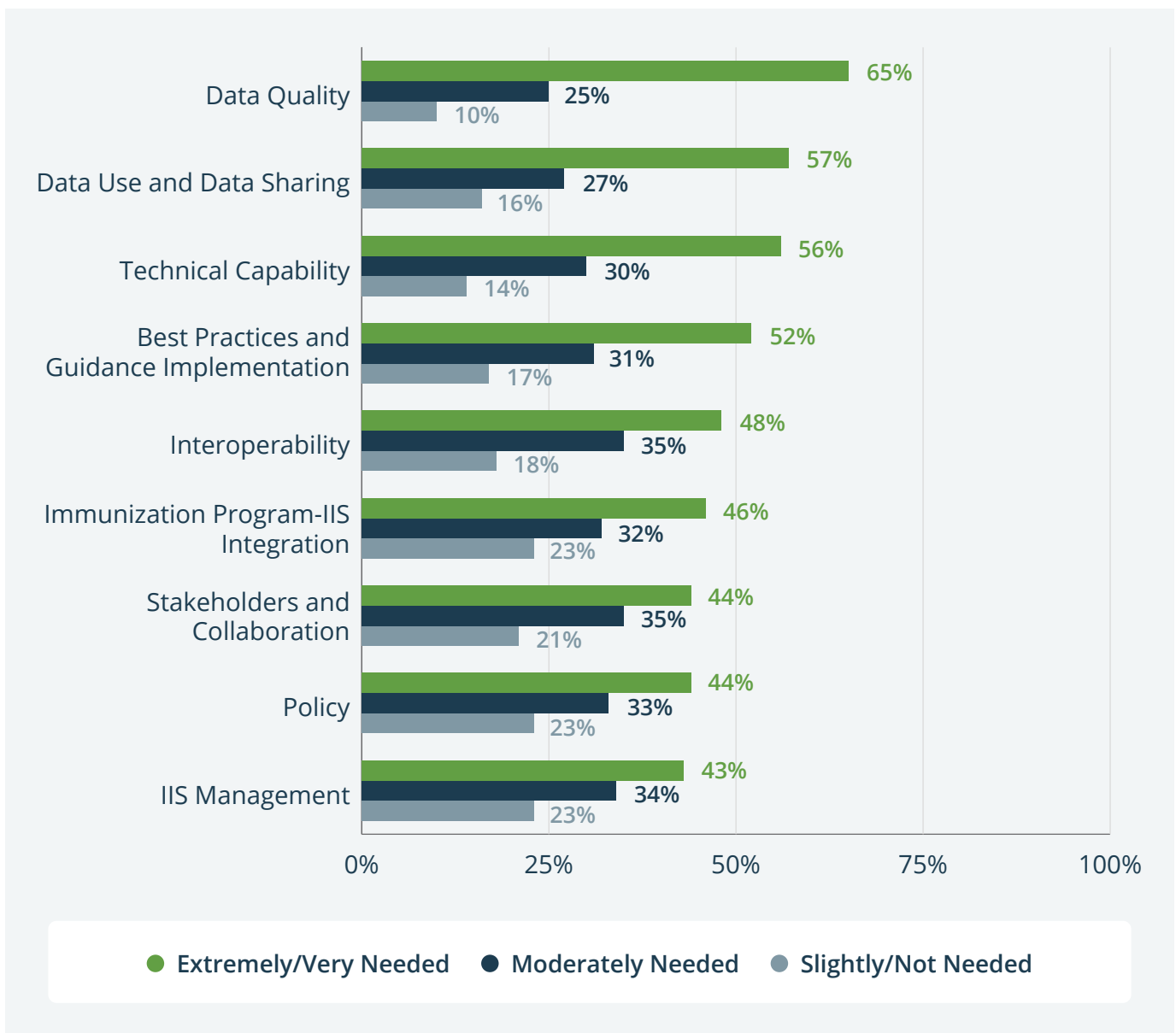
SECTION 4. EDUCATION AND ASSISTANCE NEEDS

TOPIC AREAS

OVERALL NEEDS

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 (Figure 9).

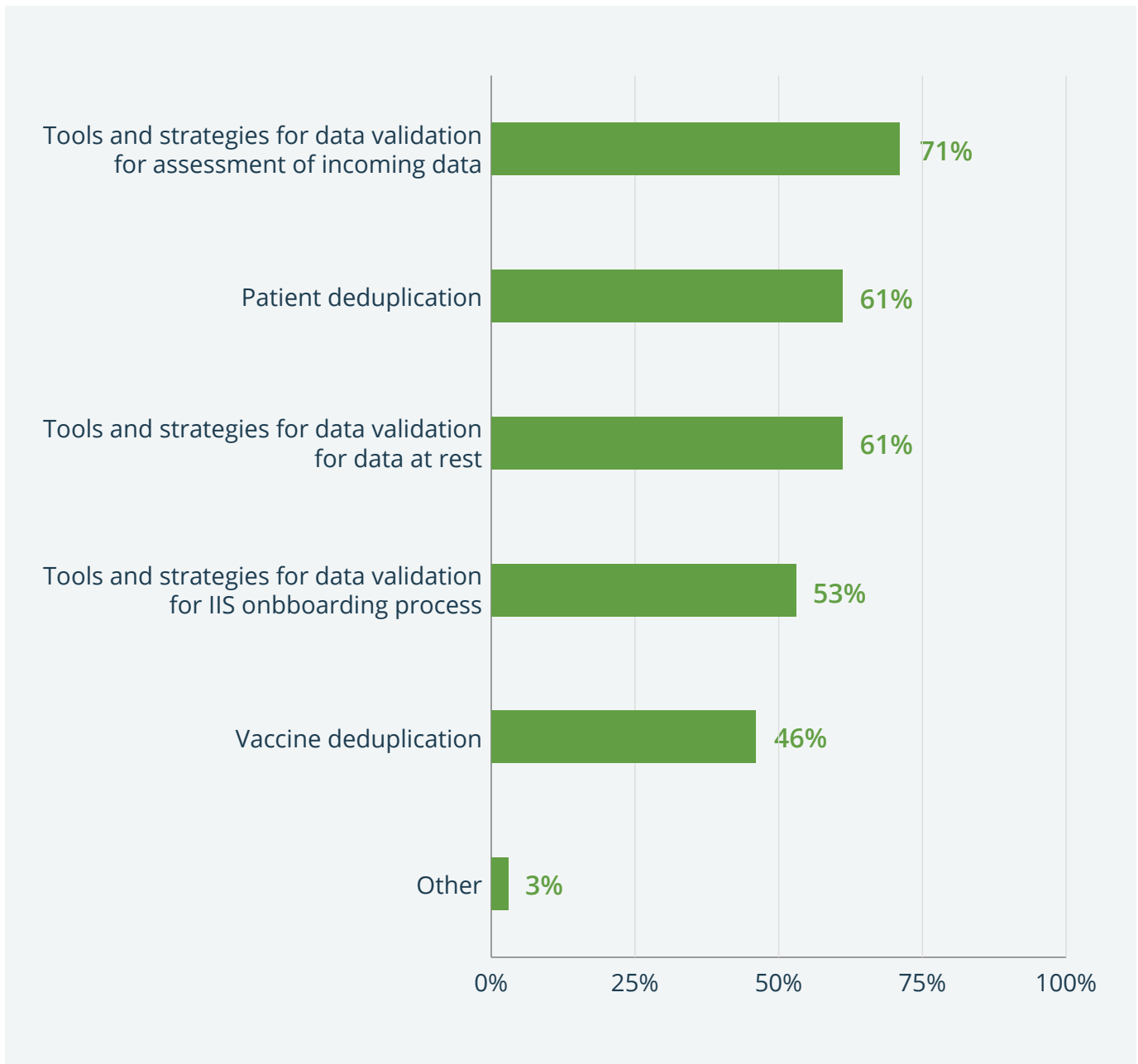
Figure 9 | Education/assistance needs across topics (Q10)



SPECIFIC NEEDS

In addition to rating educational needs across the eight topic areas, respondents were also asked to rate specific needs within each topic. Respondents were asked to check all subtopics for which they were most in need of education/assistance/information from AIRA. Results are presented for each topic area in Figures 10 to 18 below.

Figure 10 | Data quality (Q12)



SECTION 4. EDUCATION AND ASSISTANCE NEEDS

Figure 11 | Data use and data sharing needs (Q13)



SECTION 4. EDUCATION AND ASSISTANCE NEEDS

Figure 12 | Technical capability needs (Q19)

