

**Improving Health Outcomes for Children (IHOC)**  
**Summary of Pediatric Quality Measures**  
**For Children Enrolled in MaineCare**  
**FFY 2009-FFY 2012**

UNIVERSITY OF SOUTHERN MAINE  
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## About this Report

This report was written by Nathaniel Anderson and Tracey Meagher of the Cutler Institute of Health and Social Policy, Muskie School of Public Service at the University of Southern Maine. We would like to acknowledge our colleagues at the Muskie School of Public Service, Tina Gressani and Jasper Ziller who conducted the measure programming and calculation for the child health quality measures presented in this report; and Pamela Ford-Taylor for administrative support. We would also like to thank Dr. Amy Belisle, Director of Quality Improvement at Quality Counts for Kids, Dr. Kevin Flanigan, Medical Director of MaineCare Services, Maine Department of Health and Human Services (DHHS), and Amy Dix, Children's and Waiver Services Manager at MaineCare Services, Maine DHHS, for their feedback and support throughout the development of this report.

This report presents the results of the 16 CHIPRA Core Measures that were collected using MaineCare claims or Vital Statistics data and reported in the State of Maine's FFY 2012 CHIP Annual Report to the Centers for Medicare and Medicaid Services (CMS). Also included in this report are an additional three measures from the Improving Health Outcomes for Children (IHOC) project's Master List of Pediatric Measures. In addition to presenting results in graphs and narrative, this report also provides measure definitions and background information about each measure topic.

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The views expressed are those of the authors and do not necessarily represent the views of either the Department or the School. For further information regarding this report, please contact Catherine McGuire at [cathy@usm.maine.edu](mailto:cathy@usm.maine.edu). For more information about the IHOC project, please contact Joanie Klayman at [jklayman@usm.maine.edu](mailto:jklayman@usm.maine.edu).

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## Introduction

In February 2010, Maine and Vermont were awarded a five-year demonstration grant from the Centers for Medicare and Medicaid Services (CMS) to improve the quality of health care for children insured by Medicaid and the Children's Health Insurance Program (CHIP). Maine's Department of Health and Human Services' (DHHS) Office of MaineCare Services (OMS) received the Improving Health Outcomes for Children (IHOC) grant in partnership with the Maine Center for Disease Control, the Muskie School of Public Service at the University of Southern Maine, Vermont's Medicaid Program, and the University of Vermont.

In Maine, a key objective of the IHOC grant is to collect and report on the Initial Core Set of Children's Health Care Quality Measures (referred to below as the "CHIPRA Core Measures"), a set of 24 standardized, evidence-based measures identified by CMS for use by State Medicaid and CHIP programs.<sup>1</sup> States submit results of the CHIPRA Core Measures to CMS once each year as a component of the CHIP Annual Report, a web-based reporting system that CMS and its contractors use to monitor the operations of Medicaid and CHIP programs.

Although reporting of the Core Measures is currently not required by CMS, MaineCare reported results for 17 of the measures in the Federal Fiscal Year 2012 (FFY 2012) CHIP Annual Report, with support from the IHOC project. Thirteen of the measures were collected using MaineCare claims data, three measures were collected using Vital Statistics data from birth certificates, and an experience of care measure was collected through a telephone survey of parents who had children enrolled in MaineCare.

This document presents the results of the 16 CHIPRA Core Measures<sup>2</sup> that were collected using MaineCare claims or Vital Statistics data for the FFY 2012 CHIP Annual Report. These measures include:

- Well child visits (3 measures)
- Access to primary care practitioners
- Preventive dental and dental treatment services (2 measures)<sup>3</sup>

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1 For more information about the CHIPRA Core Measures, see: <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/CHIPRA-Initial-Core-Set-of-Childrens-Health-Care-Quality-Measures.html>

2 Results of the experience of care survey measure are available in a separate report: Anderson NJ, Thayer D, Fox K & Gage-Croll Z (January 2013). *Children Served by MaineCare, 2012: Survey findings*. Portland, ME: University of Southern Maine, Muskie School of Public Service, Institute for Health Policy.

3 MaineCare reports the two dental measures to CMS each year as part of a separate reporting process called the CMS 416 / EPSDT Annual Report. For FFY 2012 reporting, CMS decided that states should not report the dental measures with the CHIP Annual Report, since it would be redundant with data provided in the CMS 416. The dental measure results reported in this document come from MaineCare's CMS 416 reports for FFY 2010, 2011 and 2012.

