



SNAPSHOTs

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

PRESIDENT'S REPORT

Dear Colleagues,

It's hard to believe the end of the year is upon us. Looking back on 2021, I'm so impressed by the hard work going on in jurisdictions across the country in response to the COVID-19 pandemic. I've also noticed some things beginning to return to normal, or maybe they're becoming our new normal, as we begin to (slowly) come out the pandemic. One example is the AIRA 2021 National Meeting. This year was a hybrid event with both in-person attendees and a virtual component, which has become the new normal. Having a virtual option was a reminder that the pandemic is definitely not over. Yet being able to attend in person felt like a return to the normalcy we've all been craving, and it felt so good to see people face to face.

We welcomed some new board members on October 1: IIS directors John Robison (who had previously been a temporary director) from Philadelphia, Jennifer Coiteux from Washington, and David Crowell from Nevada, and non-IIS director Sammy Chao from the Public Health Informatics Institute. Thank you to outgoing board members Dannette Dronenburg (secretary) from Washington, Aaron Bieringer (Governance Committee chair and past president) from Minnesota, and Tiffany Dent (non-IIS director) from STHealth for your hard work and contributions! As the incoming board president, I look forward to working with our new directors and continuing to serve the IIS community.

Speaking of community, there's a lot of great work being done by our peers across the country to help end the pandemic and help us avoid outbreaks of other serious diseases. An article in this edition of *SnapShots* showcases Nevada's work to achieve equity during the COVID-19 vaccine response, and another article describes how leveraging IIS as a tool can help recover and improve routine vaccination coverage rates. You can also read about how assessment of the vaccination of adults and pregnant women is an important tool to ensure these populations receive routine vaccinations, especially during the pandemic, and to help limit the spread of other vaccine-preventable diseases. Take a minute to read through the article below on measurement and using IIS to enhance reporting. There's also helpful information from the Public Health Informatics Institute on staffing and recruiting an IIS team.

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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.



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This newsletter also includes an exciting new column dedicated to technology. The column will appear in each edition of *SnapShots* and introduce you to technology concepts in a straightforward and streamlined way. Through this column, you'll learn how tech and public health can work together to further our shared goals.

I hope you can take a few minutes to read through the articles in this newsletter and thank you to those of you who took the time to write them. As always, let us know how we can help you share your expertise and knowledge or contribute to the community in other ways.

Regards,

Christy Gray

AIRA Board President

Director, Division of Immunization

Virginia Department of Health

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TECH CORNER

JOINT NAVIGATION: SETTING A COURSE FOR PUBLIC HEALTH PROFESSIONALS AND TECHNICAL STAFF, TOGETHER

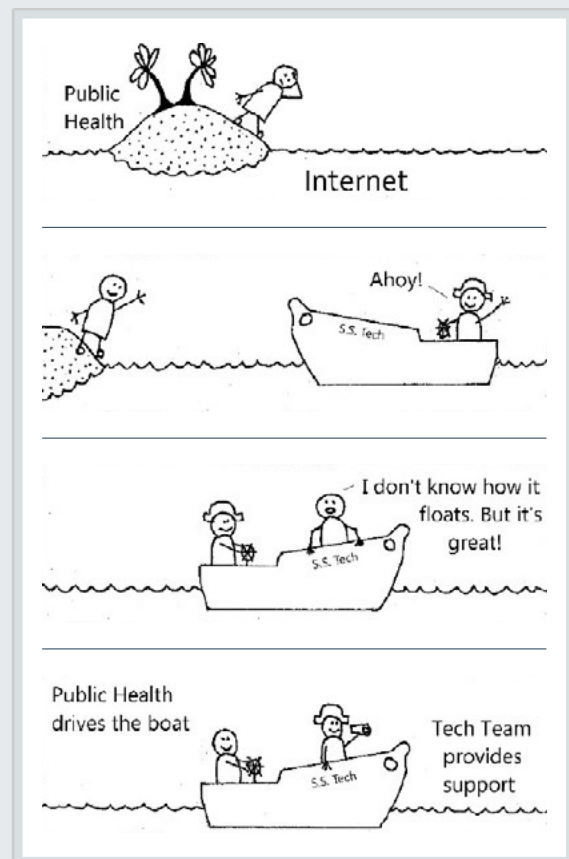
Immunization registries are a relatively new frontier in public health. They were created by city, county, and state public health departments across the United States in the 1990s.

