

Supplemental Document No. 2

Twenty-Measure Information Summary Table for 2013 Final SNAC Deliberations

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Introduction

To accommodate the size of this table, it has been broken into two sections according to the criteria used by the 2013 AHRQ National Advisory Council Subcommittee on Children’s Healthcare Quality Measures for Medicaid and CHIP Programs (SNAC) as it deliberated whether to retire any of the 20 Child Core Set measures. The first section covers the variables for criterion 1, Importance. The second section covers the variables for criteria 2-4: Scientific Acceptability, Usability, and Feasibility. Each section provides summary information on all 20 measures.

Table. Twenty-Measure Information Summary Table for 2013 Final SNAC Deliberations

1. Importance								
Category or Measure	Medicaid/CHIP Individuals or Events Affected	Medicaid/CHIP Variation by Race/Ethnicity	Costs to Medicaid/CHIP	Evidence Grade for Focus of Measure	FFY12 Median Medicaid/CHIP Performance (number of States for which performance is based)	FFY12 Medicaid/CHIP Variation in Performance by 25th and 75th Percentiles	FFY10–12 Performance Trend	FFY12 Mean Medicaid HMO HEDIS Performance (10th, 90th percentiles)
<i>Perinatal Measures</i>								
1. Timeliness of Prenatal Care	Discharges for liveborns (HCUP ^a): 1,705,095 Discharges for liveborns (MAX ^b): 1,300,012	Discharges for liveborns (MAX ^b): W: 450,509 (35%) B: 233,964 (18%) H: 322,896 (25%) O: 292,643 (23%)	Aggregate costs for liveborn discharges (HCUP ^a): \$5,935,680,148 Total Medicaid payments for liveborn discharges (MAX ^c): \$3,546,676,935	B-	85% (13)	72.6, 86.8	Upward	83% (71, 93)
2. Frequency of Prenatal Care	Discharges for liveborns (HCUP ^a): 1,705,095 Discharges	Discharges for liveborns (MAX ^b): W: 450,509 (35%) B: 233,964 (18%) H: 322,896 (25%) O: 292,643 (23%)	Aggregate costs for liveborn discharges (HCUP ^a): \$5,935,680,148	B-	≥81% of expected visits: 59% (10)	51, 72.5	Mixed	≥81% of expected visits: 61% (36, 80)

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1. Importance								
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	for liveborns (MAX ^b): 1,300,012		Total Medicaid payments for liveborn discharges (MAX ^c): \$3,546,676,935					
3. Low Birthweight	Discharges for premature birth and low birthweight (HCUP ^a): 213,252 Discharges for premature birth and low birthweight (MAX ^b): 166,467	Discharges for premature birth and low birthweight (MAX ^b): W: 57,933 (35%) B: 41,918 (25%) H: 34,810 (21%) O: 31,806 (19%)	Total Medicaid payments for discharges for premature birth and low birthweight (MAX ^c): \$2,481,996,510	B	8% (12)	7.0, 9.5	Not available (only FFY12 data available)	Not available
4. Caesarean Rate for Nulliparous Singleton Vertex	Discharges for all Medicaid C-section deliveries (HCUP ^a): 519,649 Discharges for all Medicaid C-section	Discharges for all Medicaid Caesarean deliveries (MAX ^b): W: 119,291 (37%) B: 69,893 (22%) H: 103,209 (32%) O: 32,623 (10%)	Approximate total costs for hospitalizations from Caesarean deliveries: \$1,064,226,075 (MAX ^c) and \$3,052,937,875 (calculated from HCUP ^a based on average cost per discharge	B	24% (9)	19.6, 25.9	Not available	Not available

