



# Clinical Reporting System (CRS) Childhood Immunizations Measures

*Updated February 2017*

# CRS GPRA Modernization Act (GPRAMA) Measure

- User Population patients ages 19–35 months active in IMM with the 4:3:1:3\*:3:1:4 combination, contraindications, and evidence of disease
  - Beginning in 2013, the measure was changed to look for 3 or 4 Hib, depending on the vaccines administered.
  - The 2016 rate reported by CRS was 72.3% (reported for GPRA).

# CRS Denominators (1)

- Active Clinical patients ages 19–35 months as of the *end* of the Report Period (7–23 months at beginning of the Report Period)
  - Active Clinical is defined as:
    - Must be Indian/Alaska Native, based on Beneficiary classification 01.
    - Must reside in a community specified in the site's GPRA community taxonomy.
    - Must be alive on last day of Report Period.
    - Must have *two visits to defined medical clinics in the past 3 years*. One of those visits must be any of the following: 01 General, 06 Diabetic, 10 GYN, 12 Immunization, 13 Internal Med, 20 Pediatrics, 24 Well Child, 28 Family Practice, 57 EPSDT, 70 Women's Health, 80 Urgent, 89 Evening. Second visit may be to larger list of clinics (see CRS User Manual).

# CRS Denominators (2)

- User Population patients ages 19–35 months as of the *end* of the Report Period
  - User Population defined as
    - Must be Indian/Alaska Native, based on Beneficiary classification 01
    - Must reside in a community specified in the site's GPRA community taxonomy
    - Must be alive on last day of Report Period
    - Must have *one visit to any clinic in the past three years*
  - Only included in the Selected Measures (Local) Reports

# CRS Denominators (3)

- GPRA: User Population patients ages 19–35 months as of the *end* of the Report Period who are active in the Immunization Package (IMM)
  - Must meet the User Population definition (see previous slide)
  - Must be active in IMM as of end of the Report Period, which is checked each time the report is run.

## Example:

- Report Period: July 1, 2016–June 30, 2017
- Immunization Package Status: Inactive
- Inactive Date: May 1, 2017
- Patient is not included in this denominator

# CRS Denominators (4)

- GPRO Denominator (Continued)
  - Since there is no way to determine when a patient became active in IMM, data is not reported for the Previous Year or Baseline Years for this denominator.
  - Reporting facility must be using the RPMS IMM for this denominator; otherwise, will have zero patients in the denominator.

# CRS Numerators

- Most CRS numerators include patients with the vaccine, contraindication, evidence of disease, and/or NMI-only refusal
  - Except for the Immunization Program Numerators, NMI refusals, evidence of disease, and contraindications for individual immunizations will also count toward meeting the definition, as defined below. NOTE: NMI refusals are not counted as refusals; rather, they are counted as contraindications.
  - Contraindications include:
    - IMM contraindications
    - NMI refusals entered into Patient Care Component (PCC)
    - Diagnosis codes for specific conditions (e.g. HIV)
    - Where required number of doses is  $>1$ , only 1 contraindication is necessary to be counted in the numerator
  - Evidence of disease will be checked for at any time in the child's life (prior to the end of the Report Period)

# CRS Numerators (cont.)

- Most CRS numerators include one sub-numerator:
  - Patients with (1) evidence of the disease, (2) a contraindication, or (3) a documented NMI refusal



# CRS Numerators (more)

Childhood Immunizations Numerator	National GPRA/GPRAMA Report?	Selected Measures (Local) Report?
<b>GPRAMA: 4:3:1:3*:3:1:4</b>	Y	Y
4 DTaP	Y	Y
3 Polio	Y	Y
1 MMR	Y	Y
3-4 Hib	Y	Y
3 Hepatitis B	Y	Y
1 Varicella	Y	Y
4 Pneumococcal	Y	Y
2 Hepatitis A	N	Y
2-3 Rotavirus	N	Y
2 Influenza	N	Y

# CRS Logic

- Vaccines must be at least 10 days apart. Vaccines documented on dates within 10 days of each other are considered as the same immunization.



