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Immunization Information Systems for a New Era

SnapShots

IMMUNIZATION REGISTRY NEWS *from* AMERICAN IMMUNIZATION REGISTRY ASSSOCIATION (AIRA)

Welcome to *SnapShots,* AIRA's newsletter about the progress, best practices, and accomplishments of immunization information systems across the country.

We invite you to share news about your registry. Email us at aira@immregistries.org or call us at 202-527-7000 with information about a successful programmatic or technical innovation, major accomplishment, or milestone that your registry has reached.

SnapShots is sent to subscribers quarterly and posted on the AIRA web site: www.immregistries.org.

Please share *SnapShots* with others who may benefit from a trusted source of immunization registry news and information.

SnapShots is produced by the AIRA Education Committee and edited by **Katie Reed, NY.**

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PRESIDENT'S REPORT

As many of you are aware the Minnesota Legislature was unable to reach a budget agreement prior to July 1, 2011 which resulted in most state employees being placed on furlough; our AIRA President, **Emily Emerson,** was no exception. Therefore, the President's Report for this issue of *SnapShots* is authored by the Executive Director.

On behalf of Emily and everyone at AIRA we extend a "Thank You!" to **Don Blose** *(Immunization Program Manager, OK),* who served as AIRA President-elect prior to his retirement in June. We wish Don the best of luck in his new endeavors.

Since the last edition of *SnapShots* our AIRA Steering Committees have been hard at work. Below is just a sample of the committees' work.

Assessment Steering Committee – this committee has been hard at work drafting a new assessment document that will allow an IIS program to conduct a self-assessment of their system.

Education Steering Committee – this committee has conducted three education webinars, conducted a survey of the IIS community for educational needs, and assisted with the AIRA Workshops held prior to the National Immunization Conference (more about this on page 7).

MIROW Steering Committee – this committee has finished Chapter 5 of the IIS Operational Best Practice Guidelines titled, *Immunization Information System Collaboration with Vaccines For Children Program and Grantee Immunization Programs* (available on the AIRA website). This committee has also begun work on the next chapter related to vaccine inventory management.

Standards & Interoperability Steering Committee – this committee has been hard at work evaluating the Health Level 7 ballots and providing comments and drafting comments for the proposed Stage 2 Meaningful Use criteria.

Thank you to our many AIRA members who serve on these committees and enable our committees to accomplish so much. Learn more about AIRA Steering Committees at www.immregistries.org. ∎

— Submitted by Rebecca Coyle, AIRA Executive Director
on behalf of Emily Emerson (IIS Manager, MN), AIRA President

Preparing for CDC's VTrckS

June 2011 marks six months since the CDC's **Vaccine Tracking System** (VTrckS) went live with four pilot grantees: Chicago, Colorado, Michigan and Washington. Pilot grantees chose one of two ways to use VTrckS. Chicago and Colorado providers enter inventory and orders directly into VTrckS. Michigan and Washington providers track inventory and order vaccines through an Immunization Information System (IIS), which produces files that grantee staff then upload to VTrckS for processing. Non-pilot grantees continue to place vaccine orders in VACMAN, but those orders are ultimately processed through VTrckS.

While pilot grantees gain experience with VTrckS and test new functionality, non-pilot grantees can prepare for the transition by taking the steps listed below:
• If not already doing so, decide how to track inventory by NDC number, lot number,

and expiration date.

- Assess current processes for assigning user permissions in the IIS, ordering vaccine, reporting routinely to health department staff and leadership and conducting ad hoc queries.
- Review provider data for correct contact information, shipping address, and statistics such as active or inactive.

As part of this strategic planning process, non-pilot grantees should consider the capabilities of their IIS to determine the best method for implementing VTrckS. The CDC has a checklist to help grantees decide between allowing providers to enter orders directly into VTrckS (i.e., similar to the approach for Chicago and Colorado) or to interface their IIS with VTrckS (i.e., the approach taken by Michigan and Washington). Lessons learned from the pilot grantees will ease the transition to VTrckS, no matter which approach a grantee chooses.