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	deliveries (MAX ^b): 325,016		multiplied by number of discharges)					
Preventive Services								
5. Childhood Immunization Status	Enrollees turning age 2 years during measurement year (MAX ^b): 2,293,353	Enrollees turning age 2 years during measurement year (MAX ^b): W: 798,173 (35%) B: 486,219 (21%) H: 695,527 (30%) O: 313,434 (14%)	Medicaid-specific data not available	B	74% (17)	63, 76	Upward	76% (66, 85)
6. Adolescent Immunization Status	Enrollees turning age 13 years during measurement year (MAX ^b): 1,371,058	Enrollees turning age 13 years during measurement year (MAX ^b): W: 532,619 (39%) B: 350,657 (26%) H: 332,081 (24%) O: 155,701 (11%)	Not available	B	71% (10)	58, 81	Upward	67% (51, 86)
7. BMI Assessment (persons ages 3–17 years)	Children ages 10–17 years who are obese (NSCH): 2,259,779 Children ages	Not available	Estimated annual medical costs for children ages 10–17 years enrolled in public health insurance in 2012 (NSCH and Trasande and	B	42% (10)	18, 57	Upward	52% (23, 80)

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	10–17 years who are overweight (NSCH): 1,913,601		Chatterjee 2009 ¹): \$1,067,212,038					
8. Developmental Screening (children turning ages 1–3 years during the measurement year)	Persons ages 2–17 years who currently have developmental delay (NSCH): 1,288,332	Medicaid-specific data not available	Not available	B	Enrollees age 1 year: 33% (5) Age 2 years: 40% (5) Age 3 years: 28% (5)	Enrollees age 1 year: 19, 61 Age 2 years: 23, 50 Age 3 years: 18, 35	Upward (only FFY11–FFY12 data available)	Not available
9. Chlamydia Screening (females ages 16–20 years)	Sexually active females ages 16–20 years (MAX ^b): 2,167,125	Sexually active females ages 16–20 years (MAX ^b): W: 871,404 (40%) B: 559,505 (26%) H: 536,864 (25%) O: 199,352 (09%)	Payments for sexually active females ages 16–20 years (MAX ^c): \$4,260,709	B	49% (20)	39, 57	Upward	54% (41, 66)
10. Well-Child Visit: Children Age 15 Months or Younger With 6 or More Visits	Enrollees ages 0–15 months (MAX ^b): 3,049,014	Enrollees ages 0–15 months (MAX ^b): W: 1,044,968 (34%) B: 601,587 (20%) H: 838,803 (28%) O: 563,656 (18%)	Expenditures for well-child visits for enrollees ages 0–15 months (MAX ^c): \$431,699,026	B	62% (33)	56, 69	Upward	64% (50, 77)
11. Well-Child Visit: Children Ages 3–6	Enrollees ages 3–6	Enrollees ages 3–6 (MAX ^b):	Expenditures for well-child visits	B	68% (37)	62, 75	Mixed	72% (61, 82)

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Years	years (MAX ^b): 7,882,422	W: 2,851,118 (36%) B: 1,747,655 (22%) H: 2,361,022 (30%) O: 922,627 (12%)	for enrollees ages 3–6 years (MAX ^c): \$226,342,876					
12. Adolescent Well-Care Visits: Persons Ages 12–21 Years	Enrollees ages 12–17 years (MAX ^b): 8,146,982	Enrollees ages 12–17 years (MAX ^b): W: 3,154,421 (39%) B: 2,168,719 (27%) H: 1,896,719 (23%) O: 926,264 (11%)	Expenditures for well-child visits for enrollees ages 12–17 years (MAX ^c): \$167,294,071	B	46% (27)	40, 58	No change	50% (37, 66)
Primary Care Use								
13. Access to Primary Care	Enrollees (MAX ^b) ages 12–24 months: 2,561,366 Ages 25 months–6 years: 9,972,430 Ages 7–11 years: 8,002,483	Enrollees (MAX ^b) ages 12–24 months: W: 894,078 (35%) B: 516,195 (20%) H: 750,999 (28%) O: 400,094 (16%) Other age groups had similar trends. ^d	Not available	A	Enrollees ages 12–24 months: 97% (35) Ages 25 months–6 years: 89% (35) Ages 7–11 years: 91% (35) Ages 12–19	Enrollees ages 12–24 months: 95, 98 Ages 25 months–6 years: 86, 92 Ages 7–11 years: 86, 93 Ages 12–19 years: 86, 92	Enrollees ages 12–24 months: Mixed Ages 25 months–6 years: Downward Ages 7–11 years: Mixed Ages 12–19 years:	Enrollees ages 12–24 months: 96% (92, 99) Ages 25 months–6 years: 88% (83, 94) Ages 7–11 years: 90% (83, 95) Ages 12–19

