Data sharing between state, local, or territorial public health immunization programs (IPs) and state Medicaid programs is essential to supporting data-driven decision-making, improving vaccination rates, and reducing the spread of vaccine-preventable diseases. Collaboration between these programs to improve data collection and reporting to Immunization Information Systems (IIS) is critical to closing long-standing inequities in vaccination coverage. Moreover, improving data sharing is essential to improving the quality of data in the systems and, ultimately, improving health outcomes.

This tip sheet, created with input from experienced public health professionals, provides suggestions for how immunization and Medicaid programs can increase data sharing and tips for developing data-sharing agreements. This resource highlights the benefits to both IPs and Medicaid programs of working together to exchange data captured in different ways toward the same goal: to vaccinate as many individuals as possible and to use data to identify areas where vaccination is low and action is needed. We encourage you to also review the AIM resource "Collaborating with Medicaid to Improve Vaccination Rates: a Checklist for Program Managers" to learn more about the overall benefits of collaborating with Medicaid and the impact the relationship can have on immunization rates.

While long-standing legal, technical, or other barriers may have historically prevented or limited the exchange of data between systems, the COVID-19 pandemic has created new opportunities for jurisdictions to examine the current state of data sharing. The data-sharing relationship between IPs and Medicaid can be leveraged to acquire funding for data systems, increase vaccination rates, increase the amount and quality of vaccination data available, and improve the ability of both programs to meet goals, performance metrics, and requirements.
**Tip 1**

**DEVELOP A SHARED UNDERSTANDING AND KNOWLEDGE OF EACH SYSTEM AND PROGRAM**

Before determining the benefits of sharing data between the IIS and the Medicaid Management Information Systems (MMIS), staff from both programs must understand the types of data captured and what these types of data are used for, as well as the reporting requirements or barriers, any relevant consent laws or policies, and any other nuances relevant to the jurisdiction.

**IDEA**

Hold a learning session and have both programs provide an overview of their data systems, funding structures, current landscapes, and any other relevant information for a successful partnership. Allow plenty of time for Q&A. This can be the first of many conversations on gaps in data between the systems and how that could be alleviated through sharing of data.

- Get creative when brainstorming about what could be done with improved data, such as funding opportunities, improved accuracy of coverage rate reporting, and, ultimately, increased visibility to areas with low vaccination coverage not previously visible with the limited data in one system or the other.
- Make sure to ask and answer the who, why, what, and how:
  - Who should be involved and why?
    - Who is instrumental for the success of a sustainable data-sharing partnership?
    - Are they at the table?
    - What is the organizational capacity of the groups involved? Is there leadership buy-in?
  - What are the priorities and pressures impacting data sharing partners?
  - Why should data sharing be pursued and maintained?
    - What problem can data be used to solve?
    - What is the relevance, practicality, and value of this data-sharing partnership?
    - What is the value proposition of data sharing and how can that be scaled over time?
  - How should this data-sharing partnership be developed and maintained?
    - Is there room for growth and adjustments as priorities and goals change over time?
    - Is there room to scale up later?
    - What are some of the regulatory, policy, or programmatic ways to support sustainability?
**Tip 2**

**GET LEGAL AND IT STAFF INVOLVED FROM THE BEGINNING**

As soon as you decide to move forward with either establishing a new data-sharing arrangement, or re-evaluating an existing arrangement, start working with your legal teams to determine the type of legal agreements that need to be in place. Then discuss the process for approval and implementation. This process is more efficient when both parties have realistic expectations and timelines, preventing unnecessary roadblocks and bottlenecks.

**IDEA**

Ask your legal team to give you examples of current data-sharing agreements from other agencies or data systems.

Be sure to specify that you are looking to exchange data between the IIS and MMIS; if the IIS is not overseen by the IP, the team that oversees the IIS will need to be involved. Depending on the structure of the jurisdiction, this could determine whether the MMIS would be within the same agency/department with a more streamlined process, or if it is in a separate agency/department requiring a more formal agreement.