Grantees will start their transition to VTrckS in April 2012 using the spend plan component and/or the full system functionality. The plan is for grantees to roll on to the spend plan component in four waves between April and June. Deployment with full VTrckS system functionality will also commence in April 2012, when one new grantee will roll on each week. Every grantee is expected to have transitioned to the full VTrckS system by June 2013. In determining the roll on sequence for full system functionality, CDC will consider such factors as the grantee's intention to implement the VTrckS ExIS interface; provider network size; geographical distribution of providers; and procedural and policy complexities the grantee faces.

To support grantees that intend to implement the ExIS interface, funds are being made available through the "Prevention and Public Health Fund: Capacity Building Assistance to Strengthen Public Health Immunization Infrastructure and Performance" funding opportunity announcement. Review panels for submitted applications are underway.

For an update on VTrckS activities, plan to attend the VTrckS Wave Grantee Monthly Call, scheduled for the third Wednesday of each month from 3:30PM to 4:30PM Eastern Time. The VTrckS website (www.cdc.gov/vaccines/programs/vtrcks) is another resource for current and past VTrckS activities, newsletters, and webinars. Questions regarding VTrckS or information on attending the monthly call can be emailed to VTrckS – A Vaccine Management Project (askvm@cdc.gov). ∎

— Source: Janet Fath & Ulrica Andujar, CDC

MIROW Continues Development of Best Practice Guidelines for IIS

On Monday, May 23, 2011 the AIRA Board of Directors approved a new best practice recommendations document **"IIS Collaboration with VFC Program and Grantee Immunization Programs."** The guidelines document describes best practices to use an IIS as a base for handling eligibility-related activities – such as screening for eligibilities, validating recorded information, and providing aggregated reports to support the needs of provider organizations and grantee immunization programs. The document will assist IIS's in aligning practices through adherence to a set of common recommendations. Best practices are described with standard analysis and modeling techniques and include detailed decision tables presenting logic for screening a patient for VFC and grantee immunization program eligibilities (26 eligibility screening scenarios), business rules to guide operational aspects of eligibility screening, e.g., how often to screen, how to resolve dual-coverage, and what information to record (seventeen business rules), general recommendations for IIS functionality and various operational aspects of IIS-VFC/Grantee Vaccine Program collaboration (nine general recommendations), and key eligibility reports, with a focus on the provider profile report and doses administered report.

The new best practices guideline document is available on the MIROW page of the AIRA web site at: www.immregistries.org/pubs/mirow.html

The MIROW Steering Committee has also initiated work on a new best practices topic with a focus on the IIS's role in vaccine inventory management. The topic's scope outline has been defined and selection of subject matter experts is currently under way. The panel of experts is expected to meet for several days in September of this year in Atlanta. ∎

— Source: David Lyalin, PhD, Northrop Grumman contractor to CDC

CDC Expert Panels Make Progress in Several Focus Areas

Throughout the spring months, CDC's Expert Panels met regularly to define, and in some cases finalize, recommendations and guidance for critical IIS support functions. To foster and support efforts regarding EHR-IIS Interoperability, Expert Panel members have focused on identifying recommendations for transport layer technology, defining guidance for local HL7 implementation, and creating guidelines for client-level deduplication. At the same time, the Clinical Decision Support Panel recently got underway and is taking on the task of identifying best practices and developing guidance for immunization evaluation and forecasting.

EHR-IIS Interoperability Panels: After a mid-May review by External Reviewers for the transport layer panel, the Transport Layer Technology Recommendation Document is in final draft form. The panel determined use of the SOAP transport protocol as the preferred transport method. It's anticipated that this document will be released in mid-June. The panel is now working on developing content for a SOAP Implementation Wiki. When complete, it will provide supporting materials and code to assist with the implementation of the SOAP protocol.

Also finalized and available to the public are the local HL7 implementation guide templates. These documents, which include the Local HL7 2.5.1 Implementation Guide Template and Business Rules Template, are available on the CDC IIS Support Branch (IISSB) website.