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	Ages 12–19 years: 10,579,774				years: 90% (35)		Upward	years: 88% (82, 94)
Management of Acute Conditions								
14. Testing for Pharyngitis (persons ages 2–18 years)	Persons younger than age 18 years who were in contact with a health care professional for a sore throat (MEPS): 12.2%	Medicaid-specific information not available	Payments for antibiotic prescriptions to treat pharyngitis for persons ages 2–18 years (MAX ^c): \$29,281,909	A	71% (20)	59, 78	Mixed	67% (50, 84)
15. ED Visits (persons ages 0–20 years)	Enrollees younger than age 1 year with ED visits (MAX ^b): 638,513 Ages 1–9 years: 5,139,969 Ages 10–19 years: 3,025,263	Enrollees younger than age 1 year with ED visits (MAX ^b): W: 210,083 (33%) B: 150,551 (24%) H: 180,668 (29%) O: 97,221 (15%) Other age groups had similar trends. ^e	Payments for ED visits (MAX ^c) for enrollees younger than age 1 year ^f (MAX ^b): \$71,632,713 Ages 1–9 years: \$554,387,029 Ages 10–19 years: \$386,514,805	B	46.4% (8) (rate per 1,000)	26, 52 (rate per 1,000)	Mixed	Enrollees younger than age 1 year (rates per 1,000): 98 (62, 124) Ages 1–9 years: 50 (35, 67) Ages 10–19 years: 43 (27, 61)

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16. Pediatric CLABSI in NICU Only (SIR ^g)	Admissions with NICU stays (MAX ^b): 94,886	Admissions with NICU stays (MAX ^b): W: 32,213 (34%) B: 23,544 (25%) H: 22,733 (24%) O: 16,396 (17%)	Expenditures for admissions that include NICU stays (MAX ^c): \$2,227,938,181	B	0.64 (40) for all payers (only FFY11 data available)	0.48, 0.76 for all payers (only FFY11 data available)	Not available	Not available
Management of Chronic Conditions								
17. Asthma-Related ED Visits (persons ages 2–20 years)	Children ages 0–17 years who currently have asthma (NSCH): 3,026,497	Medicaid-specific information not available	Payments for ED visits with asthma diagnoses for children ages 2–20 years ^h (MAX ^c): \$17,214,627	C	9.9% (5)	8.6, 11.9	Mixed	HEDIS data not available
18. Followup Visits for ADHD Medication (children ages 6–12 years)	Children age 2–17 years with current ADHD (NSCH): 2,242,239 Current ADHD and on ADHD medication (NSCH): 1,620,807	Medicaid-specific information not available	Expenditures for prescriptions for ADHD medications for children ages 6–12 years (MAX ^c): \$636,185,390	C	Initiation phase: 43% (15) Continuation and maintenance phase: 52% (15)	Initiation phase: 39, 51 Continuation and maintenance phase: 48, 61	Initiation phase: Mixed Continuation and maintenance phase: Mixed	Initiation phase: 39% (23, 53) Continuation and maintenance phase: 46% (22, 63)
19. Pediatric HbA1c	Children ages	Not available	Hospital	D	80% (5)	76, 84	Downward	No HEDIS

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(persons ages 5–17 years)	0–17 years who currently have diabetes (NSCH): 82,163		admissions and ED visits with diagnosis code for diabetes in persons ages 5–17 years (MAX ^c): Admissions: \$34,078,484 ED visits ^{ij} : \$629,262					data available
20. Followup After Mental Hospitalization (persons ages 6–20 years)	MAX ^b : 181,224	MAX ^b : W: 83,488 (46%) B: 42,046 (23%) H: 21,151 (11%) O: 34,539 (19%)	Payments for inpatient admissions and residential treatment (MAX ^c): \$2,575,522,829	B	Followup within 7 days: 46% (11) Within 30 days: 66% (11)	Followup within 7 days: 37, 57 Within 30 days: 63, 74	Upward	Not available