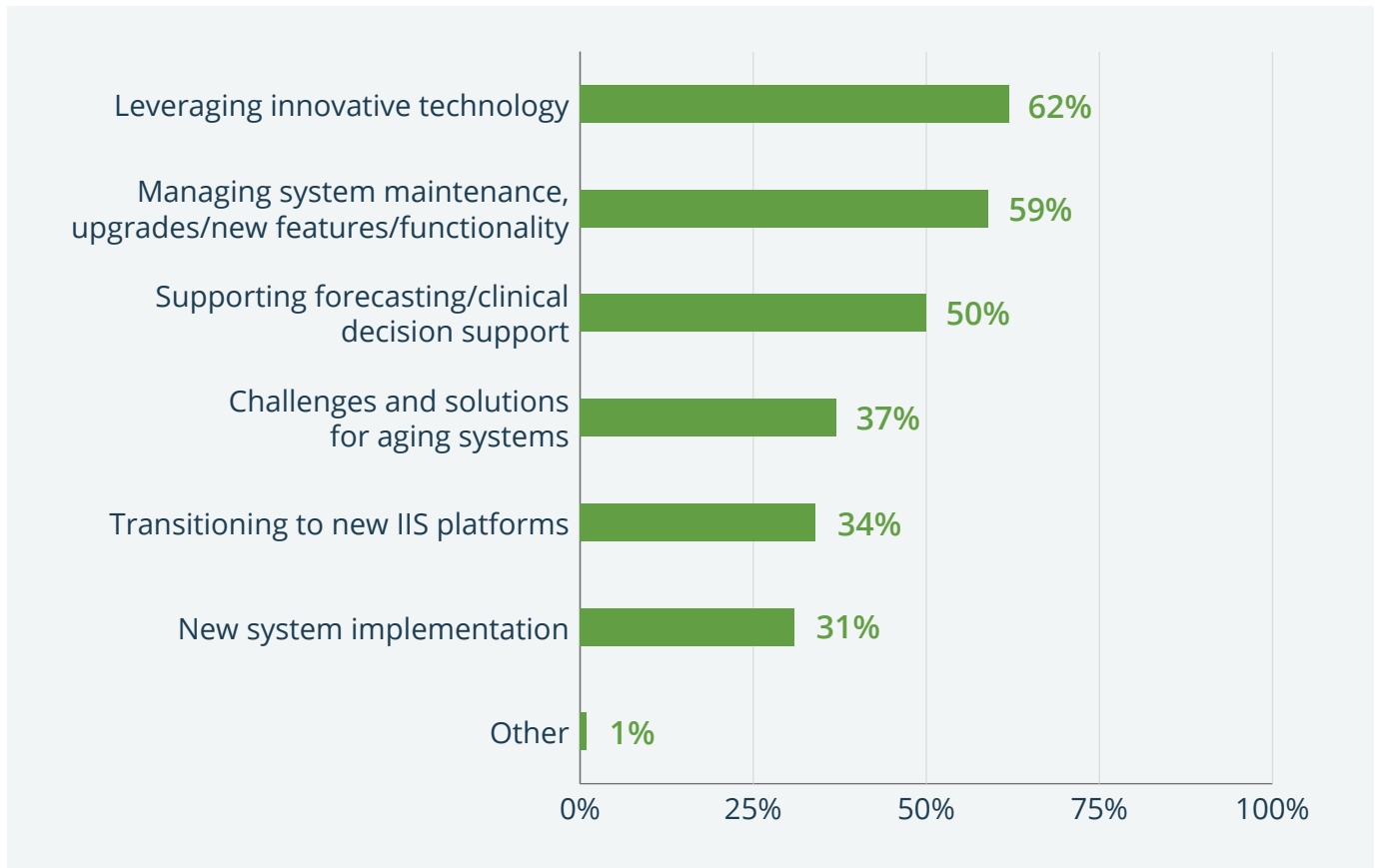
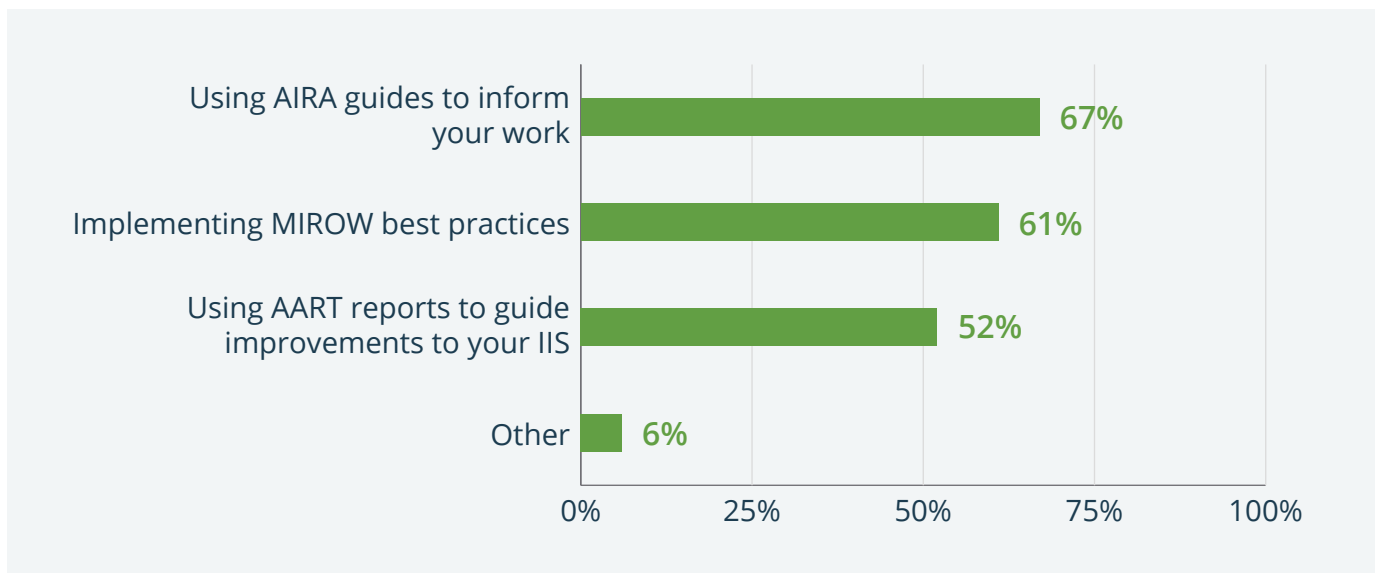
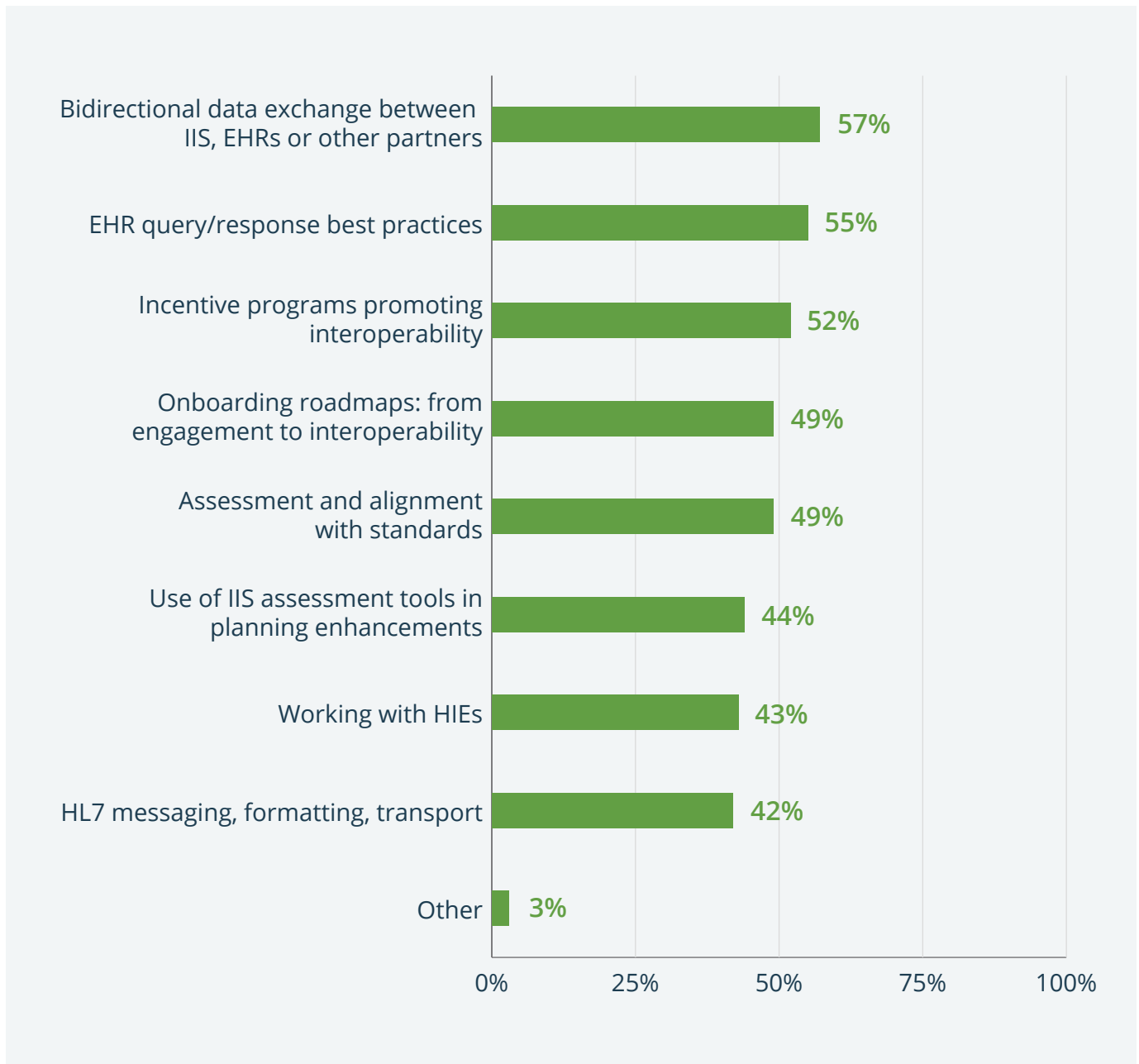


Figure 13 | Best practices and guidance implementation needs (Q11)



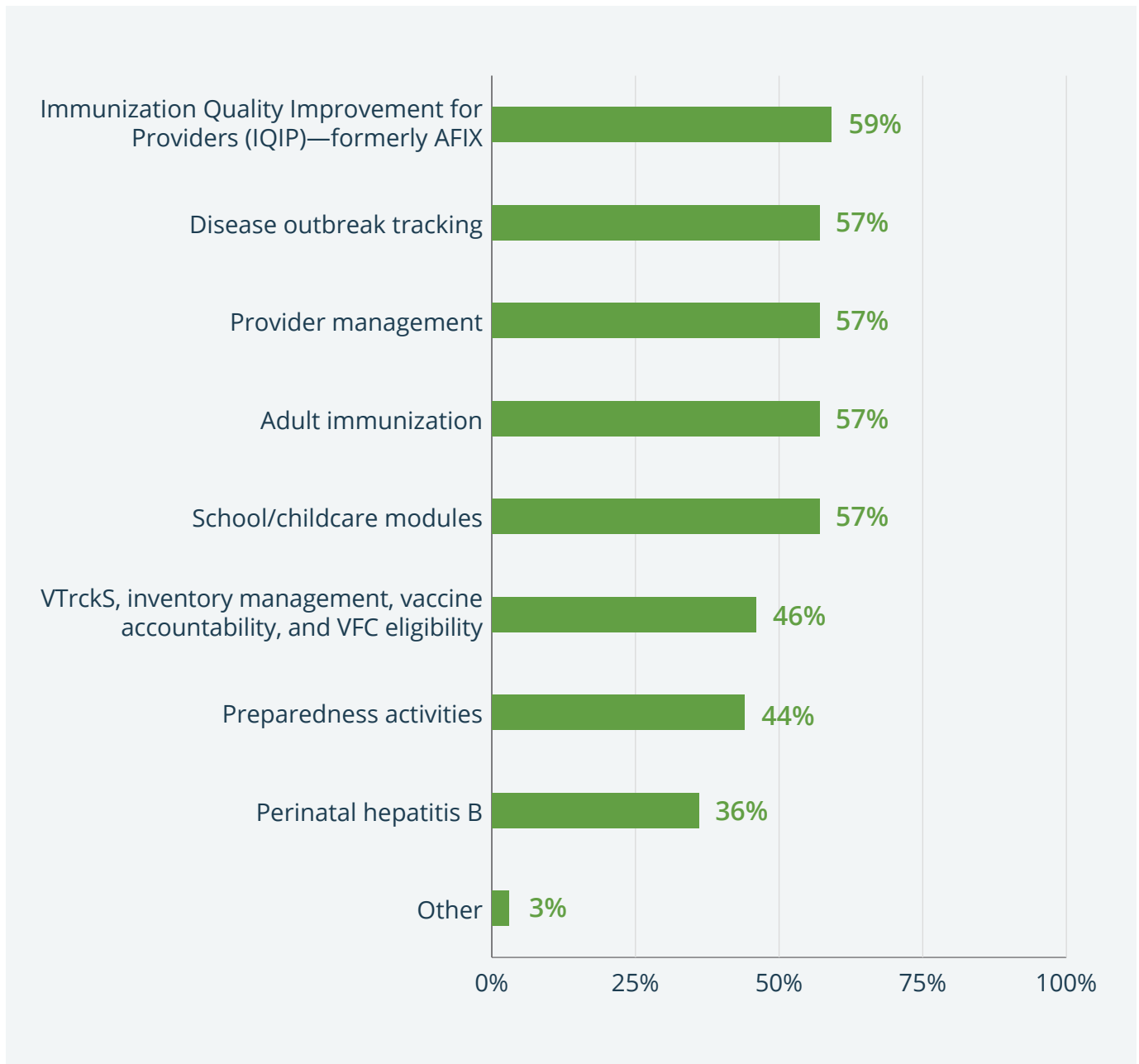
SECTION 4. EDUCATION AND ASSISTANCE NEEDS