The third interoperability panel, focusing on client-level deduplication, is in the process of selecting panel members. The kick off meeting for panel proceedings will occur in late summer or early fall.

Clinical Decision Support (CDS) Panel: The CDS panel began with their kick off meeting on April 22. Selected panel members have been assigned to the following groups: (1) Logic Specification, (2) Process, Communication and Sustainability, (3) Validation and Testing, and (4) External Reviewers. Over the next several months, the CDS Expert Panel will continue to meet to define areas such as scope, guiding principles, and preliminary work plans, with an in-person session tentatively scheduled for early fall.

As recommendations and guidance are finalized and published, IIS grantees and the IIS community at-large can find information on the CDC IISSB website: www.cdc.gov/vaccines/programs/iis/default.htm. ■

— Source: Ulrica Andujar & Stuart Myerburg, CDC

Transport Layer Panel Update

The American Reinvestment & Recovery Act (ARRA) includes many measures to modernize infrastructure. The Health Information Technology for Economic and Clinical Health (HITECH) Act is a measure which supports the concept of Electronic Health Records – Meaningful Use [EHR-MU]. HITECH proposes the meaningful use of interoperable electronic health records throughout the U.S. healthcare delivery system as a critical national goal and awards funds to time-limited projects which demonstrate innovative approaches that enhance this interoperability, including an effort to promote EHR and Immunization Information Systems (IIS) interoperability. IIS are confidential, population-based, computerized information systems that collect vaccination data within a geographic area. IIS are an important tool to increase and sustain high vaccination coverage by consolidating vaccination records from multiple providers, generating reminder and recall vaccination notices, and providing official vaccination forms and vaccination coverage assessments.

To facilitate the development and implementation of EHR-IIS integration enhancement, the CDC's Immunization Information System Support Branch (IISSB) focused on the recommendation of a transport layer protocol and supporting documentation to address the issue of utilization of multiple transport layer protocols across grantee programs and vendors and the limitations in real-time message transmission.

The CDC established a panel of subject matter experts and external reviewers, consisting of industry experts, to evaluate and analyze currently utilized industry transport protocols and recommend the most suitable option for EHR-IIS interoperability. It was the vision of this panel to recommend technologies to further promote health system interoperability. Based on research with funded project grantees, the protocols identified for consideration included the following:

- ebXML (PHINMS)
- SMTP+S/MIME (Direct Project)
- SFTP
- HTTPS POST/REST
- SOAP

An initial meeting and subsequent sessions over eight weeks involved the discussion and formulation of the mission, scope, approach, definitions, business requirements, and use cases for the project as well as detailed research on each transport layer protocol. During a three-day, in-person session, the panel SMEs were provided with a project overview and

detailed feedback on each transport layer protocol option. Panel members identified SOAP as the best choice to meet the current and future needs of IIS data exchange, with the best chance for broad adoption across disparate healthcare systems. In addition, SOAP was recommended for a variety of reasons including, but not limited to:

- SOAP supports synchronous real-time vaccination update and query/response.
- SOAP has a natural look and feel for developers on both the sender and receiver side.
- SOAP has a machine-readable contract that allows

for a clear interface across all healthcare systems.

With the panel's recommendation of SOAP came the acknowledgment of the role and value of other transport layer options as well as the expectation that IIS would continue to use other transport layer technologies currently in place. IISSB supports the effort to recommend a standard transport option that our grantee cities and states as well as other healthcare systems would support for immunization interoperability.

For further information and the Transport Layer Recommendation Document, please visit the CDC at www.cdc.gov/vaccines/programs/iis/enhance-projects.htm. ∎

— Source: Eric Larson,
Northrop Grumman contractor to CDC

Web Services Roll Out – A Pilot Project in Oregon

In 2010 Oregon launched its new Immunization Information System, Oregon ALERT IIS and the program received funding to work on enhancing interoperability with provider partners. As part of these efforts, Oregon began transitioning providers to a more seamless and efficient data exchange model and implementing its first real-time bi-directional data exchange process utilizing SOAP Web Services for data transport.