**IDEA**

Schedule a meeting with legal, privacy, and security subject matter experts (SMEs) for both IPs and Medicaid (if different) to discuss the entire process for implementing data exchange between the systems. Start to finish, for one system to exchange data with the other, what must happen and how does it get done?

Make sure that someone is responsible for recording all meeting minutes and cataloguing communications throughout the process. If there is key staff turnover or if the project gets delayed for any reason, clear documentation of all work completed will help the project not lose progress.
Successful collaborations are rooted in well-defined, shared goals and a clear understanding of the benefit of working together. Developing a value proposition that outlines the mutual benefits of data sharing for both IPs and Medicaid is a great foundation building activity that helps articulate the purpose of a subsequent, formal, data-sharing agreement.

When writing your data-sharing value proposition, gather input from all involved on how the collaboration will benefit both partners. Here are a few ideas to kick off your brainstorm. Data sharing will allow the teams to:

- Generate reports on community vaccination rates to raise public awareness and drive action.
- Identify and analyze pockets of need, including areas with severely limited provider capacity known as ‘provider deserts.’
- Understand and target disparities.
- Identify quality improvement opportunities and meet reporting requirements.
- Support managed care outreach and education strategies.
- Engage health care providers and others in the health care delivery system to increase vaccination rates for Medicaid members.
- Inform and monitor efforts to ‘catch-up’ on routine vaccinations missed due to the pandemic.
- Support data-driven decision-making for clinical operations, programmatic management, policy development, and resource allocation.

**VALUE PROPOSITION EXAMPLE: VACCINATION COVERAGE DATA**

The difference between vaccination coverage rates for Medicaid-eligible children in the IIS versus in the MMIS or other Medicaid claims system, known as the vaccination coverage data gap, can be quite wide in some jurisdictions. One factor to consider when analyzing these vaccination coverage data gaps is whether these systems exchange data in a way that populates each system with as much vaccination information that is available about the Medicaid population within the jurisdiction.\(^1\)\(^2\)\(^3\) Both IPs and Medicaid report on several vaccination coverage metrics for the population served by each program.

To increase the benefits of data sharing for both partners, you can use defined metrics to compare data from both systems to determine the variation of information in each system. For example, if the IIS reports the coverage rate of Medicaid-enrolled individuals between 0–19 years of age as 92% for a particular vaccine and the MMIS reports a coverage rate of 67% of the same individuals, this shows a significant benefit to Medicaid to have access to the information in the IIS to augment their information. The more data that is available, the more accurate the reporting on vaccination coverage for a given population.

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2. [https://academyhealth.confex.com/academyhealth/2018arm/meetingapp.cgi/Paper/26327](https://academyhealth.confex.com/academyhealth/2018arm/meetingapp.cgi/Paper/26327)
Tip 4
LEVERAGE IMMUNIZATION QUALITY IMPROVEMENT METRICS

As the nation’s health system moves toward value-based and accountable care models, being able to report accurate data for key immunization-related measures will have a major impact on incentivizing preventive care. When developing your data-sharing partnership, ask Medicaid what current quality improvement metrics, if any, they are tracking and reporting and where the data for the metrics come from. This will help all involved understand the reporting needs to include in the IIS-MMIS data exchange proposition, as well as provide ideas on how metrics can be leveraged as a case for data sharing.

EXAMPLE 1
Financial incentives tied to quality or performance indicators could be considered leverage to increase IIS and MMIS data accuracy.

EXAMPLE 2
The Centers for Medicare and Medicaid Services (CMS) has established core measurements to assess compliance with national standards of care. The number of states reporting the immunization-related Medicaid / Child Health Insurance Program (CHIP) Child Core Set measures has increased substantially since the release of the Child Core Set in 2010. Adult Immunization Status (AIS) measures were publicly reported for the first time in 2022, and AIS and Prenatal Immunization Status (PRS) measures have been recommended for inclusion in the Adult Medicaid Core Set. Starting in 2024, Medicaid programs will be required to report the Child Core Set measures and certain Adult Core Set measures, some of which focus on vaccination rates, to CMS. Medicaid reporting for these required measures can be enhanced by incorporating data from IIS.