Figure 14 | *Interoperability needs (Q15)*



SECTION 4. EDUCATION AND ASSISTANCE NEEDS

Figure 15 | *Immunization program-IIS integration needs (Q14)*



SECTION 4. EDUCATION AND ASSISTANCE NEEDS

Figure 16 | Stakeholders and collaboration needs (Q18)

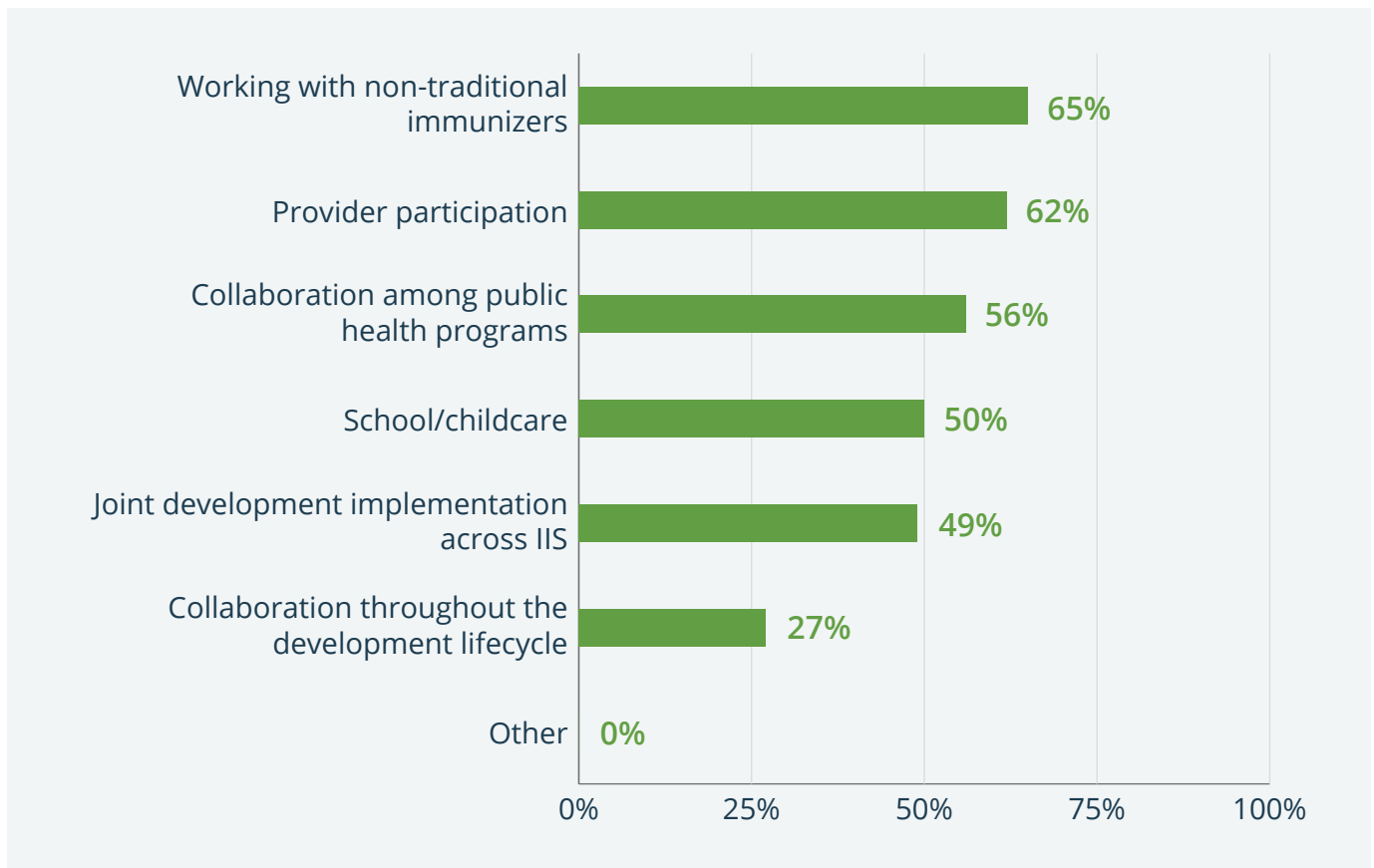
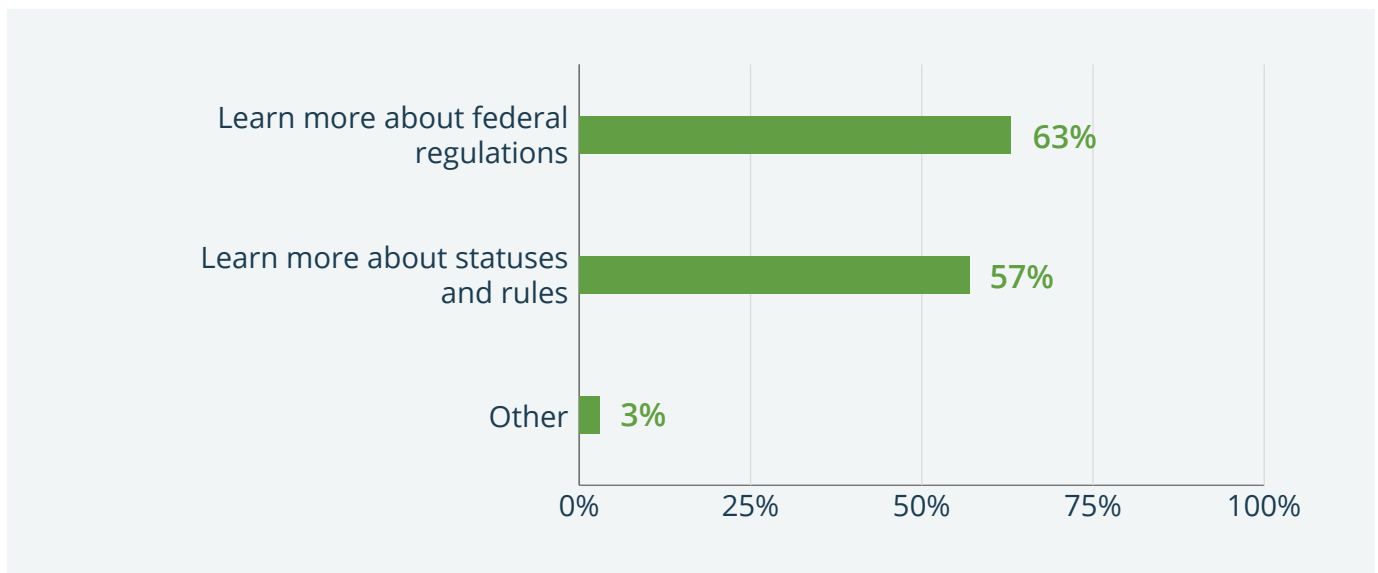
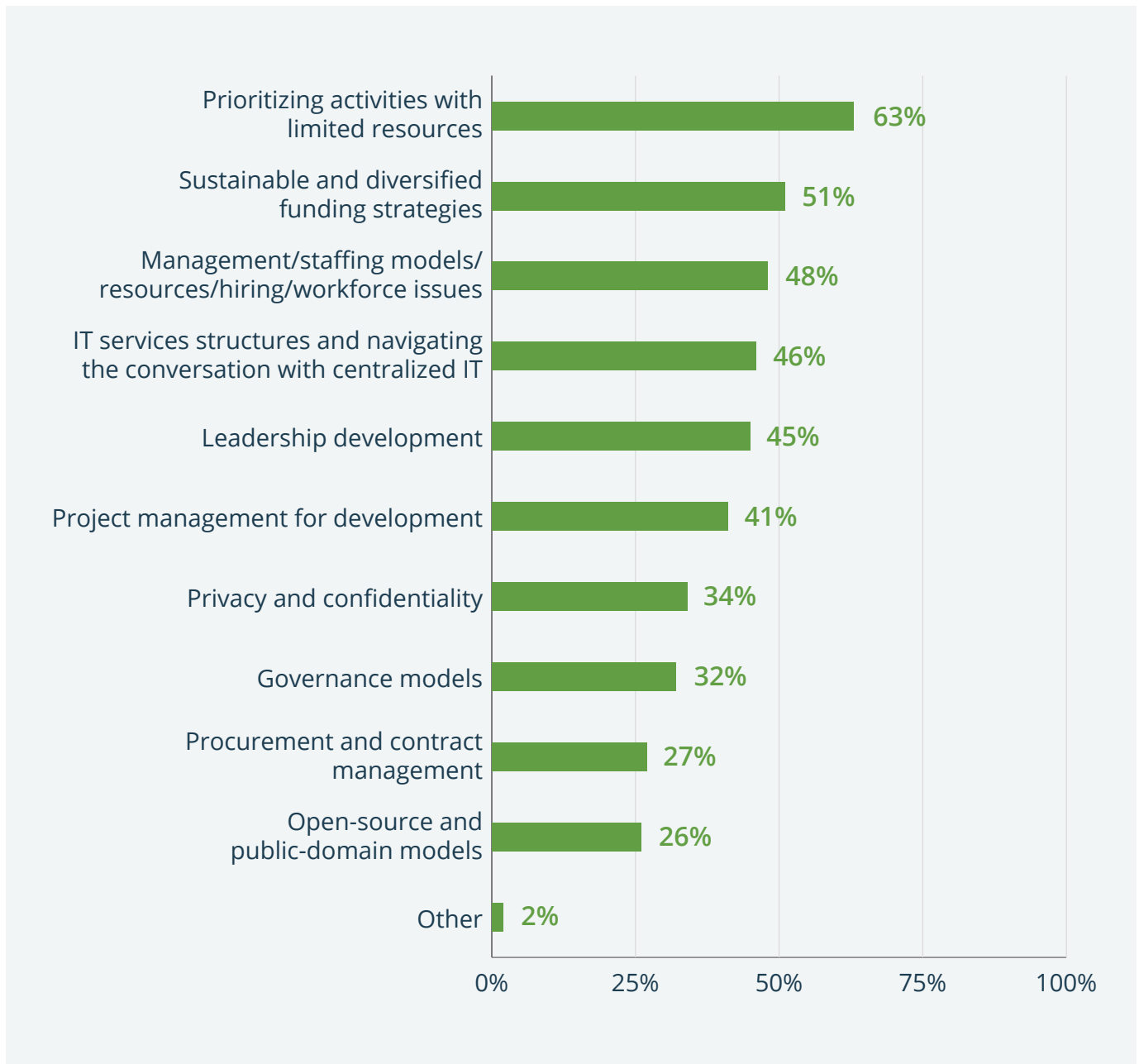


