



The Office of the National Coordinator for  
Health Information Technology



# Capturing Adult Immunization Data in EHRs and Registries

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Putting the **I** in **HealthIT**  
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- What does ONC do?
- Meaningful use (MU) Stage 2
  - Improvements for immunization and other public health measures
- Data exchange challenges
- Recommendations for MU Stage 3
- Consumer access to immunization registries

# What does ONC do?

- Mission: Improve health and health care for all Americans through use of information and technology.
- ONC defines technical requirements for certified electronic health record (EHR) technology and electronic exchange of health information.
  - ONC defines the technical requirements for certified EHR technology that eligible hospitals and providers must possess to meet the “meaningful use” objectives in the Medicare and Medicaid EHR Incentive Programs.
- ONC works with many other government agencies to implement these standards.
- ONC also works closely with standards setting organizations, the health IT industry, and health care providers.

# What improvements does Stage 2 of Meaningful Use (MU) provide?

- ONC worked closely with CDC, the American Immunization Registry Association (AIRA), and other stakeholders to improve immunization interoperability through an updated immunization message and exchange Implementation Guide.<sup>1</sup>
- EHR vendors use the Implementation Guide to develop EHR systems that can exchange data with immunization information systems (IIS).
  - Better Certification Criteria
- One big improvement: In MU Stage 2, eligible hospitals and providers must send immunization data to IIS for all ages as long as the IIS can accept the data. In other words, if the IIS can accept adult immunizations, then the data must be sent.

<sup>1</sup> <http://www.cdc.gov/vaccines/programs/iis/technical-guidance/downloads/hl7guide-1-4-2012-08.pdf>

- Beginning in 2014, providers participating in the Medicare and Medicaid EHR Incentive Programs who have met Stage 1 for two or three years will need to meet MU Stage 2 criteria.
- Stage 2 includes new objectives to improve patient care through better clinical decision support, care coordination and patient engagement.
- Stage 2 will further align with the three part aim
  - Better health experience
  - Better health
  - Reduce costs.

# Stage 2 Eligible Provider Core Objectives - 17 core objectives must be met

Core Objective	Measure
1. CPOE	Use CPOE for more than 60% of medication, 30% of laboratory, and 30% of radiology
2. E-Rx	E-Rx for more than 50%
3. Demographics	Record demographics for more than 80%
4. Vital Signs	Record vital signs for more than 80%
5. Smoking Status	Record smoking status for more than 80%
6. Interventions	Implement 5 clinical decision support interventions + drug/drug and drug/allergy
7. Labs	Incorporate lab results for more than 55%
8. Patient List	Generate patient list by specific condition
9. Preventive Reminders	Use EHR to identify and provide reminders for preventive/follow-up care for more than 10% of patients with two or more office visits in the last 2 years
10. Patient Access	Provide online access to health information for more than 50% with more than 5% actually accessing
11. Visit Summaries	Provide office visit summaries for more than 50% of office visits
12. Education Resources	Use EHR to identify and provide education resources more than 10%
13. Secure Messages	More than 5% of patients send secure messages to their EP
14. Rx Reconciliation	Medication reconciliation at more than 50% of transitions of care
15. Summary of Care	Provide summary of care document for more than 50% of transitions of care and referrals with 10% sent electronically and at least one sent to a recipient with a different EHR vendor or successfully testing with CMS test EHR
16. Immunizations	Successful ongoing transmission of immunization data
17. Security Analysis	Conduct or review security analysis and incorporate in risk management process

# Stage 2 Eligible Hospital Core Objectives - 16 core objectives must be met

Core Objective	Measure
1. CPOE	Use CPOE for more than 60% of medication, 30% of laboratory, and 30% of radiology
2. Demographics	Record demographics for more than 80%
3. Vital Signs	Record vital signs for more than 80%
4. Smoking Status	Record smoking status for more than 80%
5. Interventions	Implement 5 clinical decision support interventions + drug/drug and drug/allergy
6. Labs	Incorporate lab results for more than 55%
7. Patient List	Generate patient list by specific condition
8. eMAR	eMAR is implemented and used for more than 10% of medication orders
9. Patient Access	Provide online access to health information for more than 50% with more than 5% actually accessing
10. Education Resources	Use EHR to identify and provide education resources more than 10%
11. Rx Reconciliation	Medication reconciliation at more than 50% of transitions of care
12. Summary of Care	Provide summary of care document for more than 50% of transitions of care and referrals with 10% sent electronically and at least one sent to a recipient with a different EHR vendor or successfully testing with CMS test EHR
13. Immunizations	Successful ongoing transmission of immunization data
14. Labs	Successful ongoing submission of reportable laboratory results
15. Syndromic Surveillance	Successful ongoing submission of electronic syndromic surveillance data
16. Security Analysis	Conduct or review security analysis and incorporate in risk management process

