CHAPTER 9

Using IIS to Expand Adult Vaccinations
Introduction

Immunization information systems (IIS) are confidential, community-wide, computerized databases that record vaccines administered by providers. IIS can help providers assess their patients’ immunization status, identify the types of vaccines that an adult may need based on a variety of factors, and send reminder and recall notifications to patients. IIS help providers find and take steps to reduce missed opportunities to vaccinate their adult patients. By using an IIS, providers can properly address low adult vaccination rates in their practice setting.

Currently, 60 of 64 Immunization Programs have an IIS that includes adult patients, yet adult participation in IIS remains low.\(^1\) Only 32% of adults nationally are included in an IIS.\(^2\) The National Adult Immunization Plan 2020 goal is for 50% of adults age 19 and older to have one or more immunizations recorded in the IIS.\(^3\) Challenges to increase adult participation in IIS include gathering immunization information from the many diverse providers that serve adults, a lack of state mandates for adult immunization reporting by providers, and technical challenges involving how data is submitted by provider offices to the IIS.

Immunization Programs can work toward expanding adult vaccinations using IIS through efforts to increase the number of providers reporting to IIS and by developing tools using IIS data that promote complete and accurate data reporting. The highlighted activities related to using IIS to expand adult vaccinations are:

- **Getting Started:** Supporting provider demand for Meaningful Use certification by allowing adult providers who do not participate in the state vaccine program to report to the IIS
- **Moving Forward:** Adding vaccine coverage measures for selected adult vaccines in the IIS as options for benchmark reporting
- **Taking It to the Next Level:** Creating county-level, IIS-based “report cards” of coverage level data for select vaccine measures across the lifespan, in part to motivate local health departments to improve their adult immunization coverage rates
Customizable IIS Brochure for Adult Providers

The National Adult and Influenza Immunization Summit (NAIIS) has developed a customizable brochure targeted to health care providers with adult patients to encourage them to onboard with and use their state immunization information systems (IIS). Immunization programs and other interested parties can customize the brochure (e.g., insert own name and logo) using Adobe Acrobat.

The brochure was developed by NAIIS’s Provider and Access Workgroups based on feedback from IIS managers, IIS sentinel sites, provider organizations, and a review of currently available state-specific websites and promotional brochures. The brochure is available at: http://www.izsummitpartners.org/content/uploads/2016/01/IIS_Customizable_Brochure-11-30-2015.pdf.
OVERVIEW OF ACTIVITY
The Idaho Immunization Reminder and Information System (IRIS) accepts immunization data from adult providers, even ones who are not otherwise enrolled with the Idaho Immunization Program.

BACKGROUND/IMPETUS FOR THE ACTIVITY
Idaho is a universal state for pediatric vaccines, and providers enrolled in the pediatric vaccine program must report to IRIS. Though there are no reporting requirements for adult vaccination, IRIS is set up as an “all ages” immunization registry (i.e., no age limitations in statute) and IRIS is able to accept data from adult providers. When the federal Meaningful Use incentive program first began, IRIS was the only option for Idaho providers interested in participating in the program.

Another source of adult immunization data is pharmacies. Pharmacies are not enrolled with the Idaho Immunization Program nor receiving any vaccines from the state, and they are not required to report to IRIS. However, many large pharmacies function in multiple states that do require them to report to their immunization registry; some of these pharmacies are voluntarily submitting their data to IRIS.

DESCRIPTION OF ACTIVITY
The program processes Meaningful Use requests from all providers who can supply immunization data, including adult providers and pharmacies.

ROLE OF IMMUNIZATION PROGRAM AND OTHER AGENCIES/GROUPS INVOLVED
This activity is mainly the responsibility of the Immunization Program, particularly IRIS staff.

DISSEMINATION
The state has a website where providers report their intent to submit data to meet Meaningful Use requirements. It also provides relevant materials on the process of Meaningful Use certification.

INTERSECTION WITH OTHER PROGRAM ACTIVITIES
Not applicable.

FUNDING
This activity is funded as part of regular, federally-funded IRIS activities.

STAFFING
One staff person is responsible for IRIS Meaningful Use certifications.
IMPLEMENTATION STATUS
This activity is fully implemented and ongoing for new providers who wish to report to IRIS.

SUCCESSES
• IRIS is being populated with adult data. Though that data are not comprehensive, they are useful for the program and providers to have. The program does not plan to use these data (e.g., for assessment) in the near future, but sees having the data as an added, longer-term benefit.

CHALLENGES
• The main challenge is handling the periodic backlog of Meaningful Use requests and educating providers about the process, which is potentially exacerbated by allowing a larger pool of providers to participate.
• Internal staff time is a factor because there are other competing program needs and priorities.