A decade later, most registries were consolidated into statewide systems and became accessible online. For many pediatric locations these systems were the first step toward digitizing patient records, although it would still be another 10 years before electronic health records (EHRs) would experience widespread adoption. These first-of-their-kind registries demonstrated the benefits of embracing new technologies in public health.

Throughout the brief history of immunization registries, public health experts have played—and must continue to play—a central role. Since many public health experts are not technology experts, however, and may feel uncomfortable weighing in on issues outside their domain, technical teams often bear the full responsibility of navigating technical decisions on behalf of public health.

The future of immunization registries depends on the public health community engaging freely and openly with their technical teams to provide direction on the work these teams do. The more public health professionals know and understand about registry technology, the more direction they can provide to technical teams.

The goal of this article series is to provide public health experts with a pragmatic grasp of technical concepts so they can both understand their technical teams and provide effective guidance as public health increases its technical capabilities.





HOW NEVADA IS USING ITS IIS TO ACHIEVE EQUITY DURING THE COVID-19 VACCINE RESPONSE

In December 2020 when COVID-19 vaccines were released in Nevada, priority groups included health care workers and/or frontline workers and people over age 65, per guidelines from the Advisory Committee on Immunization Practices (ACIP).

As the vaccine rollout continued and COVID-19 vaccines became more readily available, distinct inequities throughout the state slowly came to light. As the vaccine response continues throughout the country, many jurisdictions have found a need to shift their priorities and focus on communities that are experiencing barriers to COVID-19 vaccine access. Nevada is using its IIS data to identify vulnerable communities and improve vaccine distribution to broaden the vaccine response and increase equity.

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As we continue to experience high caseloads of COVID-19 and the impact on our economy, the question of how we can further support vulnerable communities constantly arises, with little or no indication of where to begin. Traditionally, vaccine rollout begins by casting a wide net, making it available to everyone for whom it is recommended. As COVID-19 further advances and we continue to discover new strains, we want to be proactive instead of reactive and prioritize the communities that have challenges accessing medical care and higher vulnerability to COVID-19.

To do this, Nevada is working to incorporate the use of a Social Vulnerability Index (SVI), a tool used by the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry to help categorize where a geographic location falls within a vulnerability index. The SVI is a cross analysis of multiple factors that can impact a population's ability to receive care or access vaccines. The SVI takes multiple indicators into account, such as socioeconomic status, epidemiological risk factors, and population density. This enables us to pinpoint communities where interventions are most needed so we can shift strategies and more effectively serve vulnerable communities.

Nevada WebIZ (the state's IIS) is the only database in place that explicitly describes the status of a patient as they receive a vaccination. WebIZ supports the SVI by using the data collected during vaccination, such as age, county and ZIP code, race, and ethnicity. WebIZ is crucial in guiding our efforts by creating a foundation we can build on to further examine vulnerabilities unique to each community. Although we can run queries in IIS to assess areas of low coverage, the SVI creates layers using additional data from federal and county systems, such as hospital data, morbidity reports, demographer reports, and census tract data.

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HOW NEVADA IS USING ITS IIS TO ACHIEVE EQUITY DURING THE COVID-19 VACCINE RESPONSE *Continued from page 4*

Our goal in Nevada is to establish an equity framework for COVID-19 vaccine distribution that can be tailored to address other health needs in vulnerable communities. As we use the SVI to identify geographic locations that are experiencing the highest COVID-19 mortality rates, we hope to employ this same method in the future to include other vaccine campaigns, such as flu and pneumococcal. The adaptability of the SVI will allow us to drive policy, guide decisions surrounding resource allocation and distribution, increase the readiness of health planning and preparedness, and most importantly, serve the most vulnerable communities.