# CRS Logic (cont.)

- CRS dosage logic
  - 4 doses of DTaP: (1) 4 DTaP/DTP/Tdap; (2) 1 DTaP/DTP/Tdap and 3 DT/td; (3) 1 DTaP/DTP/Tdap and 3 each of Diphtheria and Tetanus; (4) 4 DT and 4 Acellular Pertussis; (5) 4 Td and 4 Acellular Pertussis; or (6) 4 each of Diphtheria, Tetanus, and Acellular Pertussis
  - 3 doses of Polio: (1) 3 OPV, (2) 3 IPV, or (3) combination of oral poliovirus vaccine (OPV) and inactivated poliovirus vaccine (IPV) totaling 3 doses
  - 1 dose of MMR: (1) MMR; (2) 1 M/R and 1 Mumps; (3) 1 R/M and 1 Measles; or (4) 1 each of Measles, Mumps, and Rubella
  - 3 doses of Hep B
  - 3 or 4 doses of Hib, depending on the vaccine administered
  - 1 dose of Varicella
  - 4 doses of Pneumococcal

# CRS Reports and Patient Lists

- National GPRA/GPRAMA Report Patient Lists
  - Active Clinical with 4:3:1:3\*:3:1:4
  - Active Clinical without 4:3:1:3\*:3:1:4
  - Active Immunization Package with 4:3:1:3\*:3:1:4
  - Active Immunization Package without 4:3:1:3\*:3:4
  - Active Clinical Pts not in Immunization Package denominator
- Selected Measures (Local) Report Patient List
  - Patients in any of the denominators with received vaccines listed
- All patient lists show the vaccines the patients received if they had the required number of doses for the vaccine

# Sample National GPRA Report

	REPORT	%	PREV YR	%	CHG from BASE	%	CHG from		
	PERIOD		PERIOD		PREV YR % PERIOD		BASE %		
3426									
3427									
3428									
3429	Active Clinical Pts 19-35 months	64	42			55			
3430									
3431	# w/ 4313*314 combo or w/Dx/Contraind/ NMI Refusal	5	7.8	0	0	7.8	0	7.8	
3432									
3433	# w/ 4 doses DTaP or w/ Contraind/ NMI Refusal	27	42.2	4	9.5	32.7	9	16.4	25.8
3434									
3435	# w/ 3 doses Polio or w/ Dx/ Contraind/ NMI Refusal	36	56.3	13	31	25.3	12	21.8	34.4
3436									
3437	# w/ 1 dose MMR or w/ Dx/Contraind/ NMI Refusal	31	48.4	13	31	17.5	18	32.7	15.7
3438									
3439	# w/ 3-4 doses HIB or w/Contraind NMI Refusal	27	42.2	10	23.8	18.4	17	30.9	11.3
3440									
3441	# w/ 3 doses Hep B or w/ Dx/Contraind/ NMI Refusal	34	53.1	12	28.6	24.6	14	25.5	27.7
3442									
3443	# w/ 1 dose Varicella or w/ Dx/Contraind/ NMI Refusal	27	42.2	12	28.6	13.6	14	25.5	16.7
3444									
3445	# w/4 doses Pneumococcal or w/Dx/ Contraind/ NMI Refusal	7	10.9	2	4.8	6.2	0	0	10.9
3446									
3447	Active Imm Pkg Pts 19-35 mos (GPRAMA)	52		0			0		
3448	# w/4313*314 combo or w/ Dx/ Contraind/ NMI Refusal (GPRAMA)	5	9.6	0	0	9.6	0	0	9.6
3449									
3450	# w/ 4 doses Dtap or w/ Dx/ Contraind/ NMI Refusal	27	51.9	0	0	51.9	0	0	51.9
3451									
3452	# w/ 3 doses Polio or w/ Dx/ Contraind/ NMI Refusal	36	69.2	0	0	69.2	0	0	69.2