The project had three primary goals: 1. To increase the submission of timely and complete immunization data entered electronically into ALERT IIS, using a standardized messaging protocol; 2. To enable the receipt of immunization history and forecast back into the provider's EHR at the point of service; and 3. To increase the number of Oregon providers submitting HL7 real-time, bi-directional data via the web service to ALERT IIS by sharing system and interface enhancements and lessons learned.

The Projects

In late August 2010, nine organizations, representing 83 clinics, were selected for the pilot project. The pilots characterize a broad geographic distribution, covering both rural and urban communities, and include private practices, public clinics, and rural health clinics. The EHR systems that were selected for these projects include: Clinician's Desktop, EpicCare, GE Centricity, Greenway PrimeSuite, NextGen, Raintree, and Unicare. In some instances, third-party immunization interfaces or "middleware" were used to handle HL7 messaging.

Since the pilot launch, four of the nine organizations are fully operational using the web service to send and receive real-time HL7 messages and work continues with the remaining five pilot providers.

Lessons Learned

Rolling out a new transport method, while developing the technology to do so, was quite a challenge. And, while the Alert Team sometimes felt like they were building the car while driving it, as the project wraps up everyone agrees it was a success. Oregon learned that while they faced several challenges, none were insurmountable. What has resulted is a strong product that can now be generalized statewide. Technology projects take time, this one was no different. Converting to a new IIS while introducing a new transport method to provider organizations is a lot of change to manage, both internally and externally. The health information technology environment and EHR marketplace are moving targets, often creating confusion and frustration for providers. Oregon solicited lessons learned from participating organizations.

Here is what they had to say:

Biggest challenges for providers (anticipated and unanticipated) included:
- Delayed timelines for testing and IIS system downtime.
  - Web service development occurred concurrent with provider EHR enhancements on a very tight schedule. Providers were impacted by delays in web service deliverables.

- Inconsistencies in documentation and platforms created challenges.
  — Local IIS requirements may differ from the CDC Implementation Guide.
  — Differences in batch and real-time HL7 data exchange parsing caused issues
- Underestimating internal ability to modify EHR; underestimating time needed to fulfill requirements.
- EHR Vendor schedule affected provider ability to meet milestones.
- Certificate management and testing.
- Operationalizing 'on the fly'.
- No two systems (even when the same EHR) are alike.

How were these challenges addressed by providers?

- Middleware or interface engines were sometimes the solution when the EHR was not a viable option for real-time HL7 messaging.
- Early and open discussions with EHR Vendors for planning and making system modifications.
- Having a plan for testing and delays as well as an internal project team that includes both program and tech staff to oversee and troubleshoot.
- From the EHR perspective, provider organizations should confirm that the required messaging contents are supported. They should identify the organizational workflows to check on patient immunization status and how to communicate changes in that status to the ALERT IIS system.
- Organizations should be aware of available resources to support a secure HL7-formatted text body in a SOAP request message sent through a web service client while being able to process an HL7-formatted text body in a SOAP response message. Security key and certificate creation and management options will be necessary as well. Being able to determine support for these needs at the EHR or middleware level early on in the process should help streamline overall implementation efforts.

Tips from Oregon's Web Service Users

- Ask lots of questions and seek out other organizations that are already doing similar work with similar products for advice and feedback.
- Test connectivity between the EHR and IIS early in the process to ensure ample time for troubleshooting.
- Allocate sufficient in-house staff time to ensure the project stays on track and to facilitate the work with third-party vendors.
- Prepare your EHR system with functional data placement. Specifically, ensure that each vaccine data point (site, route, dose, given by, VFC, etc) is in fact mapped to corresponding observation terms one for one. This will avoid the need for complete data clean up or extensive programming to extract and sort needed field data.
- Plan for system downtime for both sides of the interface. Whether the downtime issues are caused by the IIS or the EHR program, they can greatly impact the scheduled time your team has allotted to the project.
- Start with clean, functional data; be sure to give your organization ample time for thorough testing and staff training; and research and hire good, reliable resources to assist with the project.
- Be flexible. Schedules change and milestones come and go but always do what you can with what you have.
- Involve end users in the process and encourage them to "own" it, so it doesn't become another one of those dreaded IT projects.