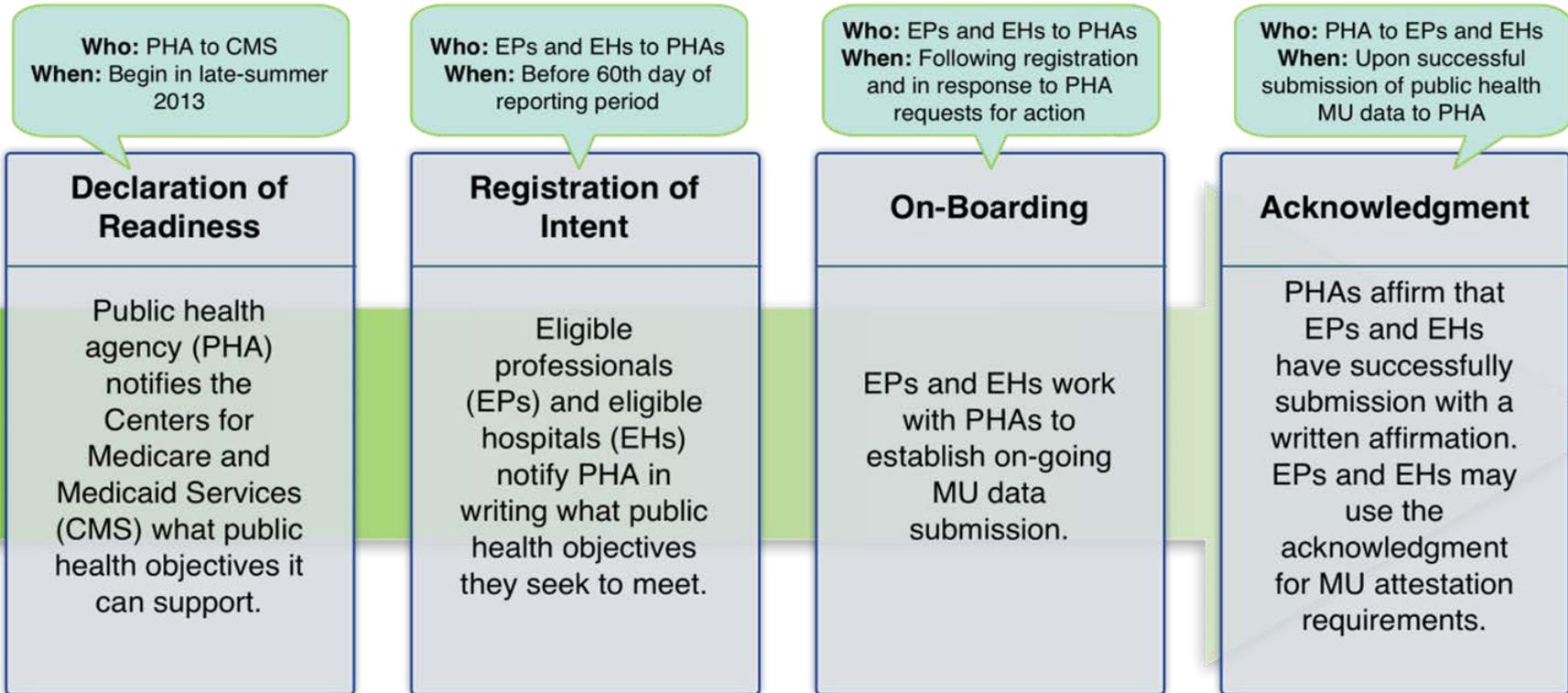
# Stage 2 Immunization Measure

Objective	Measure	Exchange Standards	Vocabulary Standards
<p><b>Immunization registries:</b> Capability to submit electronic data to immunization registries or immunization information systems <b>except where prohibited, and in accordance with applicable law and practice</b></p>	<p><b>EP/EH Measure: Successful ongoing submission</b> of electronic immunization data from Certified EHR Technology to an immunization registry or immunization information system for the entire EHR reporting period</p>	<p><b>Standard - HL7 2.5.1</b> • HL7 2.5.1 Implementation Guide for Immunization Messaging Release 1.4 - Approved 7/15/2012</p>	<p>HL7 Standard Code Set CVX -- Vaccines Administered, updates through July 11, 2012</p>

