

Registries & Information Sharing

# Exploring the History and Rise of Data Opportunity Systems—Part 2

BY MIKE POPOVICH



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Part 1 of this series, published in the March 2019 *Immunization Guide for Pharmacists*, included a review of the history of immunization information systems (IISs) in the United States and the drivers that over time have increased their value. The case was made that after 2½ decades of expansion and growth, these population-based data repositories are no longer just data storage systems; they are now “opportunity systems.”<sup>1</sup>

Consider the value of these data systems across the immunization ecosystem to engage, empower, and influence individual, community, and cultural behavior. Health care professionals would struggle to find a similar health data framework so universally valuable to providers and patients as the IIS.

Let’s explore an example of how to put these data to work.

Public health professionals want to close immunization care gaps. An initiative to accomplish this could start with payers who can measure a provider’s performance in patient coverage rates. Payers could implement a pay-for-performance incentive program to office-based or pharmacy immunization providers. Incentives from such a program could result in more immunizations delivered. Payers, clinicians, caregivers—and, most of all, the patient—can reap the benefits of this model through lower health care costs, increased provider revenue, and, perhaps most important, increased disease prevention.

The opportunity to leverage patient immunization history and data at the point of care in a pharmacy environment can increase the trust and credibility of the pharmacist as a member of the patient’s health care team. This opportunity can also create a new framework in which to integrate prescription, prevention, and consultation services. For example, as discussed in part 1 of this series, the US population is nearing 330 million people. In an 11-state sample, 95% of those state populations had an immunization record in their state’s IIS. Even if 80% of a state’s population has information on immunizations in the state’s IIS, pharmacists would have access to the patient immunization his-

ories of more than 260 million individuals across all age ranges.<sup>1</sup>

In 2019, it is not uncommon for a public health immunization information system to capture 10 immunization events per individual. An understanding of the potential power of these data systems begins with realizing that reaching 1 billion patient immunization records in a nationwide IIS requires only an average of 3.7 immunizations per patient. If all IISs captured data from electronic medical records and pharmacy, the health care community could achieve this in no time.

In 2017, results from a pharmacy/public health partnership study evaluated the impact of a real-time connection to immunization decision support.<sup>2</sup> The investigators found that 82% of adult patients presenting at the pharmacy counter for an influenza immunization were behind on 1.6 other immunizations. When patients were asked whether they would like to also receive their missing immunizations, the pharmacy team was able to close 41% of those immunization gaps at the same point-of-care moment.

For additional context, consider the recent measles and pertussis outbreaks, which have led to a significant increase in vaccine awareness in the United States.<sup>3</sup> This increased public awareness has caused many individuals to wonder, “Am I protected?” Pharmacist consultations, backed with the knowledge of the patient’s immunization history, can influence and encourage action on the patient’s part. More patients may then agree to not just their flu shot, but also potentially a tetanus/diphtheria/pertussis vaccine, the pneumococcal polysaccharide vaccine (PPSV23), or a vaccine to protect against hepatitis A or B virus infection.

The following summaries describe these and other opportunities to use immunization data systems to generate outcomes.

## OPPORTUNITY NO. 1: CLOSE PATIENT IMMUNIZATION CARE GAPS

Clinicians should ensure their pharmacy immunization data link with public health data and support

**TABLE. PROJECT IMPACT GAP CLOSURE RATES<sup>2</sup>**

Number of flu shots administered	500
Average number of missing vaccinations in 82% of patients <sup>2</sup>	1.6
Total expanded opportunities in pharmacies	656
Average gap closure rate	41%
Expected increase in nonflu vaccinations	269
Average blended retail cost per nonflu vaccination <sup>2</sup>	\$172.20
Expected revenue increase	\$46,315

2-way information and decision-support tools. This can lead to not only increased disease prevention but also added revenue. The **TABLE** illustrates a potential revenue gain linked to patients who request a flu shot and consultation services provided by pharmacists about other immunizations needed concurrently.<sup>2</sup>

If pharmacy consultations continue to improve, resulting in a 60% gap closure rate during a flu shot encounter, the monthly revenue on the same 500 flu shots would be more than \$67,000 per retail location.<sup>2</sup>

#### **OPPORTUNITY NO. 2: SUPPORT PATIENT-INTEGRATED CARE SERVICES**

Immunization gaps are like any other gap in care that pharmacies track through their medication therapy management (MTM) efforts. A solid MTM program that can query patients' immunization records and identify their gaps in immunizations prior to prescription alignment outreach creates the opportunity to engage the patient in other needed services, such as immunizations. MTM outreach can encourage patients to both schedule a flu shot and add on past-due immunizations. If a proactive MTM effort included the immunization component and this effort led to another 500 flu shots with results similar to those illustrated above, that model could translate to another \$46,000 to \$67,000 in monthly revenue.

#### **OPPORTUNITY NO. 3: FOCUS ON SERIES COMPLETIONS**

By focusing on current pharmacy customers who have not been receiving their immunizations in store, retailers can expand pharmacy loyalty and create the opportunity for more in-store visits. Immunization series reminders are a suggested approach to achieving this goal. Sending an alert to an existing patient who started an immunization series elsewhere, via text or by linking this information to MTM tools, can improve consumer health engagement and empowerment.

#### **OPPORTUNITY NO. 4: STRENGTHEN PARTNERSHIPS**

Create a patient-centric "immunization ecosystem" that surrounds the patient with immunization education, opportunity messages, and access to administration. This ecosystem should include health care providers that immunize, public health

officials, payers, vaccine manufacturers, immunization coalitions, and health advocates. A retail pharmacy with a proactive immunization team that makes its state IIS data a resource can leverage demographics and analytics to assess patient immunization gaps as well as the immunization gaps of the general population living within a given radius of each retail location. These collaborative patient-centric campaigns create an opportunity to reduce the risk of vaccine-preventable disease in a community.

A quick calculation of the potential revenue increase per retail pharmacy per month, using 500 patients per month as a baseline, reveals that establishing opportunity No. 1 (above) leads to an average of \$50,000 in new revenue per month. Moreover, proactively collaborating in the 3 other opportunity areas (targeting \$25,000 for each) creates a total goal and return on investment of \$125,000 per month.

Not all pharmacists, with their limited time constraints, will find taking advantage of these opportunities feasible; however, pharmacy management should be able to implement these programs. Managers can accomplish this by making a phone call to the state public health department or an IIS technology partner and setting the first goal as automating compliance reporting and establishing a 2-way data exchange. At that point, the key technical framework would be in place, with a window into each pharmacies' patient immunization histories.

The door to opportunity is ready to open, and pharmacy managers should consider these repositories as "data pipes" similar to pipelines linked to oil and gas wells. Pharmacy leadership should feel empowered when collaborating with key partners to turn a valuable raw resource into intelligence that allows their pharmacists to engage customers with timely, meaningful information.

Pharmacists will play a bigger role in reducing the risk of vaccine-preventable disease in the future. Armed with opportunity systems of state IISs filled with data ready to improve the health of individuals, pharmacists will have the tools to empower their customers and influence health behavior.

#### **REFERENCES**

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