- Chlamydia screening
- Appropriate testing for children with pharyngitis
- Emergency department (ED) visits
- Asthma ED visits
- Follow-up care for children with ADHD medication
- Annual pediatric hemoglobin A1c testing
- Follow-up after hospitalization for mental illness
- Prenatal care (2 measures)<sup>4</sup>
- Low birth weight

One more CHIPRA measure, developmental screening, was calculated using claims data for FFY 2009 through FFY 2012. Due to concerns about the validity of the claims data that are being investigated and addressed separately by MaineCare and IHOC staff, these results were not included in the FFY 2012 CHIP Annual Report, but are provided here for informational purposes.

In addition to the CHIPRA measures, Maine providers collaborating with the IHOC project identified other quality measures to support quality improvement at the practice-level. Through a stakeholder feedback process, measures drawn from *Bright Futures* guidelines, Meaningful Use, and other sources were added to the CHIPRA Core Measures to create the IHOC Master List of Pediatric Measures, totaling 52 pediatric quality measures.

This document also presents results of measures from the IHOC Measures list not included among the CHIPRA Core Measures. The following three “IHOC-only” measures were calculated using MaineCare claims:

- Well-child visits between 15 months and 3 years of age (IHOC #32), and between 7 and 11 years of age (IHOC #34)
- Asthma controller medication (IHOC #25)

The goal of this document is to present the claims- and vital statistics-based CHIPRA and IHOC measure results in a user-friendly format for IHOC project stakeholders. Measures are grouped by topic. For each topic, a Background section provides a brief description and rationale for collection. (The background discussion for CHIPRA Core Measures is drawn from the *Background Report for the Initial, Recommended Core Set of Children’s Healthcare Quality Measures for Voluntary Use by Medicaid and CHIP Programs*. Available at: <http://www.ahrq.gov/chipra/corebackgrnd.htm>) Next, we provide a general description of how each measure is defined, followed by the results.

Most of the measures use a 12-month measurement period. To fulfill requirements of the CHIP Annual Report we used measurement periods that correspond to Federal Fiscal Years (FFY) 2009, 2010, 2011 and 2012.

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<sup>4</sup> The prenatal care and low birth weight measures were reported for the first time in the FFY 2012 CHIP Annual Report using data from Vital Statistics records

Federal Fiscal Years run from October 1<sup>st</sup> of the prior year through September 30<sup>th</sup> of the year being described. For example, FFY 2012 represents the period from October 1, 2011 through September 30, 2012.

Where available, we also include national 2011 Health Plan Employer Data and Information Set (HEDIS) averages from Medicaid managed care plans along with Maine's results. HEDIS measures are performance measures developed by the National Committee for Quality Assurance (NCQA). HEDIS measures are widely used by employers, consumers, and Medicaid agencies to compare and monitor performance of health plans. Many of the CHIPRA Core Measures are HEDIS measures, and the NCQA publishes average results for selected measures each year.<sup>5</sup> The 2011 HEDIS averages are included to provide a point of comparison for the Maine results.

### Well-Child Visits (WCVs)

*CHIPRA Measures 10, 11, 12 / IHOC Measures 31, 32, 33, 34, 35*

#### Background<sup>6</sup>

Current American Academy of Pediatrics (AAP) Bright Futures guidelines suggest that all children receive a well-child visit (WCV) at specific intervals depending on age. Well-child visits are the gateway to immunizations and early identification of problems. They provide opportunities to discuss developmental issues with parents and deliver evidence-based and other recommended specific preventive services. The CHIPRA Core measures include three well-child visit measures currently specified by National Committee for Quality Assurance (NCQA): 1) WCVs in the first 15 months of life; 2) WCVs in the 3rd, 4th, 5th, and 6th years of life; 3) WCVs in adolescence (ages 12 – 21).

IHOC stakeholders noted the importance of measuring WCVs for two additional age ranges that are not included in the CHIPRA measures: WCVs between 15 months and 3 years of age (IHOC #32), and WCVs between 7 and 11 years of age (IHOC #34).

#### Measure Definition

These measures assess, for each age group, the number of children who received a well-child or preventive care visit from a primary care practitioner (including, for adolescents, an obstetrician-gynecologist) during the measurement year.