- Exclusions
  - Public health agency (PHA) does not provide capacity information to central repository by beginning of EHR Reporting Period or PHA cannot accept MU transaction according to published standards
  - Immunization
    - Does not give reportable immunization

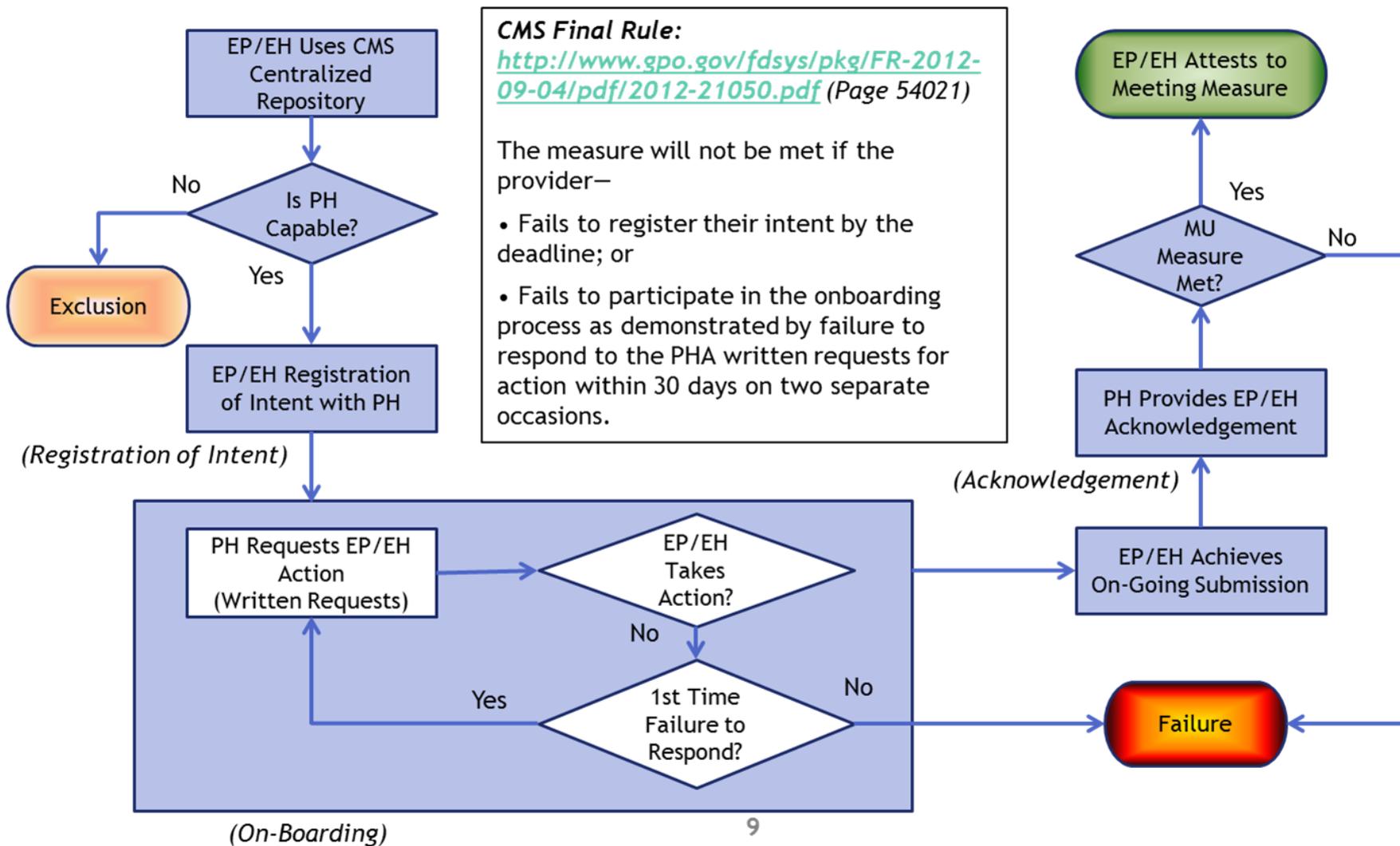
# New public health processes for MU

## Stage 2



# Stage 2 MU PH Reporting Requirements Task Force Update

## Providers Fail to Meet the PH MU Measures if:



- CDC performed a voluntary immunization interoperability status check in late 2012/early 2013.
- Examples of types of errors
  - Does not affect interoperability
    - Requiring Address, Insurance Information
  - Affects Interoperability
    - Information asked for in different ways; Provider Identification
- Short-term strategy
  - Ongoing education and targeted technical assistance
- Long-term strategy
  - Update Implementation Guide, standardize web service transport standard, evaluate other policy options (e.g., optional certification criteria)

- Eligible providers participating in MU Stage 2 are also required to report electronic clinical quality measure data, including:
  - Childhood Immunization Status
  - Influenza Immunization, 6+ months
  - Pneumococcal Vaccination Status, 65+ years

# Draft Recommendations for MU

## Stage 3

- The Health IT Policy Committee has made draft recommendations to HHS for items to consider for Stage 3.
- **Proposed Objective:** Use clinical decision support to improve performance on high-priority health conditions (including immunizations).
- **Proposed Objective:** Capability to receive a patient's immunization history supplied by an immunization registry or immunization information system, and to enable healthcare professionals to use structured historical immunization events in the clinical workflow, except where prohibited, and in accordance with applicable law and practice.
- **eCQMs:** Count all immunizations in the numerator of a measure regardless of where the vaccine was given.

# Consumer Access to Immunization Registries

- ONC is working with the National Vaccine Program Office and CDC to give consumers/patients electronic access to their immunization history data from IIS.
  - Projects are being cooperatively funded to develop the technology and communication plans.
