

## Proposed Changes to Existing Measure for HEDIS<sup>®1</sup> 2009: Childhood Immunization Status (CIS)

NCQA seeks comments on proposed modifications to the *Childhood Immunization Status (CIS)* measure with the addition of the hepatitis A, rotavirus (rota) and influenza (flu) vaccines. With the inclusion of these new vaccines, the *Childhood Immunization Status* measure will evaluate the percentage of children two years of age who had four diphtheria, tetanus and acellular pertussis (Tdap); three polio (IPV); one measles, mumps and rubella (MMR), three H influenza type B (HiB), three hepatitis B, one chicken pox (VZV), four pneumococcal conjugate; *two hepatitis A; three Rota; and two flu vaccines* by their second birthday. The measure calculates a rate for each vaccine and three separate combination rates.

The addition of these vaccines and the optional exclusions align with the Centers for Disease Control and Prevention (CDC) and the Advisory Council on Immunization Practices (ACIP) guidelines for immunizations and contraindications. The ACIP recommends routine vaccination of infants with 3 doses of rotavirus vaccine administered orally at ages 2, 4 and 6 months. This vaccine should not be administered after age 32 weeks because of insufficient data on the safety and efficacy of rotavirus vaccine in infants after this age (CDC MMWR Rotavirus 2006). The hepatitis A vaccine is recommended for all children 1 year of age (more specifically, 12–23 months), with the two doses being administered 6 months apart (American Academy of Pediatrics Committee on Infectious Diseases 2007). The ACIP recommends that all children aged 6–59 months receive the influenza vaccine each year, with the first dose accompanied by a primer dose (American Academy of Pediatrics Committee on Infectious Diseases 2007).

NCQA's policy has been to implement changes to the ACIP guidelines (e.g., new vaccine recommendations) after three years, to account for the measure's look-back period and to allow the industry time to adapt to new guidelines. In general, vaccinations have been added to the measures without field-testing unless a particular situation required it. The addition of the hepatitis A and rota vaccinations are proposed based solely on ACIP recommendations, while the addition of the flu vaccination is proposed based both on recommendations and on field-test results. Field-testing was pursued for the flu vaccine because uncertainty existed regarding the place of administration, dosage timing and impact of possible shortages.

### Influenza Vaccine Field-Test

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NCQA conducted a field-test in the summer of 2007 to assess the feasibility of adding the flu vaccination to the CIS measure. Results are based on data from three health plans, representing members from commercial and Medicaid product lines.

With respect to the place of administration, in talking with experts and reviewing field-test results, we determined that flu vaccines for children are generally given in providers' offices or health departments and not in pharmacies, as with adults. Consequently, data should be able to be captured through administrative billing, medical record documentation or immunization registries.

With respect to dosage timing and number of flu vaccines administered by 2 years of age, rates of performance were analyzed for a two-flu-shot and a three-flu-shot requirement. Performance rates were significantly lower for the three-shot requirement and it was very difficult for plans to accurately assess which vaccine was the primer dose. With respect to the two-shot requirement, field-test data confirmed that there is variation and significant room for improvement. Based on hybrid data collection and rate calculation, rates for the two commercial plans ranged from 26 percent–66.7 percent, whereas hybrid performance for the Medicaid plan was lower, at 13.3 percent.

In addition to the new antigens, two new combination rates will be added to the measure; one to include the flu vaccine and one without it. In years where a shortage has been determined to have an impact on rates, the combination rate without the flu vaccine can be used for reporting.

Attached is a copy of the draft specifications with the proposed changes.

**NCQA thanks and acknowledges the contributions of the Centers for Disease Control and Prevention (CDC).**

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## Childhood Immunization Status (CIS)

### SUMMARY OF CHANGES TO HEDIS 2009

- [Added the following vaccines: hepatitis A, rotavirus and influenza](#)
- [Retired Combination 2](#)
- [Added Combination 4 and 5](#)

### Description

The 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, one chicken pox (VZV); four pneumococcal conjugate; [two hepatitis A](#); [three rotavirus \(rota\)](#); and [two influenza \(flu\)](#) vaccines by their second birthday. The measure calculates a rate for each vaccine and [three](#) separate combination rates.

### Eligible Population

<b>Product lines</b>	Commercial, Medicaid (report each product line separately).
<b>Age</b>	Children who turn 2 years of age during the measurement year.
<b>Continuous enrollment</b>	12 months prior to the child's second birthday.
<b>Allowable gap</b>	No more than one gap in enrollment of up to 45 days during the 12 months prior to the child's second birthday. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 days] is not continuously enrolled).
<b>Anchor date</b>	Enrolled on the child's second birthday.
<b>Benefit</b>	Medical.
<b>Event/diagnosis</b>	None.