When you're done, and we're almost there, celebrate your accomplishment. ■

— *Source: Tracy Little and Deborah Rochat, OR*

Be sure to give your organization ample time for thorough testing and staff training, and research and hire good, reliable resources to assist with the project.

Ohio's Adoption of Advanced Technology to improve IIS Program Management and EHR Integration

This will help staff ... by automating time consuming repetitive tasks and improving recruitment, training, usage and retention of the IIS.

Immunization Information Systems (IIS) and Vaccine for Children's programs are challenged by the need to manage thousands of providers and respond quickly to changes or new program requirements. Ohio's ImpactSIIS' current functional requirements include: vaccine inventory management, ordering and accountability, complex and accurate forecasting model, patient de-duplication, electronic data exchange and quality assessment capabilities. The system is currently undergoing an expansion into vaccine billing, vision and hearing screening, lead levels, BMI and laboratory services. As a result, there is a greater need for increased support and management of these features for an ever expanding health care provider IIS User Community.

The increased demand places a heavier burden on staff. Applying the same value-added principles and techniques employed in the development of Ohio's IIS, Atlantic Management Center Inc. (AMCI), developed tools that enable staff to efficiently and effectively manage their programs and meet providers' training and support needs. This will help staff manage and monitor the growing IIS user community by automating time consuming repetitive tasks and improving recruitment, training, usage and retention of the IIS.

The **Contact Management System** (CMS) leverages technology to automate and develop better workflow management to track training needs, monitor progress, ensure enrollment requirements are met, and improve communication with providers and ImpactSIIS staff. The State of Ohio realized immediate cost savings and better communication with their providers without sacrificing essential and mandatory reporting.

Contact Management System Toolset

The CMS Toolset includes the following modules to synchronize all aspects of IIS project management.

Provider Contact Management Features:
- Manages the ImpactSIIS staff's territory assignments by county and region
- Improves implementation, training tracking, support tracking and travel coordination
- Maintains scheduling, shared calendars, route tracking and instant communication to field staff
- Sends automated follow-up reminders
- Stores all registration/security agreement documents
- Tracks EHR certification and integration
- Measures provider saturation, retention and compliance
- Coordinates time and activity accountability
- Provides GIS mapping for usage levels, retention and EHR adoption

CMS easily facilitates communication to the IIS Health Care Provider Community, allowing the ImpactSIIS Team to broadcast HTML-based emails to a designated group or to the entire user community. In a recent cost saving analysis, it is estimated that Ohio saved over $40,000 by using the IIS Community Broadcast feature in CMS rather than using traditional communication methods to coordinate and keep their existing IIS User Community informed during a complete system upgrade of the ImpactSIIS.

Community Resource Center (CRC) Features:
- Enroll with the ImpactSIIS and submit security agreements online
- Request training
- Post frequently asked questions
- Virtual Training Library

The CRC allows providers to streamline communications between the ImpactSIIS Team members and the IIS User Community. Security agreements and registration forms are automatically stored in CMS. All user initiated requests are routed directly to the assigned ImpactSIIS representative, improving the overall recruitment and training workflow. The CRC module provides an electronic record response to service requests which reduces missed opportunities and lost documentation.

Group Training: The IIS Training Management Center (TMC) was introduced to manage an aggressive schedule of online Webinar and on-location regional trainings allowing three ImpactSIIS staff members to train over 8,000 users, achieving the program's transitional training goals. In addition, a virtual training library and a training request feature were added to the CRC to supplement the webinar training, thus ensuring the IIS user community's training needs were met. As ImpactSIIS expands into Ohio WIC Clinics this July, the TMC will be utilized to complete training for all 227 clinics (over 500 users) in less than two weeks.