Supplementary Document 2: 20-Measure Information Summary Table for 2013 Final SNAC Deliberations, *criteria 2–4*

	2. Scientific Acceptability		3. Feasibility				4. Usability
Category or Measure	Reliability (Medicaid and Commercial)	Validity	Number of States Reporting for FFY12	States' Reporting Trend for FFY10–12	Number of States Reporting "Data Not Available" for FFY12	Data Source(s) for Measure	Summary of Evidence for Improvability
Perinatal Measures							
1. Timeliness of Prenatal Care	Confidential	Not available	31 (61%)	Upward	8	A or HY	It is difficult to draw definitive conclusions concerning provider-based quality interventions due to the small number of studies and the poor methodological quality of studies. Medicaid expansions appear to have resulted in more timely access to prenatal care.
2. Frequency of Prenatal Care	Confidential	Not available	25 (49%)	Upward	11	A or HY	It is difficult to draw definitive conclusions due to the small number of studies and the poor methodological quality of studies.
3. Low Birthweight	Not available	Not available	15 (29%)	Upward	22	V	Studies suggest almost every strategy results in some improvement in birthweight. Although the changes are typically very modest, the public health impact may be great. No studies relevant to payment reform or medical home were identified (only low birthweight, not preterm birth, was searched).
4. Cesarean Rate for Nulliparous Singleton Vertex	Not available	Two studies questioned validity	12 (24%)	Upward	23	V	The two larger, more comprehensive reviews come to differing conclusions. No additional studies using the terms "payment" and "medical-home specific" to reduce Cesarean rates were identified.
Preventive Services							
5. Childhood Immunization Status	Confidential	Not Available	34 (67%)	Upward	7	A or HY	Evidence supports the conclusion that childhood immunization rates are improvable and that racial/ethnic and

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							<p>rural/urban disparities can be reduced through quality improvement interventions.</p> <p>Payment reform: Chien et al. 2010² found evidence of the effectiveness of piecemeal pay-for-performance with other quality improvements.^k</p>
6. Adolescent Immunization Status	Confidential	Not available	32 (63%)	Upward	8	A or HY	Almost all recent studies found improvements in adolescent immunization rates using a variety of interventions in a variety of settings.
7. BMI Assessment (persons ages 3–17 years)	Confidential	Not available	27 (53%)	Upward	10	A or HY	There is emerging evidence that efforts to increase BMI assessment in primary care can be successful.
8. Developmental Screening (children turning ages 1–3 years during measurement year)	Not available	Not available	12 (24%)	Upward	23	A or M	<p>Increases in rates of developmental screening using standardized tools in young children seem possible based on the large number of efforts, particularly State-level interventions. However, studies are not methodologically rigorous. Many interventions are now turning to improving the quality and rate of followup after screening, a challenge for health care providers,^l researchers, and evaluators because diagnosis and treatment typically take place in systems other than traditional health care delivery.³</p> <p>No results were identified in PubMed for payment reform and no new relevant papers on medical home were identified.</p>

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Category or Measure	2. Scientific Acceptability		3. Feasibility				4. Usability
	Reliability (Medicaid and Commercial)	Validity	Number of States Reporting for FFY12	States' Reporting Trend for FFY10–12	Number of States Reporting "Data Not Available" for FFY12	Data Source(s) for Measure	Summary of Evidence for Improvability
9. Chlamydia Screening (females ages 16–20 years)	Confidential	See footnote ^m	35 (70%)	Upward	8	A	<p>Results are mixed. Health care quality improvement strategies of various kinds can improve rates of screening for chlamydia in females ages 16–24 years,⁴ including adolescents.⁵ Success may depend on contextual factors that need more explication. Future studies need more methodological rigor.</p> <p>Payment reform: A PubMed search conducted in October 2013 found a 2011 Cochrane review⁶ of the effect of financial incentives on primary care practices, including at least one study focused on screening for chlamydia. The review authors concluded that, overall, “the use of financial incentives to reward PCPs for improving the quality of primary healthcare services is growing. However, there is insufficient evidence to support or not support the use of financial incentives to improve the quality of primary healthcare.”⁶</p> <p>No studies were found for screening and the patient-centered medical home.</p>
10. Well-Child Visit: Children Age 15 Months or Younger With 6 or More Visits	Confidential	Recommendation is for more than 6 visits	43 (84%)	Mixed	2	A or HY	<p>Two of three randomized studies found intensive interventions had positive effects on well-child visit rates.</p> <p>No payment reform studies were identified; one cross-sectional study of the patient-centered medical home was identified.^k</p>