- Traditionally, patients have to request this information from their health care provider or the health department and receive a paper record.
- States/regions that are already offering this electronic access include Indiana, Wisconsin, and San Diego.



**Get Your Records Now!**  
Contact your Physician and get a  
PIN# to access MyVaxIndiana

### What Is MyVaxIndiana

The Indiana State Department of Health (ISDH) maintains an Immunization Information System known as CHIRP (Children and Hoosier's Immunization Registry Program). The purpose of CHIRP is to collect, forecast, manage, and share vaccine data to registered medical providers in Indiana. A provider may include private medical facilities, local health departments, hospitals, schools, and pharmacies. The program is run under the Indiana Code 16-38-5 which allows for providers and their designees to access data from CHIRP. In addition an individual also may access their personal or their dependents vaccine record from either the registered CHIRP provider or directly from the Indiana State Department of Health.

As an update to the existing process, ISDH has created the MyVaxIndiana Immunization Portal which enables a person to access a vaccine record from any computer. To begin this process a registered CHIRP provider will create a patient ID number (PIN) which will grant a person specific patient access to the record they have requested. A parent or guardian could request a PIN to view their dependents immunization history, or any individual could do the same for their own record. They then have a number of options as to how their data can be viewed and saved. This includes an option to print and save the Official Immunization Record, download the record into a file format that may be compatible with their Personal Health Record system (PHR), or have it faxed or mailed to them.

To find out if your provider uses CHIRP, or what providers in your area do, please click the click below to see the facilities online with CHIRP.

[Find out who's online in your county.](#)

### FAQs

- [How do I use this site?](#)
- [Provider FAQ](#)
- [How can I find a CHIRP provider?](#)

If you have a question that is not answered here, please feel free to contact us at any time. You can email us at [MyVaxIndiana@isdh.in.gov](mailto:MyVaxIndiana@isdh.in.gov) or call toll-free at 1-888-227-4439. As a tip, if you wish to download your record, please install Adobe Acrobat Reader.