# Sample Selected Measures (Local) Report

1891		REPORT	%	PREV YR	%	CHG from	BASE	%	CHG from
1892		PERIOD		PERIOD		PREV YR %	PERIOD		BASE %
1893									
1894	Active Clinical Pts 19-35 months	64		42			55		
1895									
1896	# w/ 4313*314 combo or w/Dx/Contraind/ NMI Refusal	5	7.8	0	0	7.8	0	0	7.8
1897	A. # w/ Dx/Contraind/NMI Ref w/ % of Total 4313*314	1	20	0	0	20	0	0	20
1898									
1899	# w/ 4 doses DTaP or w/ Contraind/ NMI Refusal	27	42.2	4	9.5	32.7	9	16.4	25.8
1900	A. # w/ Contraind/NMI Ref w/ % of Total DTaP	9	33.3	0	0	33.3	0	0	33.3
1901									
1902	# w/ 3 doses Polio or w/ Dx/ Contraind/ NMI Refusal	36	56.3	13	31	25.3	12	21.8	34.4
1903	A. # w/ Dx/Contraind/NMI Ref w/ % of Total Polio	11	30.6	0	0	30.6	0	0	30.6
1904									
1905	# w/ 1 dose MMR or w/ Dx/Contraind/ NMI Refusal	31	48.4	13	31	17.5	18	32.7	15.7
1906	A. # w/Dx/Contraind/NMI Ref w/ % of Total MMR	8	25.8	0	0	25.8	0	0	25.8
1907									
1908	# w/ 3-4 doses HIB or w/Contraind NMI Refusal	27	42.2	10	23.8	18.4	17	30.9	11.3
1909	A. # w/ Contraind/NMI Ref w/ % of Total HIB	5	18.5	0	0	18.5	0	0	18.5
1910									
1911	# w/ 3 doses Hep B or w/ Dx/Contraind/ NMI Refusal	34	53.1	12	28.6	24.6	14	25.5	27.7
1912	A. # w/ Dx/Contraind/NMI Ref w/ % of Total HEP B	8	23.5	0	0	23.5	0	0	23.5
1913									
1914	# w/ 1 dose Varicella or w/ Dx/Contraind/ NMI Refusal	27	42.2	12	28.6	13.6	14	25.5	16.7
1915	A. # w/ Dx/Contraind/NMI Ref w/ % of Total Varicella	5	18.5	1	8.3	10.2	0	0	18.5
1916									
1917	# w/4 doses Pneumococcal or w/Dx/ Contraind/ NMI Refusal	7	10.9	2	4.8	6.2	0	0	10.9
1918	A. # w/ Dx/ Contraind/ NMI Ref w/ % of Total Pneumococcal	1	14.3	0	0	14.3	0	0	14.3

# Sample GPRA Patient List

3471	Childhood Immunizations								
3472									
3473	List of Active Clinical patients 19-35 months who received the								
3474	4:3:1:3*:3:1:4 combination (4 DtaP, 3 Polio, 1 MMR, 3 or 4 Hib, 3 Hep B,								
3475	1 Varicella, 4 Pneumococcal).								
3476									
3477	NOTE: Because age is calculated at the beginning of the Report Period,								
3478	the patient's age on the list will be between 7-23 months.								
3479									
3480	UP=User Pop; AC=Active Clinical; AD=Active Diabetic; AAD=Active Adult Diabetic								
3481	PREG=Pregnant Female; IMM=Active IMM Pkg Pt; CHD=Active Coronary Heart Disease								
3482	HR=High Risk Patient								
3483	PATIENT NAME	HRN	COMMUNITY	SEX	AGE	LAST MEDICAL VISIT	LAST VISIT	DENOMINATOR	NUMERATOR
3484	-----								
3485	PATIENT,GPRA1	000001	SAMPLE1	F	1	5/2/2003	5/2/2003	UP,AC,IMM	NMI DTaP/DTP; NMI Polio; Contra MMR; NMI Hib; NMI Hep B; Contra Vari; NMI Pneumo
3486	PATIENT,GPRA2	000002	SAMPLE1	F	1	3/3/2003	3/3/2003	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 4 4-Dose Hib; 3 Hep B; Vari; 4 Pneumo; 2 Hep A; 3 Rota; 2 Influenza
3487	PATIENT,GPRA3	000003	SAMPLE2	F	0	12/16/2003	12/16/2003	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 3 3-Dose Hib; 3 Hep B; Vari; 4 Pneumo
3488	PATIENT,GPRA4	000004	SAMPLE3	F	1	12/1/2003	12/1/2003	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 3 3-Dose Hib; 3 Hep B; Vari; 4 Pneumo
3489	PATIENT,GPRA5	000005	SAMPLE3	M	1	12/8/2003	12/8/2003	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 3 3-Dose Hib; 3 Hep B; Vari; 4 Pneumo