Figure 17 | Policy needs (Q17)



SECTION 4. EDUCATION AND ASSISTANCE NEEDS

Figure 18 | IIS management needs (Q16)



SECTION 4. EDUCATION AND ASSISTANCE NEEDS

TOP NEEDS ACROSS TOPIC AREAS

There were 13 subtopics for which at least 60% of respondents indicated a need for education/assistance/information ([Table 1](#)).

Table 1 | *Top needs across all topic areas (Q11–Q19)*

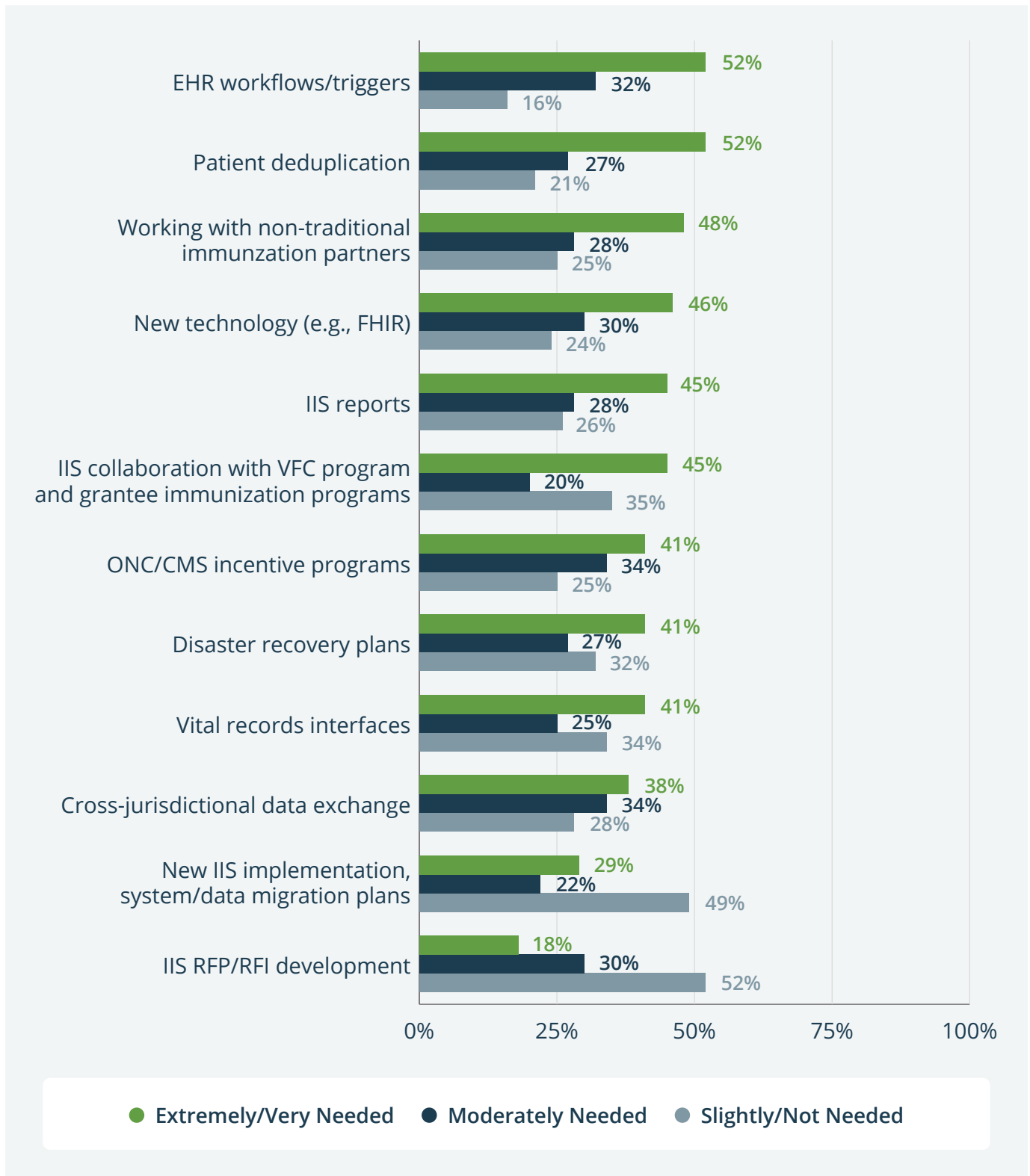
#	TOPIC	SUBTOPIC	%
1	Data quality	Tools and strategies for data validation for assessment of incoming data	71%
2	Data use and data sharing	Quality improvement activities and measures	70%
3	Best practices and guidance implementation	Using AIRA guides to inform your work	67%
4	Data use and data sharing	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	Learn 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%

EDUCATIONAL PRODUCTS

A section of the survey asked respondents to assess the usefulness of existing educational products as well as topic areas for which there is need for new products to be developed. There were 113 responses to this question. EHR workflows/triggers was the top reported need, with 84% of respondents rating this as extremely, very, or moderately needed ([Figure 19](#)). IIS RFP/RFI development came in last among the 12 categories for extremely, very, or moderately needed; however, this was still rated as a great/moderate need among nearly 50% of respondents.

SECTION 4. EDUCATION AND ASSISTANCE NEEDS

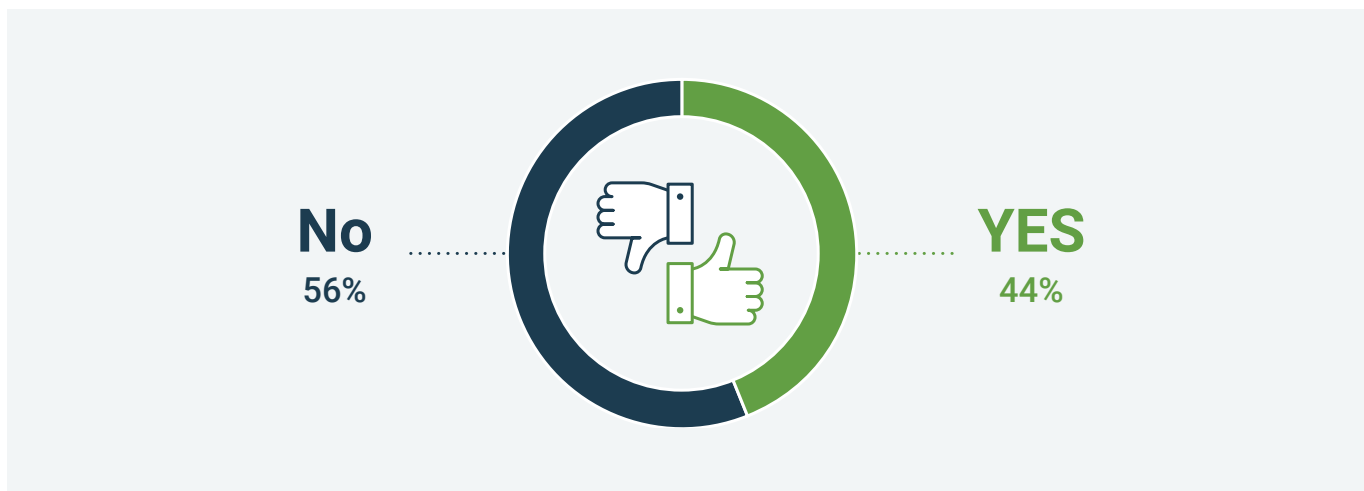
Figure 19 | Educational product need (Q22)



PROVIDER AND END-USER TRAINING NEEDS

A section of the survey asked respondents about their needs related to training providers and end users. Fifty-six percent of respondents indicated this was not a need ([Figure 20](#)).

Figure 20 | *Need for education and training to support training for end users (Q20)*



AMONG THOSE REPORTING A NEED

Those who indicated a need for education and training to support end-user training efforts were also asked to answer open-ended questions regarding their challenges and suggestions in this area. There were 46 comments regarding challenges related to end-user training efforts.

THERE WERE TWO MAIN CATEGORIES OF CHALLENGES:

- **IIS staff and resources:** Respondents commented on the lack of IIS staff to develop content and perform training. There was a concern about the limited number of IIS program staff available to provide technical support. Likewise, respondents commented about immunization program staff struggling to train on IIS-specific topics in a clear and consistent manner. More broadly, there were also concerns about funding and time to support training end users.
- **Provider office staff:** One of the most commonly stated challenges was the high rate of turnover in provider offices and that it led to a very high need for repeated training. Respondents also found it difficult to get participation from provider office staff in training sessions. Lastly, provider office staff often lacked technical knowledge, which made training more challenging.

SECTION 4. EDUCATION AND ASSISTANCE NEEDS

Respondents also suggested that there might be room for improvement for training end users by learning from other IIS about new training tools and techniques. There was also interest in joint development of training materials and leveraging a common learning management system.