For the youngest group, children who turn 15 months during the measurement year and are continuously enrolled<sup>7</sup> from 31 days after birth to 15 months of age are in the measure denominator. The number of visits is

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<sup>5</sup> National Committee for Quality Assurance (October 2012). *The State of Health Care Quality 2012*. Available at: <http://www.ncqa.org/Portals/0/State%20of%20Health%20Care/2012/SOHC%20Report%20Web.pdf>

<sup>6</sup> Throughout this document, much of the background information for each measure is drawn from the *Background Report for the Initial, Recommended Core Set of Children's Healthcare Quality Measures for Voluntary Use by Medicaid and CHIP Programs*. Available at: <http://www.ahrq.gov/chipra/corebackgrnd.htm>

<sup>7</sup> "Continuously enrolled" means the child missed no more than one month of MaineCare eligibility in the measurement period. For 12 month measurement periods, the child must be enrolled for at least 11 months to be included in the denominator.

counted (0, 1, 2, 3, 4, 5, 6 or more visits) for this age group.

For children between 15 months and 3 years of age, children who turn 3 years old during the measurement year and are continuously enrolled between 15 months and 3 years of age are in the measure denominator. The number of visits is counted (0, 1, 2, 3) for this age group.

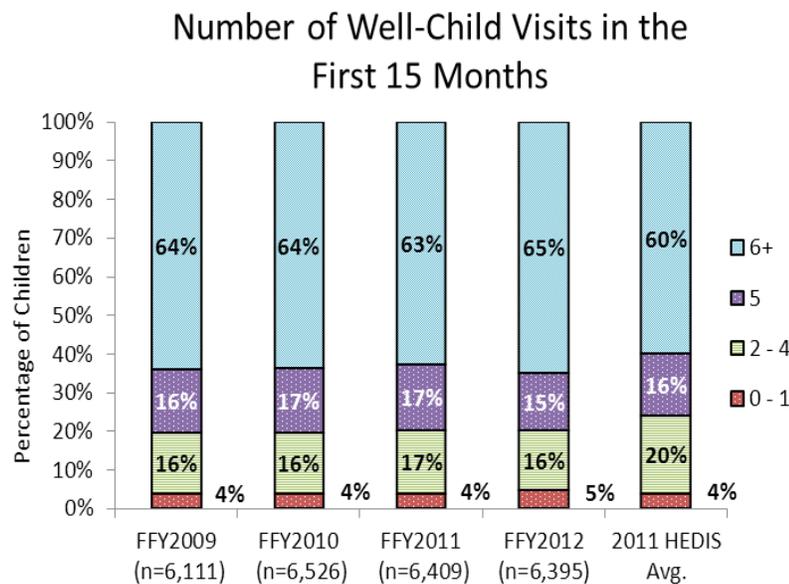
For 3-6 year-olds, 7-11 year-olds, and adolescents (12-21 years old) the criterion is at least one well-child visit with a primary care practitioner during the measurement year. The denominator population for each of these measures is defined by the age of the child at the end of the measurement year, and requires that the child be continuously enrolled during the year.

### Results

The results of the WCV measures for FFY 2009-FFY 2012 are shown in Figures 1 – 3. Rates of well-child visits remained relatively constant over the 4-year period.

Figure 1 shows the percentage of children enrolled in MaineCare with 0-1, 2-4, 5 or 6 total WCVs in the first 15 months of life. Nearly two-thirds of enrolled children (65%) had at least 6 visits in the first 15 months, and 80 percent had at least 5 visits. The 2011 HEDIS average shows similar rates, although Maine’s rates are slightly higher for children having at least 5 well child visits.

FIGURE 1.

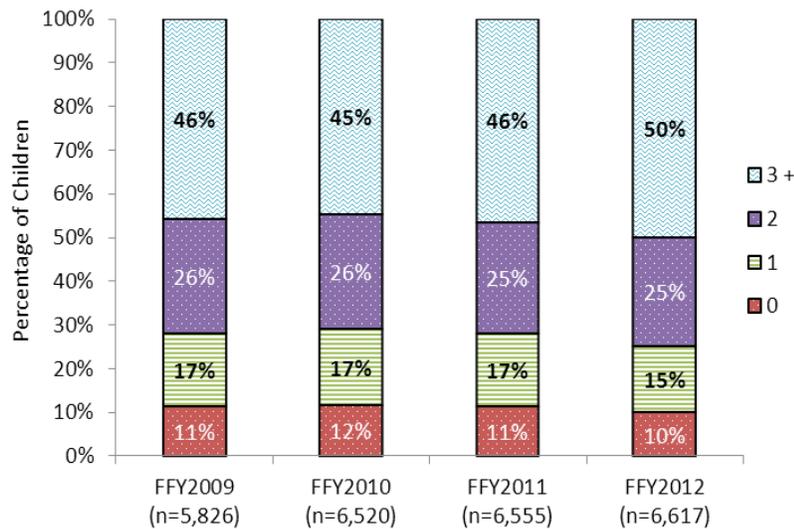


Source: MaineCare Claims Data

Figure 2 shows the percentage of children age 15 months to 3 years with 0, 1, 2, or 3 total WCVs. The FFY 2012 rate of children receiving the recommended three well child visits in this age range increased by 4% from FFY 2011, from 46 to 50%. Ten percent of the children, however, had no well-child visits.