# My VAX Indiana Downloads

Putting the I in HealthIT  
www.HealthIT.gov



Home How To Use Find My Record Contact MyVaxIndiana Mobile Vax



State of Indiana Official Record of Immunization  
All Recorded Vaccinations



Download to personal health record

### Patient Information

IRMS : 99 ISDH TEST IRMS  
Facility Name : RANDOLPH COUNTY HEALTH DEPARTM  
Date : 7/15/2013 Street Address :  
PIN # : 2339274 City :  
Patient Name : T TEST State :  
Birth Date : 4/27/2005 Zip Code :  
Gender : Country : United States  
Guardian :

### Vaccination Information

Vaccine Name	Dose # 1	Dose # 2	Dose # 3	Dose # 4
DTaP/Hib/IPV	07/12/2013			
HBIG	04/27/2005			
Hep B Ped/Adol - Preserv Free	04/27/2005			
Influ split 18+ yrs pres free	x 09/15/2009	x 07/12/2013		
MMR	07/12/2013			
Varicella	07/12/2013			

Vaccines marked with a red x indicates the dose given is outside of the ACIP recommended range. If you have any questions about the dose, please call your Medical Provider or the CHIRP help desk at (888) 227-4439 for an explanation.

### CDC ACIP Vaccination Forecast

The Vaccination Forecast for this record is based on the Centers for Disease Control and Prevention (CDC) ACIP recommended vaccine schedule. Please consult your Medical Provider if you have any questions about this vaccine forecast or this record.

Vaccine Family	Dose #	Recommended Date	Minimum Valid Date	Overdue Date	Status
HEP-B 3 DOSE	2	Past Due	5/25/2005	8/27/2005	Past Due
FLU	1	Past Due	10/27/2005	11/26/2005	Past Due
HEP-A	1	Past Due	4/27/2006	4/27/2007	Past Due
POLIO	2	8/9/2013	8/9/2013	9/8/2013	Up to Date
Tdap	2	8/9/2013	8/9/2013	9/8/2013	Up to Date
HPV	1	4/27/2016	4/27/2014	4/27/2018	Up to Date
MENINGOCOCCAL	1	4/27/2016	4/27/2016	4/27/2018	Up to Date

Vaccine Family This is the family or group name for the vaccine

For questions, contact

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# Additional Slides

# MU Stage 2 eCQMs for EPs

CMS eMeasure ID	NQF #	Measure Title	Measure Description	Numerator Statement	Denominator Statement	Measure Steward	Domain
CMS117v1	0038	Childhood Immunization Status	Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV), one measles, mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday.	Children who have evidence showing they received recommended vaccines, had documented history of the illness, had a seropositive test result, or had an allergic reaction to the vaccine by their second birthday	Children who turn 2 years of age during the measurement period and who have a visit during the measurement period	National Committee for Quality Assurance	Population/Public Health.
CMS147v1	0041	Preventive Care and Screening: Influenza Immunization	Percentage of patients aged 6 months and older seen for a visit between October 1 and March 31 who received an influenza immunization OR who reported previous receipt of an influenza immunization	Patients who received an influenza immunization OR who reported previous receipt of an influenza immunization	All patients aged 6 months and older and seen for a visit between October 1 and March 31	American Medical Association-convened Physician Consortium for Performance Improvement® (AMA-PCPI)	Population/Public Health.
CMS127v1	0043	Pneumonia Vaccination Status for Older Adults	Percentage of patients 65 years of age and older who have ever received a pneumococcal vaccine.	Patients who have ever received a pneumococcal vaccination	Patients 65 years of age and older with a visit during the measurement period	National Committee for Quality Assurance	Clinical Process/ Effectiveness.

[http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/EP\\_MeasuresTable\\_Posting\\_CQMs.pdf](http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/EP_MeasuresTable_Posting_CQMs.pdf)

