

Commentary on “Using Quality Measures to Drive Improvements in Immunization Rates: Findings from a Real-World Evaluation from 3 US Health Care Organizations” by Esselman et al.

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Keywords: immunization, vaccines, adult immunization status, quality measurement, performance measures, interoperability, HEDIS, immunization information systems, COVID-19

FOR DECADES ADULT IMMUNIZATION coverage rates have languished well below national coverage targets.¹ Coverage for influenza has hovered ~60% for over a decade with even lower coverage in certain racial and ethnic groups.² In part, this is due to a lack of awareness among consumers about routinely recommended vaccines, and providers may not see patients regularly, routinely assess patient vaccination status when they do, or not follow through with a strong recommendation when discussing which vaccines are needed.³ Even if adults may know vaccines are recommended, they may not be aware of which vaccines they need.

Another challenge is the structural complexity of our health care delivery system, in which access to and coverage for preventive care are fragmented.³ Insurance coverage for adults is pieced together by employers, Medicaid, and Medicare, leaving a small yet significant proportion of the adult population uninsured or underinsured when it comes to vaccines.⁴

To address some of this fragmentation and draw attention to some of the other barriers, concerted efforts by the National Adult and Influenza Summit, coled by the U.S. Department of Health and Human Services, U.S. Centers for Disease Control and Prevention (CDC), and Immunization Action Coalition, and its partners including the National Committee on Quality Assurance have resulted in the development and adoption of 2 new quality measures into the NCQA HEDIS[®] data set.^{5,6}

Lessons Learned: Completing the Immunization Picture Across the Life Course

For nearly a decade, influenza measures peppered the measurement, development, and quality improvement landscape with only minor variances in the specifications (eg, different denominators for population). With the addition of the prenatal immunization status (PRS) measure that focuses on receipt of vaccines in pregnant individuals, and the adult immunization status (AIS) measure that focuses on the receipt of routinely recommended vaccines in adults 19 years and older, indoctrinated into the NCQA catalogue of measures in 2018, adult immunization measures now provide a more complete view of the routinely recommended schedule for adults.⁵

Modeled after the child and adolescent composite measures that capture all routinely recommended vaccines for children and adolescents, these new adult measures provide a complement to the long-standing existing measures. Moreover, this suite of immunization measures (for children, adolescents, adults, and pregnant individuals) are composite measures that aggregate individual performance measures into a summary performance rate and can be useful to patients, providers, and policymakers.

As a champion and advocate of composite measures, it is essential to emphasize that composite measures not only provide a summary of performance across the suite of routinely

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recommended vaccines for a given age cohort, but they also serve as a testament to how well the health care system performs in ensuring individuals are fully vaccinated, providing a glimpse into overall access and utilization of primary care services.⁶

In the recent article by Esselman et al, findings from an assessment of the AIS measure in medical groups complement the evaluation by NCQA in health plans.^{5,7} Notably, in both the NCQA evaluation and the Esselman analysis, 2 key findings emerged: (1) implementation of adult measures is feasible and (2) measurement can lead to increased coverage rates, providing further evidence that these measures can be useful tools. A challenge to implementing measures that is often echoed throughout the health care community is the declaration that implementation is not feasible, particularly for stakeholders who view measures as tools for quality improvement as opposed to stakeholders who view measures as tools for accountability.

These recent findings by Esselman et al adjusted the NCQA health plan developed measure to accommodate medical groups and further provide evidence to support not only the flexibility of the AIS measure to meet real-world needs but also the feasibility of implementing an important lever in the toolbox when it comes to increasing coverage in adults.⁷

Support for Registries: Another Beneficiary of These Measures

Because the AIS and PRS measures were designed as NCQA Electronic Clinical Data System (ECDS) measures, the need for electronic reporting to meet quality measures built on the ways data were historically collected. As a result, a significant contribution of the AIS and the PRS measures has been recognition of and increased reliance on the utility of registries, which allow for not only electronic submission of data but also supplementation with data from external sources.⁵

Administrative data gathered from claims, encounter, enrollment, and provider systems; survey data; and hybrid data extracted from administrative and medical record data can all be consolidated in a single place, making access to more complete data easier for everyone who needs it and, as described by Byron and colleagues, improving performance monitoring and improvement planning.

Although the opportunity for registries to improve quality measures, and ultimately patient outcomes, has been realized, their potential has yet to be optimized. The example of preventive care for adults serves to highlight the remaining shortcomings. First, because adults seek immunization services at a wide range of locations (eg, pharmacy, doctors' office, and worksite wellness clinic), electronic systems must be widely connected. Second, providers must be able to access external sources of data without undue administrative burden.

This means automatic connections and updates among and between data systems into a patient's electronic medical records. Lastly, all providers who see adults must use the systems to accurately enter in vaccine doses administered in a timely manner to ensure completeness and quality of data.

Good from COVID-19?

A silver lining of the current COVID-19 vaccination campaign is the mandatory requirement to submit data on

all COVID-19 vaccinations administered. Immunization Information System (IIS) submission for COVID-19 vaccines is mandatory per the CDC provider agreement that spells out requirements vaccinating sites must meet to receive federally purchased vaccines for vaccination programs.⁸ This means reporting to the state IIS or other approved CDC systems.

Since COVID-19 vaccination programs are administered in all 64 immunization jurisdictions and target essentially all adults in the United States, a tremendous number of new interfaces have been established between providers (particularly adult and nontraditional providers) and jurisdictional IIS across the nation.⁹

Despite challenges in receiving information for some organizations, establishing interfaces among the thousands of Electronic Health Records (EHRs) and the jurisdictional IIS is significant. Currently, it is estimated that IIS capture immunization data representing ~96% of children, 82% of adolescents, and 60% of adults. However, adult data are highly variable across jurisdictions, ranging from <25% in 5 jurisdictions to >95% in 6 states.⁹

The extent to which COVID-19 has increased the numbers is still to be fully realized and quantified, although it is clear we have made progress in real-time connections with health care organizations (eg, health systems and pharmacies), and through traditional web-based user interfaces.

The potential impact of these increased connections is profound. However, it is critical that as we begin to emerge from the haze of the pandemic, adult COVID-19 providers remain engaged in vaccinating adults not only for COVID-19, but also for all CDC-recommended vaccines. Although H1N1 efforts did not focus singularly on adults and adult providers, similar EHR-IIS connections made during the H1N1 pandemic were not maintained and, therefore, had to be re-established for the COVID-19 vaccination program.

Getting all adult providers, regardless of whether they are administering vaccines, in the IIS is critical for establishing the complete network of providers in an area. Furthermore, ensuring that all providers who administer vaccines are able to easily record vaccinations and that individual systems connect with jurisdictional systems is necessary for having a complete picture of an individual's vaccination status. This progress would also support increased compliance and reporting of adult immunization quality measures as well as a quick and comprehensive snapshot of the population situation.

Indeed, the benefits are easy to see, but this progress should not satisfy any of us toward complacency. Important goals remain. Imagine a future in which all providers, including, for example, specialists who want to ensure their patients are up to date on vaccinations, can check the IIS through 2-way messaging in their electronic medical record. Or, one in which consumers can access a user-friendly portal to see their complete immunization history at any time. The more people who can check an individual's immunization status, the more likely we will be to overcome the dismal adult vaccination rates we have been talking about for decades.

Acknowledgment

The author thanks Charlotte Moser for her thoughtful and thorough review of this article.

Author Disclosure Statement**Funding Information**

No funding was received for this article.

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