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Category or Measure	2. Scientific Acceptability		3. Feasibility				4. Usability
	Reliability (Medicaid and Commercial)	Validity	Number of States Reporting for FFY12	States' Reporting Trend for FFY10–12	Number of States Reporting "Data Not Available" for FFY12	Data Source(s) for Measure	Summary of Evidence for Improvability
11. Well-Child Visit: Children Ages 3–6 Years	Confidential	Not available	46 (90%)	Mixed	2	A or HY	Two of three randomized studies found intensive interventions had positive effects on well-child visit rates. No payment reform studies were identified; one cross-sectional study of the patient-centered medical home was identified. ^k
12. Adolescent Well-Care Visits: Persons Ages 12–21 Years	Confidential	Not available	43 (84%)	Mixed	2	A or HY	At least one rigorous U.S. study demonstrates that quality improvement interventions can increase publicly insured adolescents' access to well-care visits. Payment reform: No studies available. Patient-centered medical home: No studies specific to adolescent well-child care were identified.
Primary Care Use							
13. Access to Primary Care	Confidential	Not available	43 (84%)	Mixed	3	A	There is no evidence that quality improvement interventions (broadly defined) can increase PCP visit rates for children and adolescents. No studies of the effects of payment reform or medical home were identified. ^k
Management of Acute Conditions							
14. Testing for Pharyngitis (persons ages 2–18 years)	Confidential	Not searched	36 (72%)	Upward	6	A	Recent studies are not focused on pharyngitis, do not report results for pharyngitis, and/or are not specifically focused on the measure (e.g., appropriate testing). No studies on the

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							effects of payment reform or medical home were identified. ^k
15. ED Visits (persons ages 0–20 years)	Not available	Not available	28 (56%)	Upward	11	A	Two studies suggested that, under the right conditions, child ED visit rates can be reduced with quality improvement interventions. A recent study of the effect of copayments on ED visits in the Alabama CHIP program concluded the increase in copayments was not effective in reducing nonurgent ED use. All patient-centered medical home studies are of weak methodological quality. ^k
16. Pediatric CLABSI in NICU Only (SIR ⁹)	Not available	See footnote ⁿ	Hospitals in 40 States reported NICU CLABSI data to CDC	Not available	Not applicable	M	The methodological quality of the published pediatric-focused studies has been called into question. No payment reform studies were identified. ^k
Management of Chronic Conditions							
17. Asthma-Related ED Visits (persons ages 2–20 years)	Not available	Topic ranked highly	15 (29%)	Upward	15	A	Mixed. Seven of 12 studies reviewed show evidence that asthma-related ED visit rates can be reduced with quality improvement interventions.
18. Followup Visits for ADHD Medication, (children ages 6–12 years)	Confidential	Not available	29 (57%)	Upward	9	A	One study suggests that a quality improvement intervention with primary care pediatricians can increase postdiagnosis visits during which ADHD is discussed. No additional studies pertaining to ADHD followup and medical home or payment

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							reform were identified. ^k
19. Pediatric HbA1c (persons ages 5–17 years)	Not available	Concerns were raised regarding use of HbA1c to diagnose Type 1 diabetes	13 (26%)	Upward	16	A or HY	No studies that specifically focused on children with diabetes were identified. Payment reform and patient-centered medical home: Quality improvement effects of incentives cannot be maintained without the incentives. ^k
20. Followup After Mental Hospitalization (persons ages 6–20 years)	Not available	Not available	27 (53%)	Upward	11	A	One study partially addressed followup after mental hospitalization for children and adolescents. No studies on payment reform or medical home specific to this topic were identified. ^k

^aHCUP data represents Medicaid Managed Care and Fee-for-Service Medicaid.