Stage 2 Final Rule	Stage 3 Recommendations
<p><b>EP/EH Objective:</b> Use clinical decision support to improve performance on high-priority health conditions</p> <p><b>Measure:</b></p> <p>1. Implement five clinical decision support interventions related to four or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period. Absent four clinical quality measures related to an EP, eligible hospital or CAH's scope of practice or patient population, the clinical decision support interventions must be related to high-priority health conditions. It is suggested that one of the five clinical decision support interventions be related to improving healthcare efficiency.</p> <p>2. The EP, eligible hospital, or CAH has enabled and implemented the functionality for drug-drug and drug-allergy interaction checks for the entire EHR reporting period.</p>	<p><b>Objective:</b> Use clinical decision support to improve performance on high priority health conditions</p> <p><b>Measure:</b></p> <p>1. Implement 15 clinical decision support interventions or guidance related to five or more clinical quality measures that are presented at a relevant point in patient care for the entire EHR reporting period. <b>The 15 CDS interventions should include two or more of one or more</b> interventions in each of the following areas, as applicable to the EP's specialty:</p> <ul style="list-style-type: none"> <li>• Preventive care (including immunizations)</li> <li>• Chronic disease management, including hypertension* (e.g., diabetes, coronary artery disease)</li> <li>• Appropriateness of lab and radiology orders</li> <li>• Advanced medication-related decision support** (e.g., renal drug dosing)</li> <li>• <b>Improving the accuracy or completeness of the problem list for one or more chronic conditions</b></li> </ul> <p>2. The EP, eligible hospital, or CAH has enabled the functionality for <b>drug-drug and drug-allergy interaction checks</b> for the entire EHR reporting period.</p> <p><b>Certification criteria:</b></p> <p>1. Ability to track CDS triggers, how the provider responded to improve the effectiveness of CDS interventions, <b>and the reason for overriding</b></p> <p>2. Ability to flag preference-sensitive conditions, and provide decision support materials for patients.</p> <p>3. Capability to check for a maximum dose in addition to a weight based calculation.</p> <p>4. Use of structured SIG standards</p> <p>5. Ability for EHRs to consume <b>external</b> CDS interventions <del>from central repositories</del>—(e.g., rules for drug-drug interactions, <b>rules for reporting diseases for public health departments-immunization recommendations and rules</b>, preference-sensitive care lists)</p> <p>6. <b>Ability to use structured information within systems to support clinicians' maintenance of up-to-date accurate problem lists, med lists, and med allergy lists. Systems provide decision support about additions, edits, and deletions for review and action, but would not automatically add anything to these lists without professional action.</b></p> <ul style="list-style-type: none"> <li>•<b>EHR systems should provide functionality to code medication allergies including its related drug family to code related reactions. Adapt and further develop existing standards to define the nature of reactions for allergies (i.e. severity).</b></li> </ul>

\* This will assist in achieving the CDC's goal of improvements in hypertension control.

\*\*Kuperman, G.J. (2007) Medication-related clinical decision support in computerized provider order entry systems: a review. *Journal of the American Medical Informatics Association: JAMIA*, 14(1):29-40.

\*\*\* Phansalkar, S., van der Sijs, H., Tucker, A., Desai, A., Bell, D., Teich, J., Middleton, B., Bates, D (2012). Drug-drug interactions that should be noninterruptive in order to reduce alert fatigue in electronic health records. *Journal of the American Medical Informatics Association: JAMIA*, 2013;20:3489-493

# MU Stage 3 Recommendations 2

Stage 2 Final Rule	Stage 3 Recommendations	Proposed for Future Stage
<p><b>EP/EH Objective:</b> Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice</p> <p><b>EP/EH Measure:</b> Successful ongoing submission of electronic immunization data from Certified EHR Technology to an immunization registry or immunization information system for the entire EHR reporting period</p>	<p><b>EP/ EH Objective:</b> Capability to receive a patient’s immunization history supplied by an immunization registry or immunization information system, and to enable healthcare professionals to use structured historical immunization events in the clinical workflow, except where prohibited, and in accordance with applicable law and practice.</p> <p><b>Measure:</b> <del>Documentation of timely and successful electronic receipt by the Certified EHR Technology of vaccine history (including null results) from an immunization registry or immunization information system for 30-10% of patients who received immunizations from the EP/EH during the entire EHR reporting period.</del> <b>at least 10 query results received by the EHR from the immunization registry or immunization information system within the reporting period.</b></p> <p><b>Exclusion:</b> EPs and EHs that administer no immunizations or jurisdictions where immunization registries/immunization information systems cannot provide electronic immunization histories.</p> <p><b>Certification criteria #1:</b> EHR is able to receive and present a standard set of structured, externally-generated, immunization history and capture the act and date of review within the EP/EH practice.</p> <p><b>Certification criteria #2:</b> Ability to generate a report that the functionality was enabled for the entire reporting period.</p>	<p><b>EP/EH Objective:</b> Add submission of vaccine contraindication(s) and reason(s) for substance refusal to the current objective of successful ongoing immunization data submission to registry or immunization information systems.</p>