

Vermont Immunization Registry

Data Brief

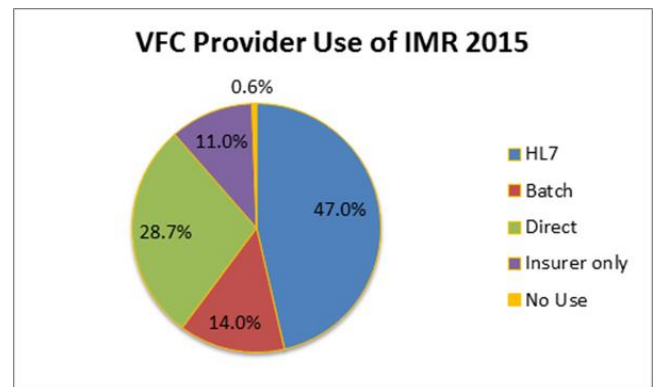
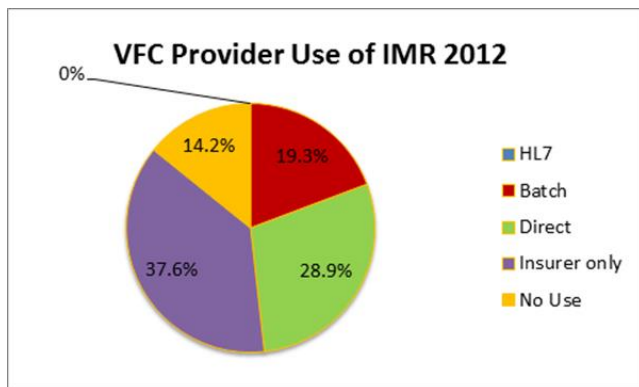
Background

How “good” is the data in the Vermont Immunization Registry (IMR)? It’s an important question. Practices want to know if the vaccine coverage rates they are measured by are accurate, and the health information they rely on is correct. Since the information in the IMR comes from different sources including hospitals, provider offices, WIC clinics, and health insurers, it is important to measure data quality. We have created this data brief to describe how **TIMELY**, how **COMPLETE**, and how **ACCURATE** the information in the Registry is.

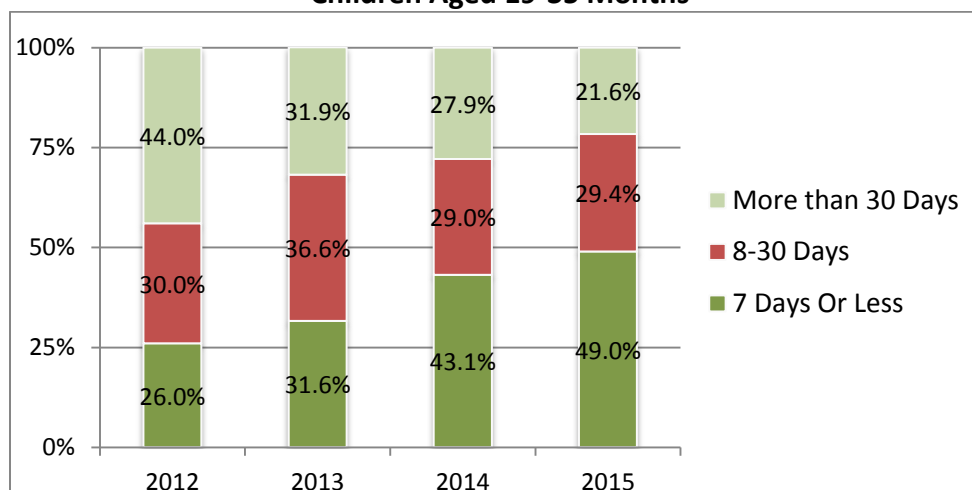
Immunizations are added to the IMR in a day or two directly from provider Electronic Health Records, through monthly imports from health insurers and pharmacies, and through direct record entry by immunization providers. All senders are assessed for quality before information is accepted, and monitored for quality assurance on an ongoing basis.