Thirty-two respondents also provided comments in response to a question asking for specific suggestions for train-the-trainer topics. The feedback was a mix of requests for information about best practices for training and specific IIS topics/functionality that would benefit from training. Sample suggestions included:

COMMENTS ABOUT TRAINING

- Training strategies that leverage technology (e.g., YouTube-like video training).
- It is helpful to hear about how other states are providing training to end users and to leverage existing basic IIS materials (like the infographics/fact sheets AIRA developed) so we don't have to develop everything from scratch.
- Stress the importance of learner engagement, the needs of adult learners, Gagne's 9 events of learning, and Bloom's Taxonomy, and maybe touch on Maslow's hierarchy of needs and how it applies to the classroom. We tend to focus so much on IIS that we overlook the basic skills of being a great trainer.
- We need to offer training on a multitude of platforms such as web-based training available 24/7, webinars, and in-person training for those who learn differently.
- Include tips and resources for the trainers on how to fully engage with the end user and evaluate the training, considering the variety of training methods used.

COMMENTS ABOUT SPECIFIC IIS TOPICS/FUNCTIONALITY THAT WOULD BENEFIT FROM TRAINING

- How to train providers to improve their data quality in their EHRs (and therefore IIS)
- How to train end users to run coverage reports
- Use coverage rates, reminder/recall
- How to read error reports and resolve the errors
- How to work with your EHR vendor to ensure data quality is high



SECTION 5.

Conference Calls and Webinars

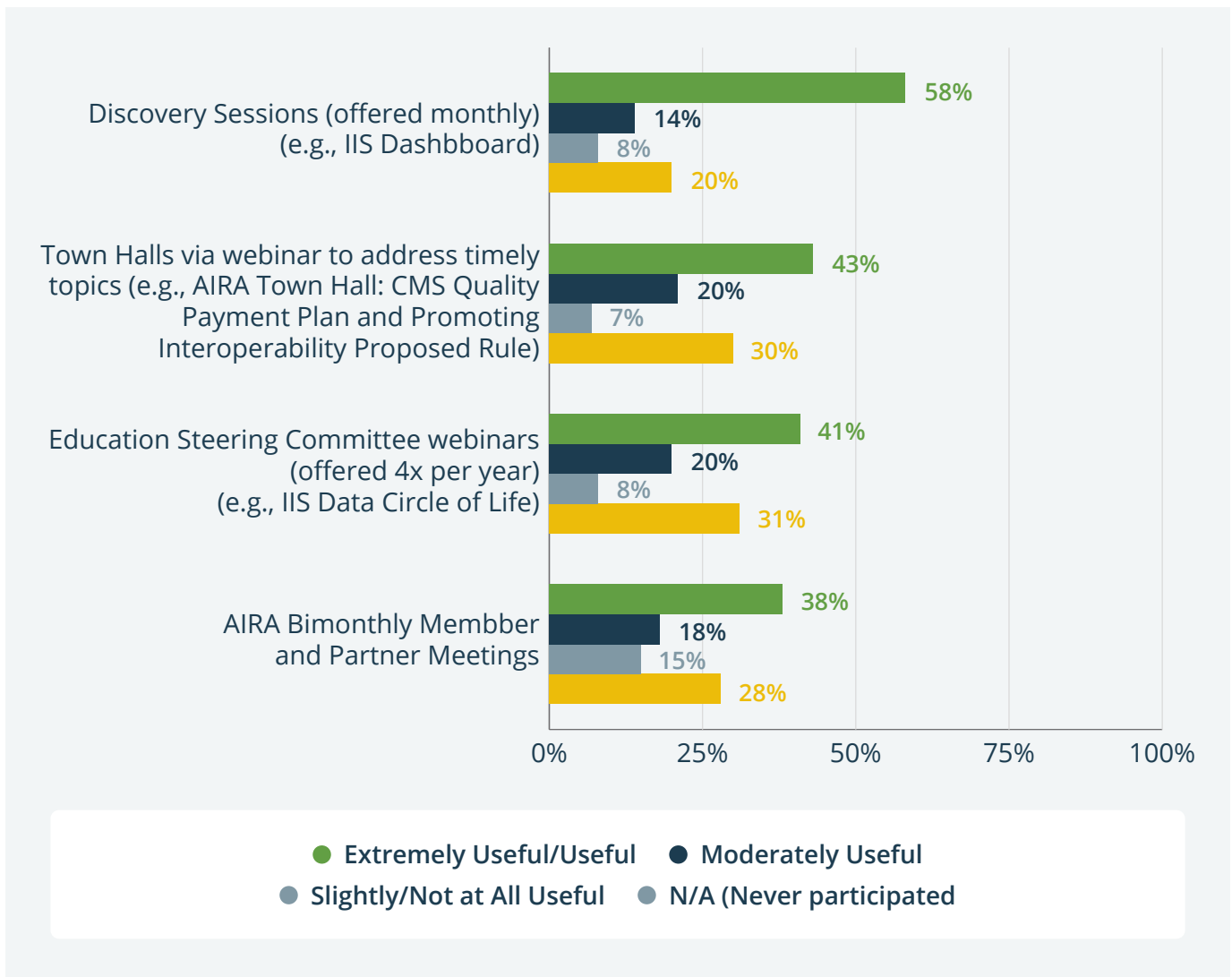
SECTION 5. CONFERENCE CALLS AND WEBINARS

SPECIFIC CONFERENCE CALLS AND WEBINARS

The survey also asked respondents to indicate the usefulness of various calls and webinars currently offered by AIRA and about conference call/webinar qualities, formats, and topics in general.

Most respondents had participated in the four types of conference calls/webinars listed; however, the percentage of respondents who replied that they had not participated indicates that there is an opportunity to reach more members of the IIS community. Discovery Sessions were identified as most useful, with 58% responding that the webinars were extremely useful or useful ([Figure 21](#)).

Figure 21 | Usefulness of current conference calls and webinars (Q23)



SECTION 5. CONFERENCE CALLS AND WEBINARS

Respondents were asked what content they are interested in learning about during AIRA conference calls and webinars, as well as if they had recommendations for adding value to the conference calls and webinars.

AIRA BIMONTHLY MEMBER AND PARTNER MEETINGS

There were 23 responses that provided suggested content for the bimonthly partner and membership calls. Many comments (eight) touched on the value of hearing updates from AIRA and its various partners. Association of Immunization Managers, the Office of the National Coordinator for Health IT, and CDC were specifically called out by respondents. Those who provided additional detail on suggested “updates” referenced new information, trending topics, and upcoming projects. Sample suggestions included:

- More detail on board discussions or items brought forward to the board
- Upcoming projects by partners that IIS can participate in
- More of a vision on how all of the partners are working toward a common theme/goal for the IIS community

Ten of the responses suggested topics that may also be suitable for other calls/webinars. Suggested content included development activities of other IIS, opt-in consent, grant writing, and funding opportunities.

DISCOVERY SESSIONS

There were 19 responses that suggested content for the Discovery Session webinars. Several comments expressed that it was beneficial to learn from other IIS programs and to use the sessions to gather community input. Several topics were recommended, including:

- Consumer access to IIS
- Data quality issues such as birthing hospital data, refugee data, and incomplete data
- How we can implement best practices in our jurisdiction
- New products from AIRA or annual updates
- New regular updates about meaningful use
- Ongoing support/training for new IIS managers
- SQL Queries that duplicate results on IIS web interfaces
- Strategies for communicating with EHR vendors to assist provider offices in working with issues
- Upcoming technologies and where IIS are headed

SECTION 5. CONFERENCE CALLS AND WEBINARS

EDUCATION STEERING COMMITTEE WEBINARS

For the Education Steering Committee, 23 responses were analyzed, and the majority offered specific recommendations for topics. Sample suggestions included:

- Best practice provider training strategies
- Best practices and standards for IIS
- Examples of situations in the exchange of data with other jurisdictions
- Introduction and explanation of new AIRA products
- Highlighting innovative IIS activities by programs
- Learning about various initiatives regarding standards and best practices
- Pain points from the national perspective that are preventing us from achieving our objectives that would educate the IIS community to harmonize our approaches
- Provider recruitment strategies
- Refining AIRA's products, services, and communications to focus on action and impact to the end users

TOWN HALLS VIA WEBINAR TO ADDRESS TIMELY TOPICS

Finally, there were 15 responses to the question asking for suggested content for the town halls to address timely topics. The most common responses indicated that town halls were useful for gathering feedback on new, challenging, or controversial topics and to hear the viewpoints of other IIS. There were several specific topics mentioned, including IIS regulations, new technologies, timely reporting of vaccines administered, and balloting and voting related to standards and interoperability (e.g., new standards such as Fast Health Interoperability Resources (FHIR)).

OPTIONS TO ADD VALUE TO CONFERENCE CALL AND WEBINARS

There were 18 responses to the question of how to improve AIRA conference calls and webinars. These responses fell into two categories: logistics and specific topics. The recommendations for improving the logistics of the conference calls and webinars included:

- Ensuring that agendas, slides, and minutes are available
- Providing more detailed agendas so the correct people attend the meetings
- Sending out pre-webinar questions to participants to encourage input
- Changing meeting times to earlier in the day

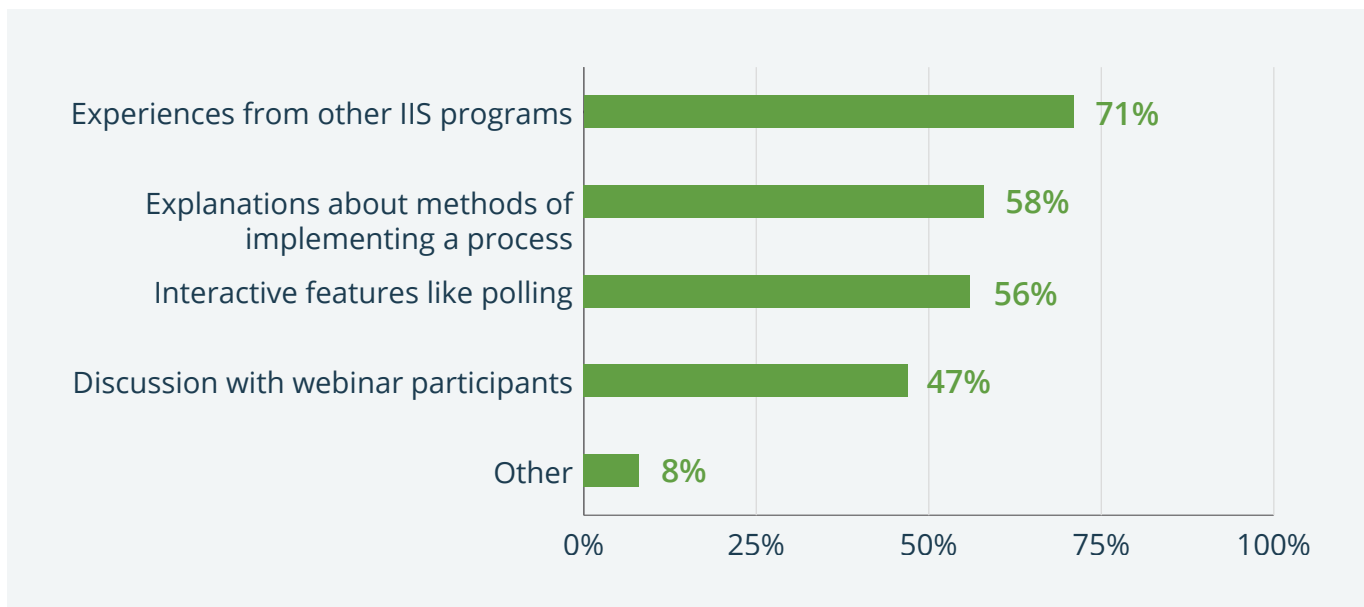
SECTION 5. CONFERENCE CALLS AND WEBINARS

Respondents provided several specific topics for conference calls and webinars, including best practices, school modules, educating providers about electronic submission, IIS-National Immunization Survey integration, SMarT AFIX implementation, meaningful use, and the future of interoperability. There were also several comments that stated that they had no recommendations and that the conference calls and webinars were useful.