OTHER LESSONS LEARNED/ADVICE TO OTHER PROGRAMS
• The Meaningful Use point person within the program needs to be very knowledgeable about the different Meaningful Use phases and timelines, and to have a good understanding of the acceptable data reporting and transmission formats. This person also needs to be able to communicate these concepts to providers, especially those who may not be accustomed to working with the immunization program.
• In addition to the immunization program, other groups within the state are now involved with Meaningful Use reporting (lab, syndromic surveillance, cancer registry); all of these groups meet regularly to discuss issues related to Meaningful Use. Meaningful Use is complicated and it is important for all parties to provide consistent messaging to alleviate confusion while navigating the stages.

RELEVANT RESOURCES
• Idaho Department of Health and Welfare Meaningful Use website:

FOR MORE INFORMATION
Contact the Idaho Immunization Program at (208) 334-5931 or iip@dhw.idaho.gov.
OVERVIEW OF ACTIVITY
Measures of vaccine coverage for selected adult vaccines were added to benchmark report options in the Iowa Immunization Registry Information System (IRIS).

BACKGROUND/IMPETUS FOR THE ACTIVITY
IRIS is a WIR-based “birth to death” immunization registry. Reporting to IRIS is required only for pharmacies, but many adult records are included. IRIS had various age-specific benchmark reports for pediatric (3-72 months) and adolescent vaccines (13-15 years). Federal Prevention and Public Health Fund (PPHF) funding (2011-2012) prompted the addition of benchmark reports for adult vaccines.

DESCRIPTION OF ACTIVITY
An adult vaccine benchmark report was added as a report option available to all users and organization types, including county health departments (CHDs). The report presents the proportion of adults (≥ 18 years) with the following vaccine doses: 1 dose Tdap/Td, 1 dose MMR, 2 doses varicella, 3 doses HPV, 1 dose PPSV23, and 1 dose zoster. For CHDs, the denominator can be set as the number of adults in the county or the population served by the CHD (e.g., active patient records for that site). There is a separate report for flu vaccine, and flu vaccine coverage can be generated for the current or past flu season.

ROLE OF IMMUNIZATION PROGRAM AND OTHER AGENCIES/GROUPS INVOLVED
The Immunization Program worked with the IRIS vendor to add this functionality.

DISSEMINATION
These reports are available for CHDs and providers to run themselves; they are not publicly available.

INTERSECTION WITH OTHER PROGRAM ACTIVITIES
The increase in providers reporting electronically to IRIS over the past 3 years has increased the number of adult vaccines reported to IRIS, which helps improve the accuracy of the benchmark reports.

FUNDING
Federal PPHF funding jumpstarted the addition of these reports. Current and future modifications will be funded as part of routine IIS activities, through federal VFC and 317 grants.

STAFFING
IRIS staff work with the IRIS vendor to outline the desired changes in functional design documents; the vendor makes the changes to IRIS. IRIS staff communicates reporting functionality updates to users.
IMPLEMENTATION STATUS
The adult benchmark report is up and running. Modifications will be made as needed (e.g., Prevnar will be added based on recent national recommendation).

SUCCESES
• Counties can take these data to their Boards of Health to demonstrate the need for outreach efforts.

CHALLENGES
None at this time.

OTHER LESSONS LEARNED/ADVICE TO OTHER PROGRAMS
• Though the Immunization Program knows that IRIS is not capturing all adult data, having a benchmark provides a starting point and will hopefully encourage more adult data to be reported to IRIS.
• To facilitate CHD and provider buy-in and use of these reports, it is important to communicate that these reports are designed as a tool to help them, not as a way for the state program to evaluate them.
• Without PPHF funding to jumpstart this activity, it probably would not have risen to the top of the priority list. The priority of desired IIS improvements must be balanced with the ability to take advantage of available funding opportunities.

RELEVANT RESOURCES
• The program can share functional design documents upon request; other programs with WIR-based immunization registries would be well positioned to add these reports.

FOR MORE INFORMATION
Contact Kim Tichy, IRIS Coordinator, at 515-281-4288 or Kimberly.Tichy@idph.iowa.gov.
OVERVIEW OF ACTIVITY
Michigan created a county-level Immunization Report Card that presents coverage levels for select vaccine measures across the lifespan using data from the state’s immunization information system (IIS).

BACKGROUND/IMPETUS FOR THE ACTIVITY
The Michigan Immunization Program uses state-level data from national surveys of immunization coverage (e.g., National Immunization Survey) to measure progress and identify areas for improvement, such as by comparing Michigan data to those of other states. The Immunization Program thought it would be useful to have something similar within the state, at the county or local health department (LHD) level. The Michigan Care Improvement Registry (MCIR), the state’s IIS, was capable of producing these data. In addition, the program had been supplying data on childhood and adolescent coverage levels to LHDs for many years; the report card was a way to present these data in a more accessible format, to add adult and other data, and to collate multiple pieces of data onto one page.