41% of IPs report using IIS data to assess CMS Child Core Set Measures
AIM annual survey 2022 (n=53; 25)
Once you have built a foundation for your data-sharing partnership, host a discussion about potential opportunities for working with safety net programs. Programs that provide public services to vulnerable populations, also known as safety net programs, can benefit from access to vaccination data. Collaboration with safety net programs improves service coordination, increases opportunities to assess and address under-immunized individuals, and supports improved provider outreach and education. Creating electronic data exchange interfaces between IIS, MMIS, and the electronic medical record (EMR) systems utilized by safety net providers alleviates the need for manual entry of information in more than one system. Even if an entity does not administer vaccines, they may benefit from having access to an individual’s vaccination history and clinical decision support information from the IIS about due or upcoming recommended vaccinations. This allows non-traditional means for education and referrals on important vaccinations.

**IDEA**

Explore collaboration opportunities with:

- **Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)**
  - IP managers report that WIC collaborations are especially productive due to the high number of WIC children in need of vaccination services. Granting WIC staff access to the IIS and providing training on how to use it can help the staff notify/remind parents of any due or upcoming vaccines their child needs to be protected and up to date on vaccinations.

- **Title V Maternal and Child Health (MCH) Programs**
  - MCH programs can be leveraged similarly to WIC to assess child immunization status. Collaborations with MCH programs may also provide opportunities to increase education and outreach during events, such as community baby showers, health fairs, or other community events.

- **Federally Qualified Health Centers (FQHCs)**
  - In each state, federally funded Primary Care Associations (PCAs) offer a mechanism to coordinate with their members, who typically include all of the FQHCs in that jurisdiction. PCAs can help IPs promote the facilitation and implementation of electronic data exchanges for easy and automated reporting of vaccination information, as well as provide clinical decision support to FQHC staff to know what vaccinations are recommended for the individual.

- **Foster Care & Child Protective Services**
  - Child services programs can be contacted, similarly to other collaborators, to assess child vaccination status and promote routine and timely vaccinations for individuals in these programs.

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**Safety Net Programs** provide health or other services to uninsured, underinsured, and other vulnerable populations. Although there is no universal definition, these programs may include FQHCs, local public health departments, public hospitals, or small racial and ethnic minority owned private provider practices.

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4 [https://www.ahrq.gov/topics/safety-net.html](https://www.ahrq.gov/topics/safety-net.html)
The American Rescue Plan Act of 2021 contains important Medicaid reforms, including mandatory coverage of COVID treatment and vaccinations throughout the public health emergency period and the following year, at a minimum. A partnership between the federal government and health insurance companies (federal–insurer partnership), announced by President Biden in March 2021, aimed to improve vaccination rates among Medicare beneficiaries, including those with both Medicare and Medicaid coverage. This partnership underscores the potential role that insurers can play in the federal push to improve vaccination coverage for all individuals. Federal and state initiatives like these provide IPs an opportunity to create partnerships with entities that need immunization data. These partnerships can produce a more accurate and comprehensive look at national vaccination rates to meet Medicaid, MCO, or other funding requirements.

**IDEA**
Focus information exchange with MCOs on quality improvement, health care provider and patient engagement, and distribution of outreach and education materials to service providers.

**IDEA**
Explore opportunities to promote COVID-19 vaccination and efforts that improve data exchange through health information exchanges (HIE).

As you solidify your data-sharing partnership, spend some time outlining the role that MCOs will play in your process and partnership. MCOs enroll about 70% of the Medicaid population. When working with MCOs on immunization data-sharing agreements, include contract language that specifies what services and data reporting are required is key to success.

**IDEA**
Routinely engage with Medicaid leadership and decision makers, to ensure that Memorandum of Understanding (MOU) or contract language is clear, explicit, and relationship-focused.