OverSight: Business intelligence Dashboards: OverSight combines data recorded in CMS with actual ImpactSIIS usage data pulled directly from the IIS database, providing increased visibility and up to date reporting at the state, regional, county and practice levels. At the practice level, the Practice Dashboard has improved conversations with the user community. The Practice Dashboard provides ImpactSIIS usage levels as well as the frequency of VFC accountability reporting and ordering and temperature logs for the practice. This upfront information saves the ImpactSIIS team research time and results in more positive outcomes in support and retention efforts. Recent enhancements to OverSight allow for ongoing monitoring of HL7 data submissions from providers using certified EHRs.

Electronic Health Record Integration: Immunization Data Evaluation (IDE) service allows provider sites and EHR vendors to enroll in the ImpactSIIS Immunization Data Exchange. With automated evaluation, they are provided an exportable summary report instantly. Meetings are more pro-

ductive and certification time has been reduced from months to days. It has relieved the ImpactSIIS program of this task, allowing them to focus on data quality, recruitment and training activities. IDE automatically captures all evaluation activity and outcomes in CMS. Integrating the OverSight Dashboard service with the IDE provides continued monitoring of data from the healthcare provider, and reports the percentage of patient and immunization records that are rejected. If the rejection rate is higher than the acceptable threshold, a bad data indicator is displayed.

Adopting and leveraging automated solutions is helping the Ohio ImpactSIIS program to better manage the needs of a growing IIS user community, keep a pulse on usage levels, while increasing communications and tackling the increased demand for EHR Integration.

For the full visual overview presented at the 2011 National Immunization Conference please visit the CDC page at http://cdc.confex.com/cdc/nic2011/flvgateway.cgi/id/6975?recordingid=6975 ∎

— Source: Darrin J Rosebrook – AMCI

AIRA at the 45th National Immunization Conference

AIRA offered two workshops prior to the March 2011 conference on topics that are relevant to the ever changing IIS community

The National Immunization Conference (NIC) is a great time to get together with fellow Immunization Information System (IIS) professionals and solve the problems of the world, well maybe not the problems of the world, but it is a great time to bounce ideas off of others as they relate to an IIS. Capitalizing on the volume of IIS professionals in one location, AIRA offered two workshops prior to the March 2011 conference on topics that are relevant to the ever changing IIS community.

The morning workshop titled, *A Primer for VTrckS, What you Need to Know When Using an IIS,* featured experts from CDC, Washington State and Michigan – the two VTrckS EXIS pilots. The speakers primarily focused on the strategies utilized within their respective states to implement vaccine ordering using an IIS and the interface with VTrckS. **Janet Fath** *(CDC)* covered the technical requirements necessary for implementing VTrckS using an IIS. She also gave helpful tips for identifying whether or not to use an IIS for VTrckS or use the VTrckS external interface. **Jan Hicks-Thomson** *(Vaccine & IP Registry Integration Manager, Washington State Dept. of Health Immunization Program CHILD Profile),* addressed the internal processes and program communication that enabled a successful transition to web-based ordering using their IIS. **Terri Adams** *(VFC Coordinator, Michigan Dept. of Community Health)* focused on the system functionality necessary to implement vaccine ordering and inventory management using an IIS and the successes and challenges of interfacing with VTrckS. Following the presentations participants broke into smaller work groups to discuss the challenges and successes related to grantee, application, program, and provider readiness for using an IIS for VTrckS.

The afternoon session titled, *IIS Interoperability & Meaningful Use, Making Meaningful Use a Meaningful Experience,* featured a variety of speakers from state IIS and IIS vendors. **Michael McPherson** *(Kansas)* provided an overview of the Meaningful Use criteria for Stage 1 & Stage 2. Following the overview of Meaningful Use, the group identified barriers to Meaningful Use and then broke into smaller work groups that each chose one of the barriers to identify challenges, solutions and success measures. **Mike Suralik,** *(Project Manager, HLN Consulting, LLC)* and **Kristen Forney** *(Public Health Solutions Manager, EHR-IIS Interoperability, New York City Citywide Immunization Registry)* demonstrated a tool being implemented in New York that allows for the management and testing of HL7 messages from an EHR system with the Citywide Immunization Registry. The final presentation was from **Mike Garcia,** *(Vice President & Managing Partner, Scientific Technologies Corporation.)*

The presentations and workbooks for both workshops are available on the AIRA website. In June, both workshops were condensed and offered as Webinars for those unable to attend the workshops at NIC. The Webinar recordings will be available on the AIRA website shortly.