# Sample Selected Measures (Local) Patient List

19601	UP=User Pop; AC=Active Clinical; AD=Active Diabetic; AAD=Active Adult Diabetic						
19602	PREG=Pregnant Female; IMM=Active IMM Pkg Pt; CHD=Active Coronary Heart Disease;						
19603	HR=High Risk Patient						
19604							
19605	Childhood Immunizations: List of patients 19-35 months with IZ, if any. If a						
19606	patient did not have all doses in a multiple dose vaccine, the IZ will not be						
19607	listed. For example, if a patient only had 2 DTaP, no IZ will be listed for						
19608	DTaP. NOTE: Because age is calculated at the beginning of the Report Period,						
19609	the patient's age on the list will be between 7-23 months.						
19610							
19611	PATIENT NAME	HRN	COMMUN	SEX	AGE	DENOMINATOR	NUMERATOR
19612	-----						
19613	PATIENT,FIRST	000001	SAMPLE1	F	0	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 3 3-Dose Hib; 3 Hep B; Vari; 2 Influenza
19614	PATIENT,SECOND	000002	SAMPLE1	F	0	UP,AC,IMM	Evid Polio; NMI ME&MU&RUB; Evid Hep B; Evid Vari
19615	PATIENT,THIRD	000003	SAMPLE1	F	1	UP,AC,IMM	NMI DTaP/DTP; NMI Polio; 2 Hep A; 2 Influenza
19616	PATIENT,FOURTH	000004	SAMPLE1	F	1	UP	
19617	PATIENT,FIFTH	000005	SAMPLE3	M	0	UP,AC,IMM	NMI DTaP/DTP; NMI Polio; Vari; 2 Rota; 2 Influenza
19618	PATIENT,SIXTH	000006	BRAGGS	M	0	UP,AC,IMM	4 DTaP/DTP; 3 Polio; 2 Influenza
19619	PATIENT,SEVENTH	000007	BRAGGS	M	0	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 3 3-Dose Hib; 3 Hep B; Vari
19620	PATIENT,EIGHTH	000008	SAMPLE2	M	1	UP	
19621	PATIENT,NINTH	000009	SAMPLE2	M	1	UP,AC,IMM	Evid Hep A; 2 Influenza
19622	PATIENT,TENTH	000010	SAMPLE2	M	1	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 3 3-Dose Hib; 3 Hep B; Vari
19623	PATIENT,ELEVENTH	000011	SAMPLE2	F	0	UP,AC,IMM	NMI DTaP/DTP; NMI Polio; NMI 4-DOSE Hib; NMI Hep B; 2 Rota; NMI Influenza
19624	PATIENT,TWELFTH	000012	SAMPLE2	F	1	UP,AC,IMM	4 DTaP/DTP; 3 Polio; MMR; 3 3-Dose Hib; 3 Hep B; Vari; 2 Influenza
19625	PATIENT,THIRTEENTH	000013	SAMPLE3	F	1	UP,AC,IMM	Vari; 3 Rota; 2 Influenza
19626	PATIENT,FOURTEENTH	000014	SAMPLE3	F	1	UP,AC,IMM	NMI DTaP/DTP; NMI Polio; Contra MMR; NMI Hib; NMI Hep B; Contra Vari; NMI Pneumo
19627	PATIENT,FIFTEENTH	000015	SAMPLE3	F	1	UP,AC	



# Potential Reasons for Differences Between CRS and IMM Reports

- CRS requires patient's age to be 7–23 months at a fixed date (beginning of the Report Period), which makes patient 19–35 months at end of Report Period. IMM uses a different cohort of children for each quarter (i.e. as of *today*, how many are between 19–35 months old?).
- GPRA community taxonomy: was the same used for both reports?
- Patient population: were American Indian/Alaska Native (AI/AN) patients only used for both reports?
- Are there inactive patients in IMM that should be changed to active?
- IMM does not require 10 days (or any days) apart for series of vaccines, whereas CRS does.

# CRS Adolescent Immunizations Measures (1)

- Included in the Selected Measures (Local) and Other National Measures (ONM) Reports
  - Denominators:
    - Active Clinical patients age 13, broken down by gender (Selected Measures)
    - Active Clinical patients age 13–17, broken down by gender (Selected Measures and ONM)

# CRS Adolescent Immunizations Measures (2)

- Included in the Selected Measures (Local) and ONM Reports (Continued)
  - Numerators
    - 1 Td/Tdap, 1 Meningococcal, 3 HPV (Selected Measures and ONM)
    - 1 Td/Tdap, 1 Meningococcal (Selected Measures and ONM)
    - 1 Td/Tdap (Selected Measures and ONM)
    - 1 Meningococcal (Selected Measures and ONM)
    - 3 HPV ever (Selected Measures and ONM)

# CRS Adolescent Immunizations Measures (3)

- Most CRS numerators include one sub-numerator:
  - Patients with a contraindication or a documented NMI (not medically indicated) refusal

# CRS Adolescent Immunizations Measures (4)

- CRS dosage logic
  - 1 dose of Td or Tdap
  - 1 dose of Meningococcal
  - 3 doses of HPV
- Uses same logic as Childhood Immunizations measures

For more information,  
visit our Web site:

[www.ih.gov/crs](http://www.ih.gov/crs)



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[http://www.ihs.gov/crs/index.cfm?module=crs\\_listserv](http://www.ihs.gov/crs/index.cfm?module=crs_listserv)

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