Managed care is a health care delivery system organized to manage cost, utilization, and quality. Medicaid managed care provides for the delivery of Medicaid health benefits and additional services through contracted arrangements between state Medicaid agencies and MCOs that accept a set, per member, per month (capitation) payment for these services. According to data published by the Kaiser Family Foundation in February 2022, nearly all states have some form of managed care in place – comprehensive risk-based managed care and/or primary care case management (PCCM) programs that enroll 70% of the Medicaid population.

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Adequate and sustainable funding to support complex systems such as IIS and MMIS can be challenging at best. As your partnership gains momentum, have a discussion with all partners to determine if there are opportunities for shared funding to sustain the partnerships, data-sharing systems, and related activities. Determine the best approach for the partnership:

- **BRAIDED FUNDING**: When you work together creatively, there may be ways to coordinate funding streams while maintaining each stream’s connection back to its original source to keep its “identity” – this is referred to as braided funding.
- **BLENDED FUNDING**: Pooling of two or more sources of funding into one funding stream, making the funds more flexible, is referred to as blended funding, and results in the funding streams losing their specific or base “identity.”
- **STACKED FUNDING**: Another funding option for IP and Medicaid partnerships is referred to as stacked funding, which is when two or more funding sources are layered into a shared service or resource making reinvestments into existing infrastructure. Stacked funding could be utilized for sharing functionality in the IIS and MMIS.

Though the systems and functions might be somewhat different on the surface, when considering things like conforming to standards, identity matching, data integration and storage, the systems start to look very similar at the core. Are there ways to share the burden of costs associated with these functionalities or ways to leverage one tool for both systems (e.g., an address cleansing/verification service or privacy preservation tool for patient matching)?

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A few things to consider and identify when it comes to braided, blended, or stacked funding:

- **LEAD AGENCY:** Specific state agencies may only access certain federal funds. Thus, the state agency must approve and administer the funding request on behalf of other state agencies and partners. Establish which agency should be the funding stream lead, then create a coordinated vision and a continuous coordination plan.

- **IDENTIFICATION AND REUSE:** To ensure states are not duplicating investments, many federal funding sources require identifying other federal funding used to build or enhance technical capabilities. Federal agencies may request documentation demonstrating that the investment is not duplicative. Prepare your funding stream documentation with all the details from both partners so that you are ready for any questions.

- **MATCHING FUNDS:** Many federal funding sources require a state matching fund contribution to offset the costs of programs, technical investments, staff, and non-staff costs. Matching funds cannot be leveraged from other federal funding sources (e.g., a public health grant awarded to the public health agency cannot serve as matching funds for CMS Federal Funding Participation requests). Don't be afraid to get creative when it comes to funding match funds – explore private and other funding sources too.

In April 2022, CMS released guidance on new Streamlined Modular Certification for Medicaid Enterprise Systems to continue to shift towards outcomes-based certification for MMIS. Table A-1: Conditions for Enhanced Funding (CEF) in the Streamlined Modular Certification for Medicaid Enterprise Systems Certification Guidance outlines conditions that must be met for Medicaid and MMIS to receive enhanced funding. A few examples of areas where IPs and Medicaid could work together to leverage funds and functionality for both systems include:

- Promoting sharing, leveraging, and reusing Medicaid technologies and systems within and among states.
- Producing transaction data, reports, and performance information that would contribute to program evaluation, continuous improvement in business operations, and transparency and accountability.
- Supporting seamless coordination and integration with the Marketplace, the Federal Data Services Hub allows interoperability with health information exchanges, public health agencies, human services programs, and community organizations providing outreach and enrollment assistance services as applicable.

Do not limit your scope of thinking to only state funds or funds received already. Is there a state tobacco or cannabis tax fund that could be applied? Are there local or regional philanthropic organizations that have funding that could be leveraged? Talk to other agencies and see what might be available. There are many connections to make, even if they are a stretch, when it comes to funding advancements in public health.