DESCRIPTION OF ACTIVITY
The one-page report card is generated from MCIR data, including:
- Comparison of population 0-19 years and ≥20 years between the US Census and MCIR;
- Number and proportion of active providers that have reported to MCIR in past 6 months;
- Data for various vaccine series and individual vaccines for those 19-35 months, 13-17 years, and adults (≥18 years); and data for relevant influenza season for one dose (6 months-17 years, ≥18 years) and two doses (6 months-8 years); including coverage levels (county, LHD, Michigan average, US average, Healthy People 2020 goal), percentage change in county coverage level since last report, and the county rank.
- Data on school and child care immunization report completion and waivers, including proportion by county, LHD, and Michigan average; percentage change in county level since last report; and the county rank.

After one year, the program conducted an online survey among LHD staff and providers that receive email notification of report card updates. Most respondents agreed that the county rankings provide motivation to increase immunization coverage and almost half had made changes to their Immunization Program in response to the report card data.

ROLE OF IMMUNIZATION PROGRAM AND OTHER AGENCIES/GROUPS INVOLVED
The Immunization Program led this activity. An internal Michigan Department of Health and Human Services group discussed which measures to include; they tried to include measures that could also be compared at the national level. Feedback also was solicited from other stakeholders, including the Michigan Advisory Committee on Immunization, Immunization Action Plan coordinators, and the Michigan Association for Local Public Health.
DISSEMINATION
The first report card was generated on December 31, 2013. Report cards are updated quarterly and available through the immunization program’s website. The main audience is LHDs and providers. Though publicly available, they are not designed to be user-friendly for those unfamiliar with immunizations (e.g., use undefined acronyms and abbreviations).

INTERSECTION WITH OTHER PROGRAM ACTIVITIES
Producing these report cards may help to increase the number of adult providers that participate in MCIR. The Adolescent and Adult Immunization Coordinator shares the quarterly HPV data with Michigan’s Cancer Consortium to monitor HPV vaccination coverage.

FUNDING
The Immunization Program staff person responsible for this activity is covered by the federal IIS Sentinel Site grant.

STAFFING
One Immunization Program staff person is responsible for pulling the data from the IIS, creating SAS programs to analyze the data to populate the measures, and pulling the data together into a one-page PDF document by county.

IMPLEMENTATION STATUS
The report card will continue to evolve. For example, PCV13 coverage for adults was added based on user feedback. A future goal is to produce similar report cards at the provider level.

SUCCESSES
• The report card has had a positive response from users. Local health officers and medical directors report data to their Boards of Health to inform them of the county’s vaccination level and ranking, and, in some cases, advocate for resources.

CHALLENGES
• Keeping the report to one page, which is a priority, has been a challenge. Future desired additions to the report card may come up against formatting constraints.
• Ranking counties that vary greatly in population limits the usefulness of the rankings. However, when the stakeholders who receive the report cards were surveyed, the rankings were viewed as motivators to increase vaccination coverage, so the rankings have been maintained.

OTHER LESSONS LEARNED/ADVICE TO OTHER PROGRAMS
• The program conducted a soft roll-out to the LHDs because it was unsure how they would respond to being ranked and wanted to get their initial feedback.
If you don’t use the data you have, the data won’t get better. Michigan knows that its adult data are incomplete (reporting of adult vaccines is strongly encouraged, but not mandatory in Michigan), but felt it needed to start somewhere. By generating report cards, the program hopes it will motivate LHDs to get more adult data into the IIS. A program would not need a mature IIS to start a similar effort in its jurisdiction. Michigan started reporting some county-level data to their LHDs many years ago when MCIR had been in operation for only 3 years, which provided a starting point for improvements.

It was useful to create a report card template for getting initial feedback on measures to include; it was easier for people to react to an existing document than think of measures from scratch.

It is helpful to have someone that can program macros, to efficiently generate the data from the IIS once the initial programming code is built.

**RELEVANT RESOURCES**

- Website with report cards (template available by request from the program): [http://www.michigan.gov/mdhhs/0,5885,7-339-73971_4911_4914_68361-321114--,00.html](http://www.michigan.gov/mdhhs/0,5885,7-339-73971_4911_4914_68361-321114--,00.html)
- SAS code and macros can be shared by request

**FOR MORE INFORMATION**

Contact Cristi Bramer, Vaccine Preventable Disease/MCIR Epidemiologist at (517) 335-8159 or BramerC@michigan.gov.

**REFERENCES**

4. 2015 AIM Annual Survey, 63 of 64 state/city/territorial Immunization Programs completed the survey that was administered online April - June 2015.

This Resource Guide was made possible through support from Pfizer Inc.