- Submitted by Sabra Arias, MPH, CHES,
COVID-19 Vaccine Data Analyst, CDC Foundation Field Employee
Nevada Department of Health and Human Services



LEVERAGING IIS AS A TOOL TO HELP RECOVER AND IMPROVE ROUTINE VACCINATION COVERAGE RATES

To help end the COVID-19 pandemic, individuals across the United States, from government officials to frontline workers, are engaged in a tireless effort to ensure Americans have access to and are vaccinated against COVID-19. Ending the pandemic is mission critical; however, it is also essential to develop and implement measures to recover from the subsequent public health consequences of the pandemic and build a more resilient vaccine ecosystem.

One such consequence is the severe disruption to routine vaccination, resulting in concerning deficits in vaccination rates across all age groups. Disruptions to routine vaccination services have been recorded throughout the pandemic, with immunization information systems (IIS) across the country providing crucial insights into the depth of the situation at hand. IIS from 10 states were leveraged to provide an analysis of the disruptions to routine vaccination services in a Centers for Disease Control and Prevention (CDC) publication. The analysis estimated more than a 60% decline in MMR vaccination for children aged 2 to 8 years and over a 60% decline in HPV vaccination for adolescents aged 9 to 12 years from March to May 2020 compared with March to May 2019.¹

When digging deeper into the data, the consequences of the pandemic have had a disparate impact on underserved and most vulnerable populations. Public childhood non-influenza vaccine doses were down by 11.2 million at the start of 2021.² Traditionally underserved populations, such as those who are insured through Medicaid, have not only seen the greatest decline in routine vaccination rates but are also recovering at a slower rate compared to those with private insurance.³

It is clear that an all-hands-on-deck approach is essential. A cross-sectoral, concerted effort is necessary to raise awareness of the importance of vaccination and implement coordinated strategies to improve access to vaccination services. Our article, ["Silent Consequences of COVID-19: Why It's Critical to Recover Routine Vaccination Rates Through Equitable Vaccine Policies and Practices,"](#) published in the *Annals of Family Medicine*, elevates examples of efforts underway from the local to national level to support recovery of routine vaccination rates, highlighting several states that have published data from the

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¹ Patel B, Murthy, Zell E, et al. Impact of the COVID-19 pandemic on administration of selected routine childhood and adolescent vaccinations—10 U.S. jurisdictions, March–September 2020. *MMWR Morb Mortal Wkly Rep.* 2021; 70:840-845. doi:10.15585/mmwr.mm7023a2

² National HPV Vaccination Roundtable. Catch up now: an urgent action call for health plans to close the adolescent vaccination care gap. https://hpvroundtable.org/wp-content/uploads/2021/03/Spring-2021-HS-Call-to-Action_FINAL.pdf

³ Mehrotra A, Chernew M, Linetsky D, Hatch H, Cutler D, Schneider E. The impact of the COVID-19 pandemic on outpatient visits: changing patterns of care in the newest COVID-19 hot spots. Commonwealth Fund. Published Aug 13, 2020. <https://www.commonwealthfund.org/publications/2020/aug/impact-COVID-19-pandemic-outpatient-visits-changing-patterns-care-newest>



LEVERAGING IIS AS A TOOL TO HELP RECOVER AND IMPROVE ROUTINE VACCINATION COVERAGE RATES

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state IIS to illustrate the declines in routine vaccination. However, even with many efforts underway, recovering from the decline in routine vaccination rates will take years without more robust strategies. Current modeling suggests it will take until between winter 2023 and fall 2031 to recover the missed vaccinations during the COVID-19 pandemic.

The article provides innovative and evidence-based strategies to recover and improve routine vaccination coverage rates now and build a more robust and resilient vaccine ecosystem that can withstand future disruptions.

The pandemic has underscored the critical importance of timely and accurate vaccination data and the role of IIS in that. Therefore, many of the strategies are centered on vaccination data.