^bMAX data represents Medicaid Managed Care and Fee-for-Service Medicaid.

^cMAX data only represents Fee-for-Service Medicaid.

^dPatterns were similar for all age groups: Ages 25 months–6 years: W = 3,579,426 (36%), B = 2,190,239 (22%), H = 2,996,256 (30%), O = 1,206,509 (12%); Ages 7–11 years: W = 3,035,755 (38%), B = 1,955,673 (24%), H = 2,117,037 (26%), O = 894,018 (11%); Ages 12–19 years: W = 4,122,806 (39%), B = 2,844,126 (27%), H = 2,396,938 (23%), O = 1,215,904 (11%).

^eRates for other age groups: Ages 0–9 years: W = 1,833,792 (36%), B = 1,253,878 (24%), H = 1,481,955 (29%), O = 570,344 (11%); Ages 10–19 years: W = 1,259,735 (42%), B = 861,329 (28%), H = 634,854 (21%), O = 269,345 (9%).

^fIn accordance with the technical specification, these figures do not include associated ancillary services such as radiology and laboratory services. Figures that do include these services are available in the Measure Report.

^gSIR data provided by the Centers for Disease Control and Prevention.

^hThis figure uses a definition of emergency department visits that aligns with the technical specifications for the measure. Other figures using more inclusive definitions of emergency department visits are available in the Measure Report.

ⁱHospitalizations for diabetes mellitus with and without complications for children ages 1–17 years: \$52,399,237 (HCUP).

^jThis figure does not include associated ancillary services such as radiology and laboratory services.

^kNew information on payment reform and medical home relevant to the specific measure topic.

^lFor example, see: Agrawal R, Shah P, Zebracki K, Sanabria K, Kohrman C, Kohrman AF. The capacity of primary care pediatricians to care for children with special health care needs. *Clin Pediatr* 2013;52(4):310-4.

^mOne study, HEDIS, may underestimate percent of sexually active females. In addition, the extent to which the measure is a "screening" measure versus an overall "testing" measure has been called into question by measurement experts.

Supplementary Document 2: 20-Measure Information Summary Table for 2013 Final SNAC Deliberations, *criteria 2–4*

^aMultiple studies, including some published in 2013, find problems with the reliability and validity of the NHSN measure and problems with the health care–associated infection measures in general:

- Perla RJ, Peden CJ, Goldmann D, Lloyd R. Health care-associated infection reporting: the need for ongoing reliability and validity assessment. *Am J Infect Control* 2009;37(8):615-8.
- Hebden JN. Rationale for accuracy and consistency in applying standardized definitions for surveillance of health care-associated infections. *Am J Infect Control* 2012;40(5 Suppl):S29-31.
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Abbreviations: A = administrative claims; ADHD = attention deficit hyperactivity disorder; B = black, non-Hispanic; CARTS = Children’s Health Insurance Program Annual Reporting Template System; CDC = Centers for Disease Control and Prevention; CHIP = Children’s Health Insurance Program; CLABSI = central-line associated blood stream infections; CMS = Centers for Medicare & Medicaid Services; CSHCN = children with special health care needs; CT = computed tomography; ED = emergency department; FFY = Federal fiscal year; H = Hispanic; HCUP = Healthcare Cost and Utilization Project ; HEDIS= Healthcare Effectiveness Data and Information Set; HMO = health maintenance organization; HY = hybrid of administrative claims and medical records; M = medical records; MAX = Medicaid Analytic eXtract; MEPS = Medical Expenditure Panel Survey; NCQA = National Committee for Quality Assurance; NICU = neonatal intensive care unit; NSCH = National Survey of Child Health; O = other, non-Hispanic; OB/GYN = obstetric/gynecologic practitioner; PCP = primary care practitioner; PPO = preferred provider organization; SIR = standardized infection ratio; SNAC = AHRQ National Advisory Council Subcommittee on Children’s Healthcare Quality Measures for Medicaid and CHIP Programs; W = white, non-Hispanic.

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