ENGAGEMENT IN VIRTUAL MEETINGS

In response to the question “What helps you stay engaged in a virtual meeting?” the top answer was experiences from other IIS programs (71%) (Figure 22). Approximately half of the respondents also felt that the other three methods helped with engagement: explanations about methods of implementing a process (58%), interactive features like polling (56%), and the discussion with other webinar participants (47%).

Figure 22 | *Engagement in virtual meetings (Q29)*



SAMPLE RESPONSES TO “OTHER” INCLUDED:

- Active engagement combined with a clearly communicated value proposition
- Opportunities for interaction/questions
- Participating in a small group together
- Structured and engaging content
- Visual learner, need more hands-on demonstrations and workable solutions



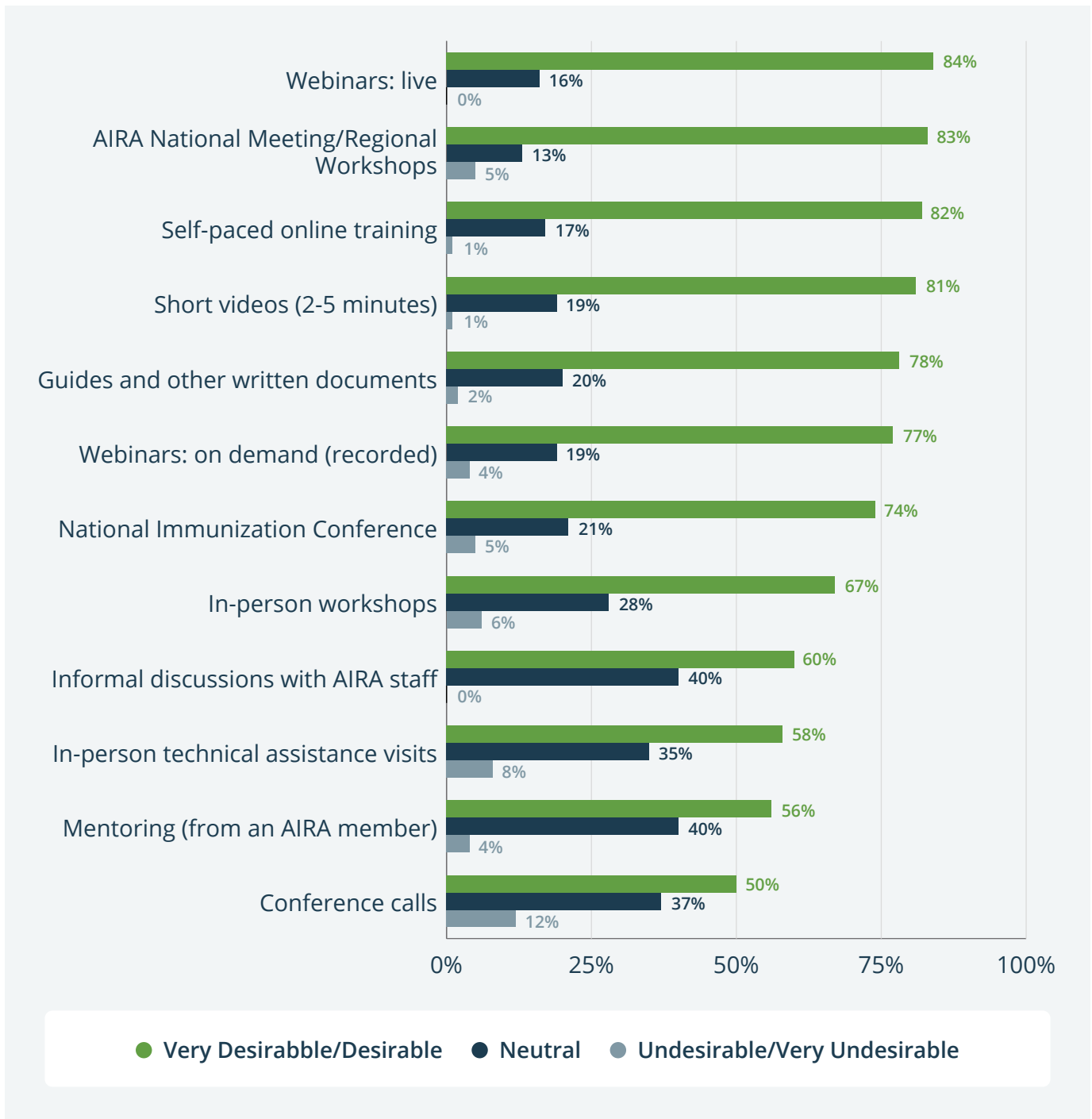
SECTION 6.

Education and
Communication
Preferences

SECTION 6. EDUCATION AND COMMUNICATION PREFERENCES

Respondents were asked to indicate the desirability of various educational delivery methods. Live webinars were rated the highest (84%), followed by the AIRA National Meeting/regional workshops (83%), and self-paced online training (82%) (Figure 23).

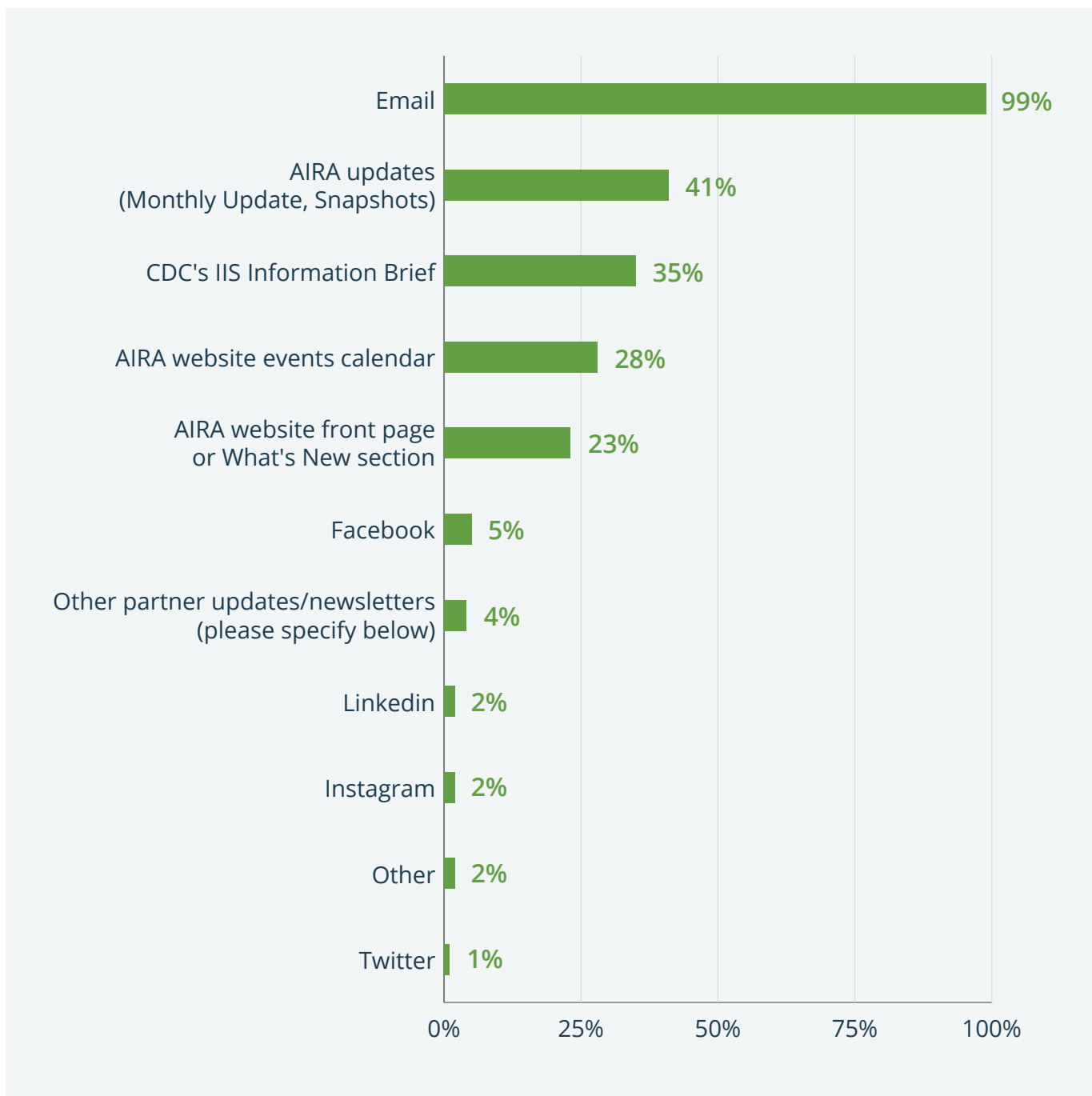
Figure 23 | Desirability of various education delivery methods (Q26)



SECTION 6. EDUCATION AND COMMUNICATION PREFERENCES

In order to be alerted to educational opportunities, nearly all respondents reported a preference for email notification (99%). Other top-rated notification methods included AIRA updates, such as the Monthly Update and SnapShots (41%), the CDC IIS Information Brief (35%), and the AIRA website events calendar (28%) (Figure 24).