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HIGHLIGHTS & SUCCESSES OF IIS AND MEDICAID PARTNERSHIPS

In 2020, AcademyHealth, National Academy for State Health Policy (NASHP), and Immunize Colorado Evidence-Informed State Health Policy Institute began working with state health officials to increase immunization rates through the collaborative use of state agency resources. The Opportunities & Barriers to Improve Immunization Rates Among Medicaid-Covered Children & Pregnant People: Targeting Medicaid Partnerships Community of Practice (CoP) was formed, and the project provided technical assistance to six states: Louisiana, Michigan, Texas, Washington, Wisconsin, Wyoming. Each state formed a multidisciplinary team with Medicaid, public health, and IIS representation, and identified specific immunization goals to achieve over the project’s three-year span. As of March 2023, the original states from the CoP, as well as Colorado, Hawaii, Kentucky, Montana, and New Mexico, continue to participate in this work.9

Through this project, participating CoP states have highlighted their successes in overcoming technical, legal, and policy challenges to Medicaid-IIS partnerships and data exchange. Some of the more recent experiences from the participating states were shared during the September 2022 CoP Annual Meeting. Project takeaways from the past two years, shared by Colorado, Louisiana, Michigan, Texas, and Wisconsin, include:

HIGH-LEVEL SUCCESSES
• improvements made to immunization data quality and data sharing
• cross-agency collaborations and agreements for data sharing and ensuring vaccine equity

HIGH-LEVEL CHALLENGES
• drops in routine immunization rates and gaps in vaccination coverage
• provider burnout and lack of personnel and resources
• vaccine misinformation, distrust, safety concerns, and hesitancy
• incomplete and inaccurate data and matching issues
• negotiation of data-sharing agreements

JURISDICTION-SPECIFIC HIGHLIGHTS
The CoP created state snapshots to provide an overview of the work and successes achieved to increase vaccination rates among pregnant people and children on Medicaid.

- Funding
  » KY Health Information Exchange (KHIE) requested approval from CMS to provide mini grants to providers for IIS integration.
- IIS Infrastructure
  » Kentucky integrated Medicaid claims data with the Kentucky Immunization Registry (KYIR).
  » Kentucky improved processes for provider enrollment to KYIR, including enrollment of pharmacies.
  » Montana established multiple immunization interface connections since June 2018, including four large national pharmacy chains and 54 additional pharmacy locations actively submitting immunization data to the IIS. Twelve non-pediatric immunizing healthcare practices were also added.

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• Data Analysis
  » Colorado obtained a high match rate between Medicaid and IIS data sources (98%).
  » Colorado fostered relationships with Medicaid vendors, which created strong data capabilities.

• Public Health
  » Kentucky updated school regulations to require two doses of Hepatitis vaccine and a MenACWY booster for 16-year-olds, as well as vaccination assessments at kindergarten, 7th, and 11th grades.
  » New Mexico encouraged providers to reach out to patients with information about the safety measures to protect against COVID-19.
  » New Mexico used reminder/recall tools, such as text messaging, to reiterate the importance of well visits and staying up to date on vaccines.
  » Hawai‘i implemented an Administrative Rules change requiring HPV, Tdap, and meningococcal vaccination for 7th grade school enrollment.10
  » Hawai‘i updated their school vaccination requirements to conform with the Advisory Committee on Immunization Practices (ACIP) national recommendations.

• Patient & Provider Engagement/Education
  » Kentucky created an immunization information dashboard displaying data on adolescent and pregnant people in Medicaid for providers and other stakeholders.
  » Kentucky created and distributed resources to family practice physicians to ensure pregnant people are aware of the closest place to go for vaccines if vaccines are not offered at the prenatal clinic, and to certify that they have an established medical home.
  » Kentucky established multiple mobile vaccination clinics in areas with high Hispanic populations to encourage vaccination.
  » Montana created a community health worker curriculum and developed immunization training provisions.

