



## Immunization information systems serve critical function, but challenges remain: AAP

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Immunization information systems (IISs), also known as vaccine registries, are an increasingly important part of the technology involved in tracking and encouraging immunization of the population.

An AAP policy statement, updated from 2006, describes the functions, benefits and challenges of IISs. The policy *Immunization Information Systems*, from the Committee on Practice and Ambulatory Medicine, Council on Clinical Information Technology and Section on Early Career Physicians, is available at <https://doi.org/10.1542/peds.2022-059281> and will be published in the October issue of *Pediatrics*.

### Myriad benefits, challenges

A centralized repository of an individual's immunization history can facilitate full and timely immunization and improve the response to public health crises, such as in natural disasters and during the rapid rollout of new vaccines, like H1N1 influenza in 2009 and COVID-19 in 2021.

IISs also benefit pediatricians, as they enable vaccine predictive logic to be implemented by even the smallest practices and assist with inventory and reconciliation of vaccine doses administered. This helps ensure accurate billing and reduces waste of expensive vaccine product.

IISs have been envisioned since the 1960s and in use since the 1990s. Implementation has been slow, however, due in large part to the lack of a single national IIS, or at a minimum, uniform standards for data collection and reporting by the 64 IISs across the nation and territories. Other reasons for lagging implementation include the time and expense of initial training to implement an IIS reporting system in a

practice; the failure of all vaccine providers (including school-based clinics, pharmacies and other nontraditional sites) to participate in IISs; and delays in development of vaccine-reporting software by electronic health record (EHR) developers.

Widespread adoption of beneficial features of IISs also has been slow. For example, the ability to query an IIS and download an individual's immunization history into the EHR, even with physician supervision, has become available only recently through some EHRs and selected state IISs.

In addition, the ability to query registries other than the one with which a provider is registered is complicated, often requiring registration with multiple registries. This is a particular impediment to care for an increasingly mobile population or when patients are displaced temporarily.

While a single national IIS could solve this problem, the policy notes that neither the will nor the funding exists for such an undertaking.

In the absence of a unified national IIS, the Immunization (IZ) Gateway developed by the Centers for Disease Control and Prevention (CDC) can facilitate the transfer of immunization data among IISs (see resources). However, it will be optimally effective only if all IISs share all data through the gateway.

## **Recommendations**

Following are among the policy's recommendations:

- The federal government should support state registries so they can implement and improve services. Appropriate resources also should be provided to all vaccinating entities to cover the costs of participating in and reporting immunization data to IISs.
- IIS participation should include the immunization history of all people receiving vaccines as a default and include immunizations given at any age.
- All certified EHRs should be required to support seamless information exchange so patients' immunization history follows them if they change health care providers.
- Access to data in an IIS should be available to providers regardless of geography or registration with an IIS to assure complete immunization of an individual who changes location or health care provider. Ideally, a single query would retrieve all of a patient's immunization data regardless of where immunizations were given or which IIS is storing the data.

IISs are a powerful tool to help achieve national goals of complete, timely and efficient immunization of all individuals. While significant progress has been made toward those goals, the policy's recommendations will bring us even closer to optimal immunization of all patients.

*Dr. Hackell is a lead author of the policy statement and chair of the AAP Committee on Practice and Ambulatory Medicine.*

## **Resources**

- [Information from the CDC on IISs](#)
- [CDC Immunization \(IZ\) Gateway](#)
- [Information for families on IISs](#)