### Administrative Specification

<b>Denominator</b>	The eligible population.
<b>Numerators</b>	For MMR, hepatitis B, VZV <a href="#">and hepatitis A</a> , count any of the following. <ul style="list-style-type: none"> <li>• Evidence of the antigen or combination vaccine, <b>or</b></li> <li>• Documented history of the illness, <b>or</b></li> <li>• A seropositive test result</li> </ul>

For DTaP, IPV, HiB, pneumococcal conjugate, [rotavirus and influenza](#), count only the following.

- Evidence of the antigen or combination vaccine

For combination vaccinations that require more than one antigen (i.e., DTaP and MMR), the organization must find evidence of all the antigens

**DTaP** Four DTaP vaccinations, with different dates of service on or before the child's second birthday. Do not count any vaccination administered prior to 42 days after birth.

**IPV** At least three IPV vaccinations, with different dates of service on or before the child's second birthday. IPV administered prior to 42 days after birth cannot be counted.

**MMR** At least one MMR vaccination, with a date of service falling on or before the child's second birthday.

**HiB** Three HiB vaccinations, with different dates of service on or before the child's second birthday. HiB administered prior to 42 days after birth cannot be counted.

**Note:** Because one particular type of HiB vaccine requires only three doses, the HEDIS measure requires the organization to meet the minimum possible standard of three doses, rather than the recommended four doses.

**Hepatitis B** Three hepatitis B vaccinations, with different dates of service on or before the child's second birthday.

**VZV** At least one VZV vaccination, with a date of service falling on or before the child's second birthday.

**Pneumococcal conjugate** At least four pneumococcal conjugate vaccinations, with different dates of service on or before the child's second birthday. [Do not count any vaccination administered prior to 42 days after birth.](#)

[Hepatitis A](#) [Two hepatitis A vaccinations, with different dates of service on or before the child's second birthday.](#)

[Rotavirus](#) [Three rotavirus vaccinations, with different dates of service on or between 42 days after birth and the child's second birthday.](#)

[Influenza](#) [At least two influenza vaccinations, with different dates of service on or before the child's second birthday. Do not count any vaccination administered prior to 6 months after birth.](#)

~~**Combination 2 (DTaP, IPV, MMR, HiB, hepatitis B, VZV)** Children who receive four DTaP; three IPV; one MMR; three HiB; three hepatitis B; and one VZV vaccination on or before the child's second birthday.~~

**Combination 3 (DTaP, IPV, MMR, HiB, hepatitis B, VZV, pneumococcal conjugate)** Children who receive four DTaP; three IPV; one MMR; three HiB; three hepatitis B; one VZV vaccination and four pneumococcal conjugate vaccinations on or before the child's second birthday.

**Combination 4 (DTaP, IPV, MMR, HiB, hepatitis B, VZV, pneumococcal conjugate, hepatitis A, rotavirus)** Children who receive all antigens listed in Combination 3; two hepatitis A vaccinations and three rotavirus vaccinations.

**Combination 5 (DTaP, IPV, MMR, HiB, hepatitis B, VZV, pneumococcal conjugate, hepatitis A, rotavirus, influenza)** Children who receive all antigens listed in Combination 4 and at least two influenza vaccinations.

**Table CIS-A: Codes to Identify Childhood Immunizations**

Immunization	CPT	HCPCS	ICD-9-CM Diagnosis*	ICD-9-CM Procedure
DTaP	90698, 90700, 90721, 90723			99.39
Diphtheria and tetanus	90702			
Diphtheria	90719			99.36
Tetanus	90703			99.38
Acellular pertussis				99.37
IPV	90698, 90713, 90723			99.41
MMR	90707, 90710			99.48
Measles and rubella	90708			
Measles	90705		055	99.45
Mumps	90704		072	99.46
Rubella	90706		056	99.47
HIB	90645-90648, 90698, 90721, 90748			
Hepatitis B**	90723, 90740, 90744, 90747, 90748	G0010	070.2, 070.3, V02.61	
VZV	90710, 90716		052, 053	
Pneumococcal conjugate	90669	G0009		
<u>Hepatitis A</u>	<u>90633</u>		<u>070.0, 070.1</u>	
<u>Rotavirus</u>	<u>90680</u>			
<u>Influenza</u>	<u>90655, 90657</u>	<u>G0008</u>		<u>99.52</u>

\* ICD-9-CM Diagnosis codes indicate evidence of disease.

\*\* The two-dose hepatitis B antigen Recombivax is recommended for children between 11 and 14 years of age only and is not included in this table.

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**Exclusion (optional)**

Children who had a contraindication for a specific vaccine may be excluded from the denominator for all antigen rates and the combination rates. The denominator for all rates must be the same. An organization that excludes contraindicated children may do so only if the administrative data do not indicate that the contraindicated immunization was rendered. The exclusion must have occurred by the second birthday. Organizations should look for exclusions as far back as possible in the member's history and use the codes in Table CIS-B to identify allowable exclusions.