FIGURE 2.

Number of Well Child Visits between  
15 Months and 3 Years

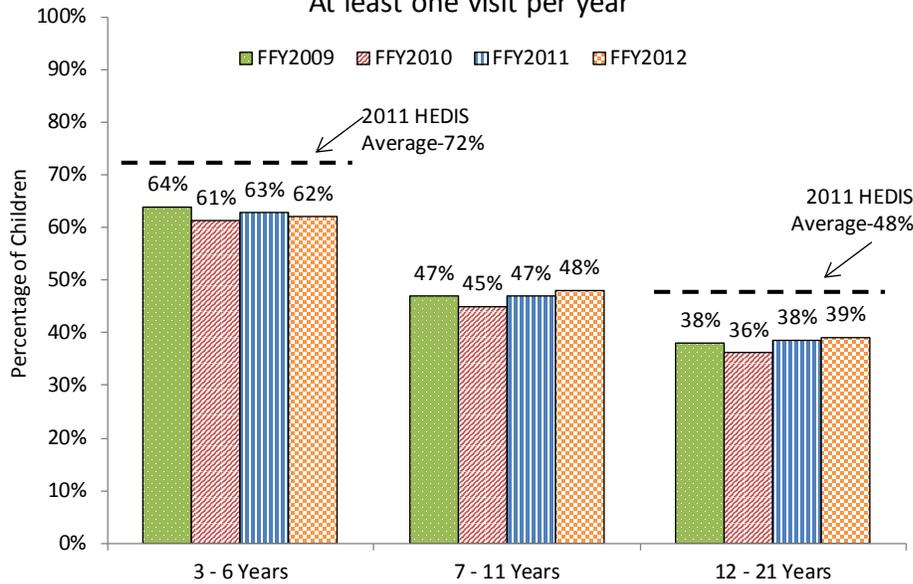


Source: MaineCare Claims Data

Figure 3 shows the percentage of children who had at least one WCV in the measurement year, by three different age ranges: ages 3 – 6, ages 7 – 11, and ages 12 – 21. WCV rates decline considerably as children get older. For 3 to 6 year olds, 62 percent had at least one visit during the measurement year. For 7 to 11 year olds, the rate falls to 48 percent, and for adolescents, it falls further still to 39 percent. Note that the 2011 HEDIS average is nearly 10 percent higher for 3-6 year olds and adolescents. (HEDIS did not measure visit rates for children ages 7-11.)

FIGURE 3.

Well Child Visits-  
At least one visit per year



| Measure Description | FFY2009          |        | FFY2010          |        | FFY2011          |        | FFY2012          |        |
|---------------------|------------------|--------|------------------|--------|------------------|--------|------------------|--------|
|                     | At least 1 visit | Total  |
| WCVs, 3-6 Years     | 14,762           | 23,124 | 15,505           | 25,304 | 16,308           | 25,984 | 16,492           | 26,526 |
| WCVs, 7-11 Years    | 12,754           | 27,246 | 12,950           | 28,856 | 13,868           | 29,618 | 14,713           | 30,811 |
| WCVs, 12-21 Years   | 16,502           | 43,402 | 16,785           | 46,469 | 18,058           | 46,988 | 18,528           | 47,990 |

Source: MaineCare Claims Data

## Access to Primary Care Practitioners (PCPs)

### CHIPRA Measure 14 / IHOC Measure 45

#### Background

The CHIPRA legislation specified that measures of availability of services be included in the CHIPRA Core measure set. Availability of services is an important topic, given the many reports from national studies on the lack of providers and some providers' unwillingness to serve Medicaid patients. The expert panel convened by the federal Agency for Healthcare Research and Quality (AHRQ) and CMS to review and make recommendations for the CHIPRA Core measures noted that "...realized access to care (e.g., utilization of primary care practitioners) [is an] incomplete measure of availability because the reasons for lack of utilization could go well beyond lack of availability (e.g., parents don't perceive a need for the service). However, realized access is a piece of availability and a way to measure access under capitated primary care arrangements."<sup>8</sup>

The panel also noted that the Access to PCP measure is only a proxy measure for availability of services; it cannot be considered a true availability of services measure because it deals with only primary care, and because the reasons for non-use of primary care services may vary, from lack of availability, to lack of time, to lack of perceived need, and other factors.