On Tuesday evening AIRA hosted a reception for the IIS community and featured **Jessica Khan** *(Technical Director for Health IT, Center for Medicare & Medicaid Services)* as keynote speaker. Ms. Kahn was a very engaging and candid presenter and focused on the operational, policy and technical issues related to Meaningful Use, Medicaid partnerships, EHRs, and HIEs. A list of barriers identified during the IIS Interoperability & Meaningful Use workshop was provided to Ms. Kahn and she was able to provide answers and possible solutions for some of the barriers.

Following the presentation, service awards were presented to the following AIRA members: **Lora Santilli** *(New York State),* **Rob Savage** *(Northrop Grumman),* **Mark Sawyer** *(San Diego County),* and **Sherry Riddick** *(Washington State CHILD Profile).*

All in all it was a great week with lots of activities for everyone. ∎

AIRA Center of Excellence Awards

The Center of Excellence Awards are annual awards presented by AIRA to immunization information systems (IIS) that have actively implemented strategies in support of the activities and goals of their immunization program. This year, there were two categories for the Center of Excellence Awards, IIS Data Use and Interoperability. The 2011 Center of Excellence Awards reflected activities and achievements that occurred during the 2008-2010 project years, had not been used before, and were particularly unique and creative in their implementation and impact. The call for nominations for this award went out to all IIS and immunization program managers.

For the category of **IIS Data Use,** the first award went to **Colorado Immunization Information System (CIIS).** The CIIS participated in a study conducted by University of Colorado to answer the question: Is registry-based recall more effective in increasing immunization rates when conducted by individual practices or centrally by the state health department? In population based recall counties, for those that were not UTD at baseline 18.7% became UTD compared to 12.8% in practice-based recall counties. It was concluded that population-based recall conducted by health departments is an effective alternative to practice-based recall for increasing immunization rates, and is also more cost effective. The second award for IIS Data Use went to **South Dakota.** One of South Dakota's immunization program priorities is to improve vaccine accountability, reduce wastage and improve vaccine ordering accuracy. In early 2009 South Dakota began using the vaccine inventory management reports produced from the South Dakota Immunization Information System (SDIIS) and compared them with VACMAN reports to identify providers that were not accurately accounting for or ordering vaccine for their facility. The vaccine inventory management reports produced from the SDIIS have been a valuable tool in holding providers accountable for their vaccine inventory. A significant improvement of >18% has been shown in the number of providers who are compliant on a regular basis.

For the category of **IIS Interoperability,** the first award went to the **Maine Immunization Registry.** Private providers using Electronic Health Record (EHR) systems were anxious to electronically send data to Maine's Immunization Information system (ImmPact2); many provider systems could not comply with the needed data elements to support Maine's vaccine ordering and usage reporting requirements. As such, duplicate immunization administration data entry was still required for providers. Maine's solution to this problem was to allow the provider to use ImmPact2 as their record of origin to document immunizations. An HL7 message, providing a record of the immunization administration transaction is generated by the IIS system and returned to the provider's EHR system. As a result, there is no longer a need for duplicate data entry. The second award for IIS Interoperability went to New York City's Citywide Immunization Registry and New York Presbyterian Hospital. The NY Citywide Immunization Registry (CIR) and the New York Presbyterian Hospital Immunization Registry, EzVac, demonstrated increased immunization record completeness and coverage rates by integrating data from a public immunization registry into a hospital information system. This project put IIS information directly into the end user's EHR. Previously, providers had to manually search for immunization histories in the CIR. Integrating public immunization records into a hospital EHR significantly increased completeness of records and improved documentation of immunization coverage rates.

Congratulations to all of our award recipients. ■