In the short term, using reminder/recall is crucial to recover and improve routine vaccination coverage rates. The article urges stakeholders to communicate with state public health officials and medical societies about using reminder/recall systems to send email, texts, patient app notifications, and mailings to patients for routinely recommended and catch-up vaccinations in an effort to bring individuals in for their vaccinations now. While short-term strategies are necessary, building a stronger vaccination infrastructure is key to being prepared for today and tomorrow's health threats. Because of this, we included four essential areas that require long-term investment:



**Enhance
Immunization
Information
Systems**



**Build
Vaccine
Confidence**



**Mitigate
Barriers**



**Secure
Sustainable
Funding**



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LEVERAGING IIS AS A TOOL TO HELP RECOVER AND IMPROVE ROUTINE VACCINATION COVERAGE RATES

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The article urges stakeholders to enhance IIS through:

- Ensuring timely and complete exchange of data both inter- and intra-state as well as enabling patient access to vaccination data
- Dedicating sustainable financing to support IIS maintenance and enhancement

[Recent projections](#) indicate that recovering routine vaccination rates, particularly for the adolescent population, will be a matter of years and will require a cross-sectoral approach. We invite you to explore our article and review the detailed strategies to recover and improve routine vaccination coverage rates.

- Submitted by Alexandra Bhatti, JD, MPH,
Director, US Vaccine Public Policy Merck



THE CARROT ON A STICK FOR ADULT IMMUNIZATIONS: HOW QUALITY MEASURES WORK AND HOW IIS ENHANCE REPORTING

You often hear the idiom “carrot and stick” or “carrot on a stick,” meaning an incentive or a combination of incentives with compliance. For me, this conjures up an image of a carrot dangled in front of a balky donkey and is quite relevant when referring to quality measurement in health care.

Quality measures are a priority for the government, payors, and health care organizations themselves. They are tools that help measure or quantify health care process, outcomes, patient perceptions, and organizational structure and systems associated with providing high-quality care. Agencies like the Centers for Medicare & Medicaid Services (CMS) use measures in programs to improve quality of care and outcomes for patients and in pay for performance for health care providers.

Measurement is important because it helps close the gaps in utilization of important interventions like immunizations. Stakeholders across the health care delivery spectrum aim to improve individual and population level health, improve the quality of health care delivery, and lower cost drivers in the health care delivery system. This triple aim can be achieved through levers like the public reporting of quality measures and feedback to those who are being measured to improve health and health care for all individuals and communities.

A recent article in the *Journal of the American Medical Informatics Association (JAMIA)* by Byron et al and myself, titled [“Harnessing electronic clinical data to report adult and prenatal immunization quality measures.”](#) reports on data collected from health plans on new adult immunization measures that are part of the widely used Healthcare Effectiveness Data and Information Set (HEDIS). These two measures assess vaccinations in adults and pregnant women using a new method that better incorporates electronic clinical data. The Adult Immunization Status (AIS) and Prenatal Immunization Status (PRS) measures assess whether adults and pregnant women, respectively, received routine vaccines according to clinical guidelines.

The HEDIS data set is developed and maintained by the National Committee for Quality Assurance (NCQA). HEDIS measures are used to track year-to-year performance of health plans and are often a component in health plan accreditation. HEDIS measures are also used in program requirements. For example, CMS uses HEDIS measures in the Star Ratings Program, which assesses quality of care provided by Medicare Advantage, the health maintenance organization plan that provides services to Medicare beneficiaries.

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THE CARROT ON A STICK FOR ADULT IMMUNIZATIONS: HOW QUALITY MEASURES WORK AND HOW IIS ENHANCE REPORTING

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What are these new measures, and why are they different from others?

These measures target health plans that are ideally situated to monitor immunizations given in a wide range of venues where adults receive vaccinations (e.g., physician offices, retail pharmacies, the workplace). Health plans aggregate these data across diverse provider locations and use the information to access coverage and target quality-improvement efforts. Unique to these measures is the use of a new electronic data method that encourages more structured data capture and sharing across systems that have been built to monitor immunizations, such as IIS.

The *JAMIA* article shows how quality measures that use data in addition to claims can facilitate and encourage the flow of electronic clinical data across providers and plans, in both directions, and how multiple sources of information can strengthen vaccination coverage reporting. These new adult measures are specified for structured electronic clinical data reporting and include claims, registries, and electronic health records. They complement the existing composite measures for young children (often referred to as the HEDIS combination-10 measure or 4-3-1-3-3-1-4-1-2-2)⁴ and adolescents. NCQA is exploring how to add electronic clinical data systems reporting to the childhood and adolescent measures, which would complete a suite of measures that address vaccinations at key points in the lifespan using electronic data sources.