• Stakeholder Collaboration
  » Kentucky established partnerships between the Kentucky Provider Outreach Coordinator, key stakeholders, and organizations to promote increased immunization coverage, offer education, and provide advocacy.
  » Kentucky formed a partnership with Jefferson County Schools to conduct school-located vaccination clinics and foster collaborative efforts between community partners to reach vulnerable populations (increasing HPV vaccine uptake among school children).
  » Kentucky solidified a working relationship with hospital systems to offer Tdap vaccines on hospital obstetric floors to vaccinate any pregnant people who may not have been vaccinated prior to delivery, and to vaccinate those who will be around the newborn (siblings, father, grandparents, etc.).
  » Hawai‘i increased collaboration between their Medicaid agency, immunization program, and IIS staff, which resulted in a request and approval for $4.4 million dollars in administrative funding through HITECH to support Hawai‘i IIS infrastructure development.

• Medicaid
  » Montana enacted legislation changing the minimum age that pharmacists can vaccinate from 12 years old to 7 years old with a collaborative practice agreement, increasing access to services.
  » Montana added childhood immunization rates (ages 19–35 months) as a measure to Medicaid Value-Based Purchasing (VBP).

View state snapshots, as well as more information about the CoP and related projects, on the AcademyHealth website.

Explore the AIM website and resource library to find more information on this topic. Resources include:

- Tools on how to build successful partnerships with Medicaid and other stakeholders
- Guides and checklists for IP staff to explore relationships for data sharing and increasing immunization coverage
- Examples of existing data-sharing agreements to help jurisdictions develop and implement new, or update existing, data-sharing relationships

DRAFTING THE DATA SHARING AGREEMENT

When developing a data-sharing agreement for IIS and Medicaid data, use the following discussion questions as a starting point:

- **Purpose**
  - Why is this relationship important? How do both sides find value in the relationship?

- **Description of Data to be Shared**
  - How would you describe all the data that both partners will share? Be specific and detailed. It may be worth developing a data dictionary or other companion documents that clearly outline the means, methods, and frequency of the data sharing arrangements.

- **Legal Justification for Data Sharing**
  - Why and how will this benefit the overall mission of public health? How will it help to meet metrics for current grant deliverables? The justification for these two questions is a great way to increase buy-in with leadership.

- **Methods of Data Transfer**
  - What are the capabilities and limitations of the modes of data exchange for this partnership? Can this be done through an electronic interface for automatic or streamlined efficiency of data exchange? Does this need to be a file that is shared and are there revisions that need to be made before sending or receiving the file? Note: don’t limit yourselves by being too specific about the file types or frequency to allow room for scaling without having to rewrite legal agreements.

- **Access and Storage of Data**
  - Who will have access to what systems and what level of access will individuals have? Are there processes for granting and revoking access? Do both partners have the capacity to store the data that is received from the other party? Again, think about the need for future scalability.

- **Security and Confidentiality**
  - How will both partners secure the shared data? Work with your agency’s IT and Office of Privacy and Security to ensure that the relationship is established in a way that protects the data being shared.
  - What will the data be used for? What are the limitations on uses of data, access to data and further sharing of data?

- **Disposal and Destruction of Data**
  - What is the shared plan for outdated or incorrect data? Work together to create a data destruction policy that will cover what happens to outdated data to prevent unnecessary security and privacy risks. Resources are available online and there are many examples of data destruction policies and procedures.

- **Costs of Data Sharing, Including Staff**
  - How will the partners fund the data sharing endeavor? Be sure to include all individuals or positions that will be part of this project and how those positions will be funded. Make the case as to how this benefits both IIS and Medicaid and see if there are opportunities for cost sharing, resource sharing, etc.
About the Association of Immunization Managers (AIM)

AIM is dedicated to establishing a nation free of vaccine-preventable disease. AIM members are the leaders of state, local, and territorial immunization programs—directing public health efforts to keep children and adults vaccinated and protected against disease. Since 1999, AIM has provided a national voice for immunization programs and a forum for program managers to learn from each other, confront challenges, and achieve success. Since its inception, AIM has gathered and shared information with its members on policy implementation, legislative issues, programmatic successes, and more. For more information, please visit www.immunizationmanagers.org.

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