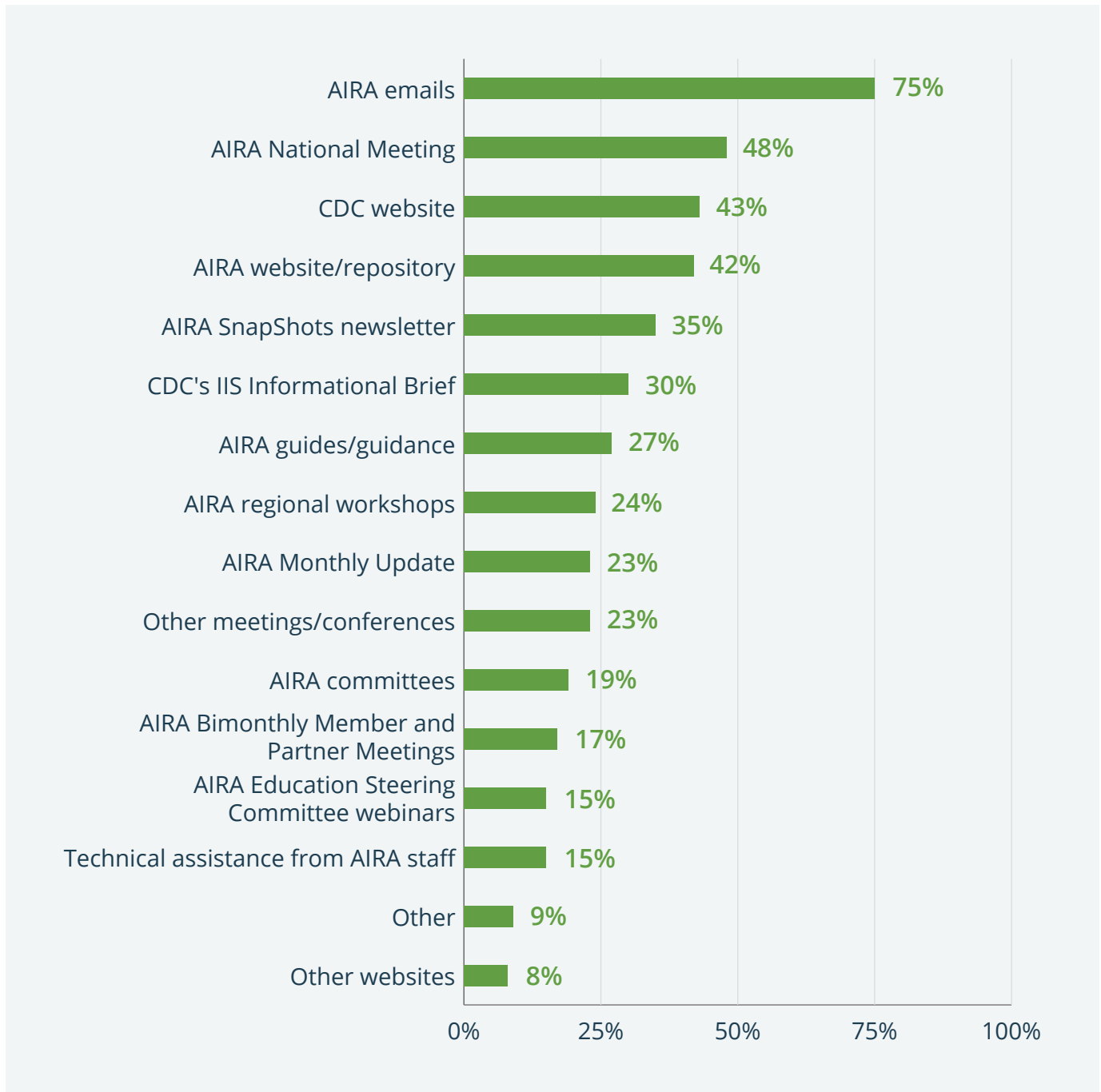
Figure 24 | Preferences to be alerted to educational opportunities (Q27)



SECTION 6. EDUCATION AND COMMUNICATION PREFERENCES

When asked about sources of information on IIS, the top sources were AIRA emails (75%), the AIRA National Meeting (48%), the CDC website (43%), and the AIRA website/repository (42%). However, respondents also noted that IIS information was obtained through a wide variety of other sources as well (Figure 25).

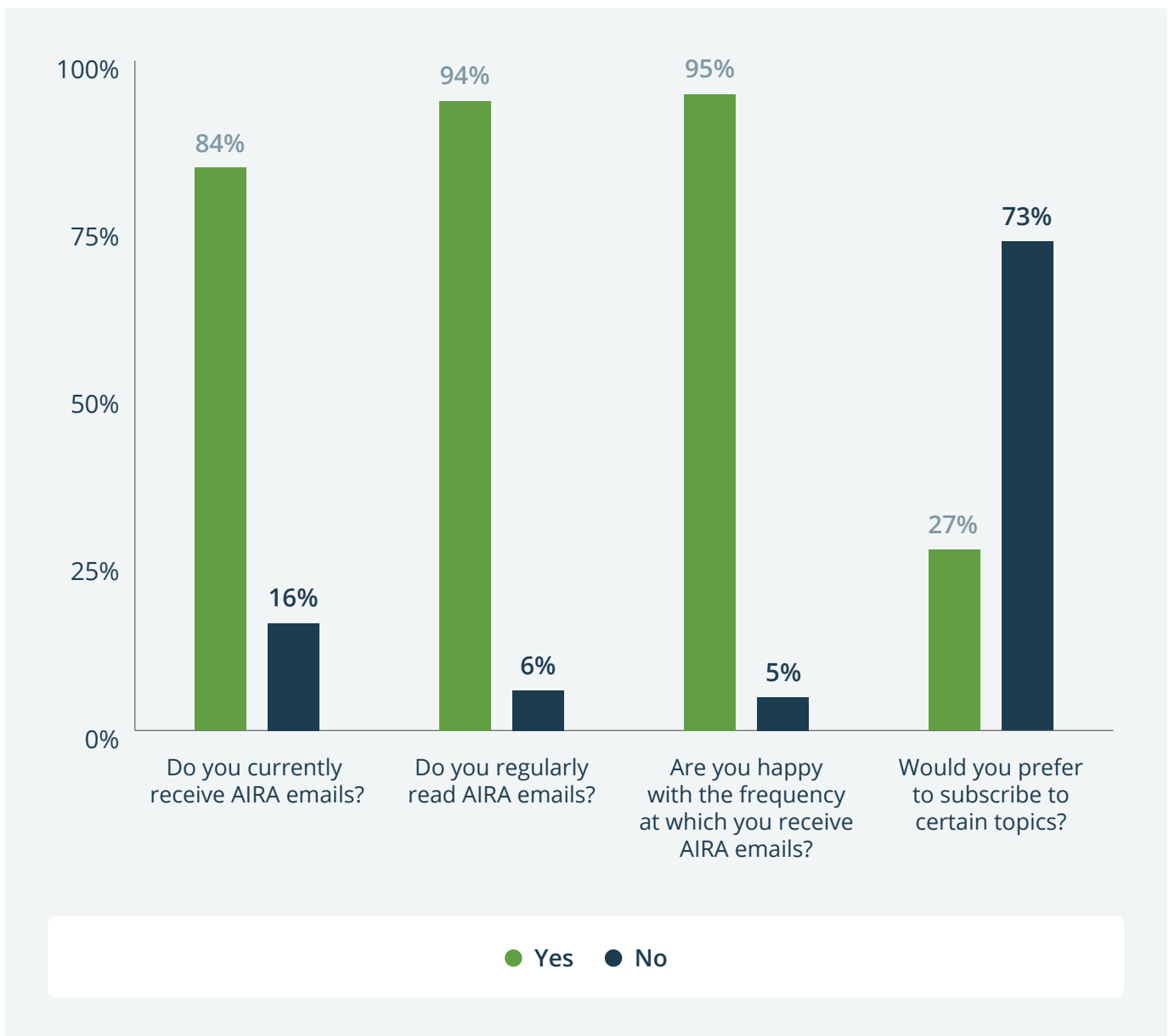
Figure 25 | Sources of information on IIS (Q28)



AIRA EMAILS

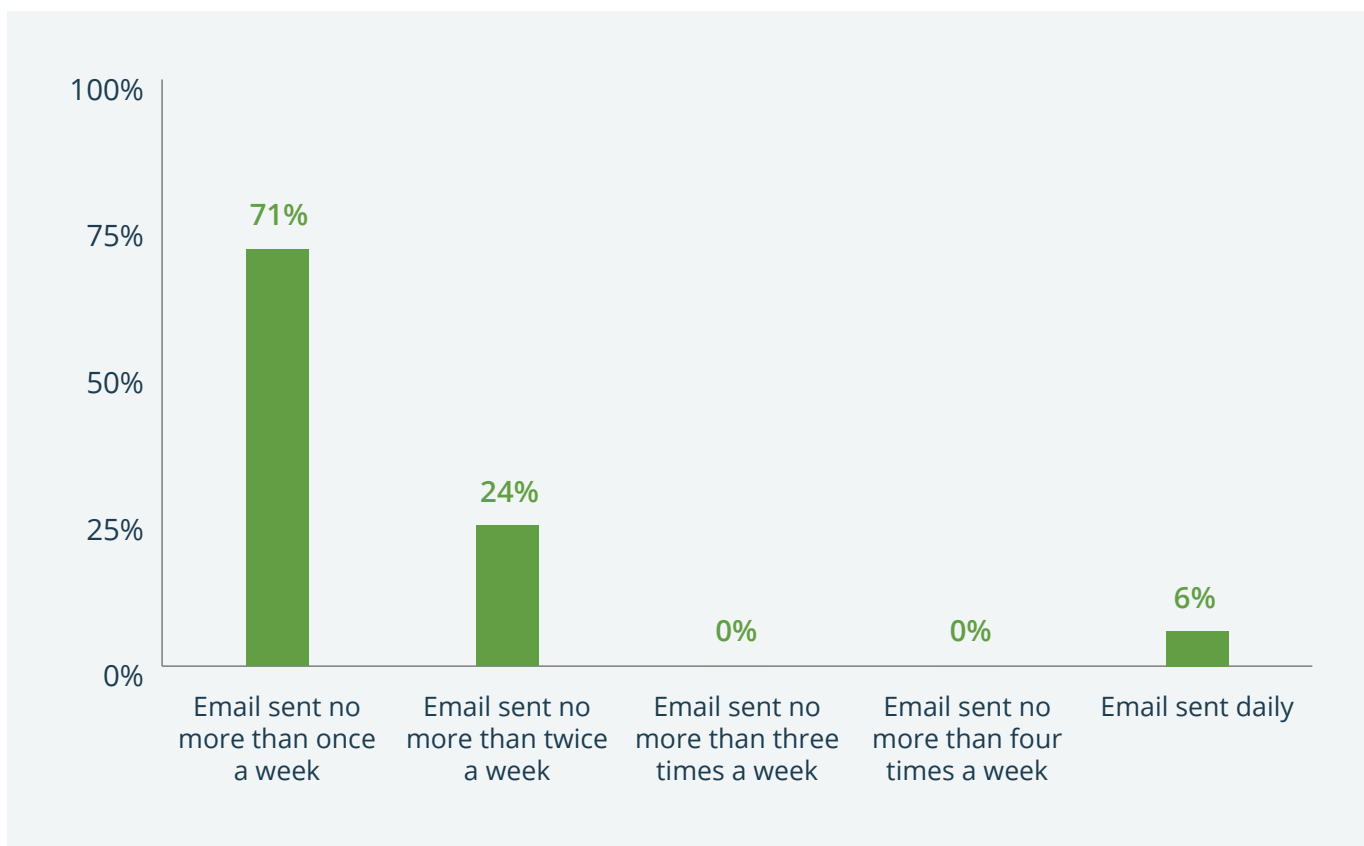
Respondents were asked several questions regarding AIRA email practices. Most reported receiving AIRA emails (84%). Of those that received AIRA emails, 94% reported regularly reading the emails, and 95% reported being happy with their frequency. Just over one quarter (27%) of respondents reported a desire to subscribe to certain topics (Figure 26). Among those not happy with the frequency of emails from AIRA (5%), most indicated a desire to receive no more than one email per week from the organization (Figure 27).