A side note worth reporting: the non-composite composite

It's worth mentioning two recent posts in *Health Affairs* ("[Unraveling A Composite Measure To Drive Immunization Uptake In Adults: A Critical Compromise](#)" and "[Moving More Electrons To Optimize New Adult Composite Immunization Measures](#)"). These blogs declared that electronic reporting of measures is the future of measurement because it makes reporting easier for health plans and providers while also improving the completeness and robustness of adult data. However, as part of an ongoing debate about composite measurement, NCQA announced that for the 2020 HEDIS data set, the AIS measure will report only individual vaccine rates rather than requiring reporting of an overall composite also. As stated in the first blog, "The point of the composite was to provide a more comprehensive view of care for the adult patient and to serve as a measure of how well the system performs in supporting receipt of routinely recommended vaccines. Calculations of the individual measures (that is, vaccine rates) were always part of the composite measure, allowing providers and health plans to focus on uptake of vaccines that lag in their population and quality improvement efforts to raise those rates."

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⁴ 4 DTaP, 3 IPV, 1 MMR, 3 Hib, 3 Hepatitis B, 1 Varicella, 4 Pneumococcal Conjugate, 1 Hepatitis A, 2-dose or 3-dose Rotavirus, and 2 Influenza vaccinations



THE CARROT ON A STICK FOR ADULT IMMUNIZATIONS: HOW QUALITY MEASURES WORK AND HOW IIS ENHANCE REPORTING *Continued from page 10*

It is my hope and the hope of many in the adult immunization community that the composite measure will be “put back together again.” Composite measures provide a broad perspective on the system of vaccination, rather than a campaign to increase coverage with one vaccine—it encourages a systematic approach for all vaccines.

Moving forward

Health plans can report adult measures and are seeking electronic data to supplement claims. Quality measure reporting that encourages connections to electronic data sources is a significant step not only in performance monitoring and improvement but also toward increased use of IIS to advance health information exchange for patient care.

Quality measure reporting that encourages connections to electronic data sources is a significant step not only in performance monitoring and improvement but also toward increased use of IIS to advance health information exchange for patient care.

- Submitted by Angela Shen, ScD, MPH,
*Independent Consultant, Professor and Senior Fellow
School of Medicine and Leonard Davis Institute, University of Pennsylvania*



PLAN FOR SUCCESS WITH STAFFING AND RECRUITING YOUR IIS TEAM!

Immunization information system staff are frequently called upon to wear many hats, which can make planning for IIS staffing and recruitment challenging. Determining what roles and functions are most needed to best support the success of an individual IIS begins with determining what an IIS team needs to *know* and *do* to be high performing.

With funding from the Centers for Disease Control and Prevention (CDC), the Public Health Informatics Institute (PHII) developed the [IIS Core Competency Model](#) to answer these questions and better inform crucial IIS staffing decisions. The IIS Core Competency Model presents a framework of core competency domains for IIS staff based on key areas of IIS performance, ranging from leadership and management to data use. This model offers a pathway for IIS performance success to align with national immunization goals and recognized operational strategies. PHII is working to ensure all of its eLearning offerings and other courses going forward correspond to this framework.

This and other IIS-related resources can be found on the [IIS Learning Hub](#), which also provides guidance and toolkits on working within an IIS. Provided toolkits include the newly launched IIS Procurement Toolkit, which provides guidance for navigating the complex process of procuring a new IT solution effectively to avoid frustrating, time-consuming, and even costly missteps. Visitors can also benefit from more general guidance on day-to-day IIS operations and management, as well as walk-throughs of more highly specialized topics. The IIS Learning Hub also offers examples of stories from the world of IIS, including podcast interviews with IIS experts Therese Hoyle and Mary Beth Kurilo. Readers can also find feature profiles on state IIS.

The [IIS Learning Hub](#) regularly undergoes updates and refreshes to remain current and relevant in a rapidly evolving immunization world. PHII is grateful for ongoing collaborations with CDC, AIRA, and IIS teams from around the United States in developing and refining these tools.

- Submitted by Piper Hale, PHII