**Table CIS-B: Codes to Identify Exclusions**

Immunization	Description	ICD-9-CM Diagnosis
Any particular vaccine	Anaphylactic reaction to the vaccine or its components	999.4
DTaP	Encephalopathy	323.51* <i>with</i> (E948.4 or E948.5 or E948.6)
IPV	Anaphylactic reaction to streptomycin, polymyxin B or neomycin	
MMR and VZV	Immunodeficiency, including genetic (congenital) immunodeficiency syndromes	279
MMR and VZV	HIV disease; asymptomatic HIV	042, V08
MMR and VZV	Cancer of lymphoreticular or histiocytic tissue	200-202
MMR and VZV	Multiple myeloma	203
MMR and VZV	Leukemia	204-208
MMR and VZV	Anaphylactic reaction to neomycin	
<del>HiB</del>	<del>None</del>	
Hepatitis B	Anaphylactic reaction to common baker's yeast	
<del>Pneumococcal conjugate</del>	<del>None</del>	

\*Use ICD-9-CM Diagnosis code 323.5 (with not fifth digit) to identify DTaP prior to October 1, 2006; the date of service *must* be before October 1, 2006.

**Hybrid Specification**

**Denominator** A systematic sample drawn from the eligible population for each product line. The organization may reduce the sample size using the current year's administrative rate for Combination ~~3-4~~, *or the prior year's audited, product-line specific results for Combination 3*. For information on reducing sample size, refer to the *Guidelines for Calculations and Sampling*.

**Numerators** For MMR, hepatitis B, VZV *and hepatitis A*, count any of the following.

- Evidence of the antigen or combination vaccine, **or**
- Documented history of the illness, **or**
- A seropositive test result

For DTaP, HiB, IPV, pneumococcal conjugate, *rotavirus and influenza*, count *only* the following.

- Evidence of the antigen or combination vaccine

For combination vaccinations that require more than one antigen (i.e., DTaP and MMR), the organization must find evidence of all the antigens.

**Administrative** Refer to the Administrative Specification to identify positive numerator hits from the administrative data.

**Medical record** For immunization evidence obtained from the medical record, the organization may count members where there is evidence that the antigen was rendered from one of the following.

- A note indicating the name of the specific antigen and the date of the immunization, **or**
- A certificate of immunization prepared by an authorized health care provider or agency including the specific dates and types of immunizations administered.

For documented history of illness or a seropositive test result, the organization must find a note indicating the date of the event. The event must have occurred by the member's second birthday.

Notes in the medical record indicating that the member received the immunization "at delivery" or "in the hospital" may be counted toward the numerator. This applies only to immunizations that do not have minimum age restrictions (e.g., prior to 42 days after birth). A note that the "member is up to date" with all immunizations but which does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence of immunization for HEDIS reporting.

**Note:** *DTP vaccinations are no longer manufactured, but notations of DTP in medical records count toward the numerator.*

### Exclusion (optional)

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Refer to the Administrative Specification for exclusion criteria. The exclusion must have occurred by the member's second birthday.

### Note

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- *NCQA follows the Centers for Disease Control and Prevention (CDC) and the Advisory Council on Immunization Practices (ACIP) guidelines for immunizations. HEDIS implements any changes to the guidelines (e.g., new vaccine recommendations) after three years to account for the measure's look-back period and to allow the industry time to adapt to new guidelines.*

## Data Elements for Reporting

Organizations that submit HEDIS data to NCQA must provide the following data elements.

**Table CIS-1/2: Data Elements for Childhood Immunization Status**

	Administrative	Hybrid
Measurement year	✓	✓
Data collection methodology (Administrative or Hybrid)	✓	✓
Eligible population	✓	✓
Number of numerator events by administrative data in eligible population (before exclusions)		Each of the <u>913</u> rates
Current year's administrative rate (before exclusions)		Each of the <u>913</u> rates
Minimum required sample size (MRSS) or other sample size		✓
Oversampling rate		✓
Final sample size (FSS)		✓
Number of numerator events by administrative data in FSS		Each of the <u>139</u> rates
Administrative rate on FSS		Each of the <u>913</u> rates
Number of original sample records excluded because of valid data errors		✓
Number of administrative data records excluded		✓
Number of medical record data records excluded		✓
Number of employee/dependent medical records excluded		✓
Records added from the oversample list		✓
Denominator		✓
Numerator events by administrative data	Each of the <u>139</u> rates	Each of the <u>913</u> rates
Numerator events by medical records		Each of the <u>913</u> rates
Reported rate	Each of the <u>139</u> rates	Each of the <u>139</u> rates
Lower 95% confidence interval	Each of the <u>139</u> rates	Each of the <u>139</u> rates
Upper 95% confidence interval	Each of the <u>913</u> rates	Each of the <u>139</u> rates