Timeliness

The IMR currently receives real-time immunization information via HL7 messaging from 110 practices and hospitals. This has allowed the IMR to have a complete immunization record for a patient much earlier than when batch importing from the provider or insurer was the primary data source. The charts below show how providers enrolled in the state’s Vaccines for Children (VFC) program are relaying information to us now, as compared to 2012 before HL7 messaging began. This has led to a shorter lag between the administration of the immunization and its addition into the IMR.



Number of Days from Immunization Administration to Receipt in IMR Children Aged 19-35 Months

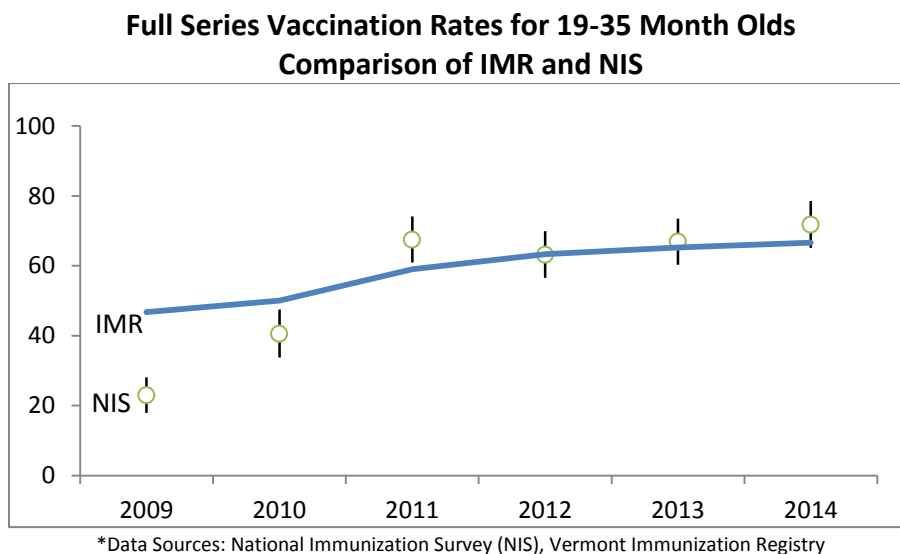


*Data Source: Vermont Immunization Registry

Completeness

The IMR contains information on all Vermont births, as well as information from other states for children residing in Vermont who were born elsewhere. Furthermore, the vast majority of practices submit data to the IMR, leading to a high level of immunization record completion for children living in Vermont.

The National Immunization Survey (NIS), administered by the Centers for Disease Control and Prevention (CDC), is the standard national survey of immunization rates for states. The chart below shows that the vaccine coverage data in the IMR is consistently within the confidence intervals of the NIS results for the complete infant immunization schedule.



Historically, one challenge to immunization record completeness has been that some Vermonters get health care out of state. Thanks to a recent change in the law, the IMR is now able to establish record exchanges with other states for the purpose of getting complete immunization histories for Vermont residents. Currently, the IMR routinely imports data for Vermonters who are immunized at Dartmouth Hitchcock Medical Center and its associated practices in New Hampshire. We expect to establish more exchanges in the future.

Accuracy

The accuracy of data the IMR receives is of crucial importance. We strive to receive data on the exact immunization that was administered. This requires proper coding in the electronic health record. Many vaccines have codes for “unspecified” types that allow the immunization information to be sent without fully identifying the type of vaccine. This is something the Department has sought to avoid. Since 2012 the number of immunizations sent with the unspecified code has dropped by 55%, allowing for improved forecasting and use of the IMR. For example, the rotavirus vaccine is made by two manufacturers. One brand of vaccine requires two doses and the other three doses. Without specification on which brand was received, it is difficult to determine if the child is up-to-date or needs additional doses.

It is also important to have an accurate picture of which patients are associated with a practice. Over time, it can be difficult to track where a patient is living and where they are receiving care. The IMR has a feature that allows a practice to identify a patient as “Moved or Gone Elsewhere”, so they will not be counted in reports for that practice. Active management of patients helps practices optimize their vaccine coverage.