Figure 26 | Questions regarding AIRA emails (Q31, Q32, Q33, Q34)



SECTION 6. EDUCATION AND COMMUNICATION PREFERENCES

Figure 27 | Preference for email frequency among those not happy with frequency (Q35)



AIRA COMMENTS PROCESS

AIRA regularly requests comments from the IIS community about policies, regulations, and reports. Respondents were asked for recommendations for improving the comments process. Very few recommendations were provided, and examples include:

- It's hard to add my own feedback, because the regulations being commented on can be long, complex, and difficult to follow and there isn't always time for me to read through them and provide any additional feedback.
- I feel like there is too much energy going into these, but perhaps I am just overly cynical about comments producing real change.
- Anything you can do to make it quicker, simple, consumable will likely result in more feedback.
- AIRA has been doing a great job so far; it helps if the policies, regulations, reports are summarized and AIRA highlights the parts that apply to IIS/public health and provide their recommended comments for others to review/edit.



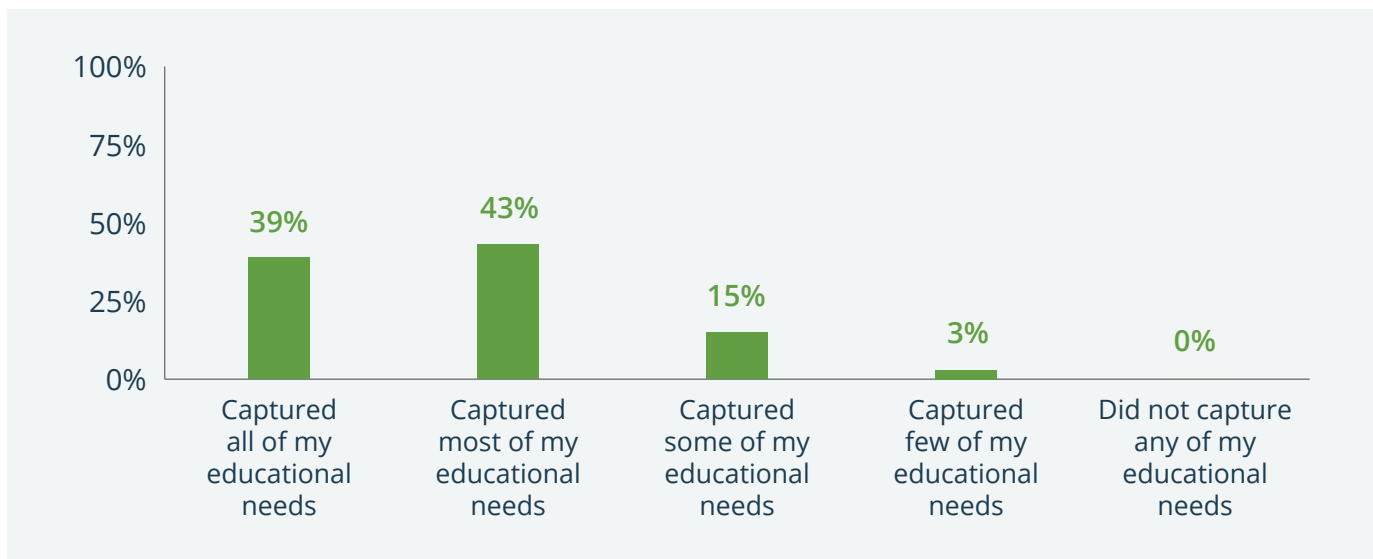
SECTION 7.

Survey Closing
Thoughts

SECTION 7. SURVEY CLOSING THOUGHTS

The final section of the survey asked whether the survey tool adequately captured respondents' educational needs and offered an opportunity to provide open-ended feedback. More than three quarters of respondents indicated that the survey captured most or all of their educational needs ([Figure 28](#)).

Figure 28 | Survey capture of educational needs (Q36)



SUGGESTIONS TO BETTER SERVE THE EDUCATIONAL NEEDS OF THE IIS COMMUNITY

When asked an open-ended question regarding how AIRA could better serve the educational needs of the IIS community, respondents offered seven specific suggestions:

- Another regional workshop to include programmatic and IIS staff
- Resources for incoming IIS managers
- Less focus on education/training topics and an improved focus on training delivery
- Provider-facing solutions aimed at educating providers
- Training opportunities for jurisdictions that do not operate their own IIS
- A template that IIS use for different activities
- Address issues by vendor

There was also a comment that will be important for AIRA to keep in mind when developing and evaluating educational resources: *"I think AIRA does a really good job providing guidance and materials to the IIS community. The challenge is having the time to read through the guidance and use them to meaningfully implement changes in our program. There is just so much going on with IIS right now that it's hard to know where to focus time and resources."*

SECTION 8.

Conclusion and Next Steps

The 2019 Education Survey results provide insight into the needs of the IIS community. A clear finding is that there are still significant educational and assistance needs within the IIS community that AIRA can play a role in fulfilling. The survey results highlight that there is overlap between the strengths and challenges in the IIS community. For example, provider relations and data were identified as both strengths and challenges for IIS. Not surprisingly, the topics that were identified as strengths and challenges were also identified as priorities for IIS (e.g., data quality, data, and work with providers). AIRA can support the IIS community by providing education and assistance on the topics identified as priorities.

Respondents also identified specific topic areas that need additional support via education and assistance from AIRA. The topic areas that were identified as most in need of support were data quality, technical capacity, data use and data sharing, best practices and guidance implementation, and interoperability. The survey results provide direction on the best methods for providing information and support to the IIS community: live webinars, annual meetings, self-paced online training, and short videos.

The Education Steering Committee will use these survey results to develop an annual education plan. The goal of the education plan will be to create opportunities to educate the IIS community on the topics identified as highest priority; prioritize topics for guide/guidance/best practice development; prioritize development of other educational products; and streamline content delivery to best meet the needs of IIS. Meeting these goals will ensure that AIRA continues to be a valuable source of information for the IIS community.

The American Immunization Registry Association would like to acknowledge and thank the Education Steering Committee and all of the survey participants for their support and assistance with this important project.

SECTION 8. CONCLUSION AND NEXT STEPS

APPENDIX B. COMPARISON TO 2014 AND 2017 EDUCATION SURVEY FINDINGS

While the 2017 and 2019 education surveys were similar; the surveys administered in 2014 and 2017 were significantly different from one another. Comparative information is provided in the tables below; however, differences in survey methodologies are also noted. The results from each survey should be interpreted as a snapshot in time.

Table 2 | Data about respondents

	2014	2017	2019
Total responses:	129	146	131
ORGANIZATIONAL AFFILIATION			
Public health agency:	88%	90%	95%
Vendor:	5%	1%	1.5%
Other:	7%	9%	3.5%
TIME SPENT ON IIS ACTIVITIES			
1–25%:	6%	12%	8%
26–50%:	*	10%	12%
51–75%:	*	10%	9%
76–100%:	68%	69%	71%
YEARS OF EXPERIENCE WITH IIS			
<1 year:	5%	7%	5%
1–2 years:	16%	19%	12%
3–5 years:	22%	25%	26%
>6 years:	57%	49%	57%

* 2014 data not comparable with 2017 or 2019 data

SECTION 8. CONCLUSION AND NEXT STEPS

Table 3 | Operational landscape

	2014	2017	2019
	CATEGORIZATION OF OPEN-ENDED COMMENTS	KEY WORD/PHRASE ANALYSIS	KEY WORD/PHRASE ANALYSIS
Challenges	<ul style="list-style-type: none"> • Interoperability/ meaningful use/EHRs • Workload/competing priorities • Data quality 	<ul style="list-style-type: none"> • Data quality • Staff/staffing • Funding 	<ul style="list-style-type: none"> • Staff/staffing • Data • Provider
Successes	<ul style="list-style-type: none"> • Provider participation/ use/retention • Data quality • VFC functionality 	<ul style="list-style-type: none"> • Provider(s) • Data • HL7 	<ul style="list-style-type: none"> • Provider • Data • Report/reporting

Table 4 | Education/assistance needs

2014	2017	2019
SIX TOPICAL CATEGORIES:	EIGHT TOPICAL CATEGORIES:	EIGHT TOPICAL CATEGORIES:
<ul style="list-style-type: none"> • Data quality • Data use • Privacy and confidentiality • Funding and IIS management • Provider relations • Technical capacity/integration 	<ul style="list-style-type: none"> • Best practices and guidance implementation • Data quality • Data use and data sharing • Immunization program/IIS integration • Interoperability • IIS management • Stakeholders and collaborations • Technical 	<ul style="list-style-type: none"> • Data quality • Data use and data sharing • Technical capacity • Best practices and guidance implementation • Interoperability • Immunization program-IIS integration • Stakeholders and collaborations • Policy • IIS management

Table 5: Sources of information, 2014 and 2017

	2014	2017	2019
Sources of information	<ul style="list-style-type: none"> • CDC website • AIRA website • AIRA National Meetings 	<ul style="list-style-type: none"> • AIRA National Meetings • AIRA website • AIRA Monthly Update 	<ul style="list-style-type: none"> • AIRA emails • AIRA National Meeting • CDC website

APPENDIX C. SURVEY QUESTIONS

To view a copy of the AIRA 2019 Education Survey and reference the actual survey questions, visit <https://www.surveymonkey.com/r/CopyAIRA2019EducationSurvey>. All required questions in the original survey have been made optional for ease of viewing.