This measure can be considered important from two perspectives. From a payer perspective, it is good to know whether enrolled children are getting any care. Access to primary care practitioners is essential for children to have well child visits and the opportunity for social and developmental screening, two measures also included in the CHIPRA Core measure set.

#### Measure Definition

For children aged 12-24 months, and 25 months-6 years, this measure assesses the receipt of one or more visits with a primary care provider during the measurement year. For children aged 7-11 and 12-19 years, the measure assesses the receipt of one or more visits with a primary care provider during the measurement year or the year prior to the measurement year. Continuous enrollment for the younger two age groups is required for the measurement year. For the two older age groups, continuous enrollment is required for both sequential measurement years.

#### Results

Figure 4 shows the percentage of children in each age group who had at least one visit with their PCP in the four recent measurement years. MaineCare's performance on this measure is excellent across all ages. Realized access among the youngest children is nearly universal, at 97 percent. And rates of access to PCPs are around 90 percent for the other three age groups as well. These rates are at or above the FFY 2010 rates reported by states in the 2011 Annual Report on the Quality of Care for Children in Medicaid and CHIP<sup>9</sup> and are also at or above the 2011 HEDIS Averages.

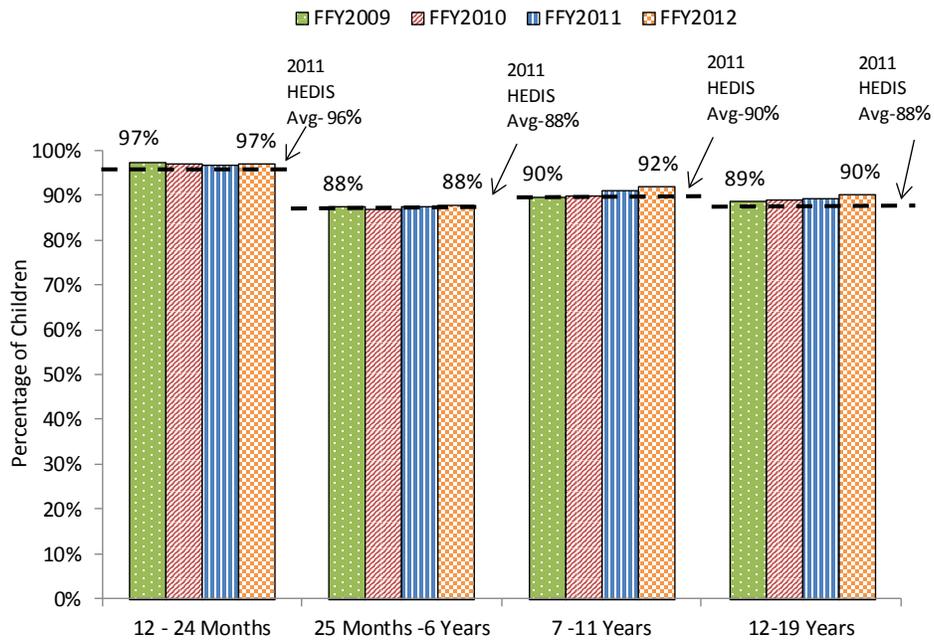
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8 <https://www.ahrq.gov/policymakers/chipra/core-set.../next-steps3.html>

9 [http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/2011\\_StateReporttoCongress.pdf](http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/2011_StateReporttoCongress.pdf)

FIGURE 4.

Access to Primary Care Practitioners-  
At least one visit per year



Source: MaineCare Claims Data

## Chlamydia Screening for Women age 16 – 20 Years

CHIPRA Measure 9 / IHOC Measure 37

### Background

Screening to identify health conditions for early intervention with effective treatments is a primary purpose of preventive (well-care) visits. Screening for chlamydia, a sexually transmitted infection, of sexually active females ages 16-20 was identified as an important screening because, if left untreated, it can cause pelvic inflammatory disease in women, a condition that can result in sterility. Chlamydia is easy to treat, but widespread. In 2008, 1,210,523 cases of chlamydia infection were reported to the Centers for Disease Control (CDC), with rates for women almost 3 times those of men. Girls ages 15 to 19 have the highest chlamydia rate: 3,276 cases per

100,000 females.<sup>10</sup> Although Maine ranks 49<sup>th</sup> in reported chlamydia cases (2,586 in 2010),<sup>11</sup> screening is essential to ensure that cases are not being missed and going untreated.

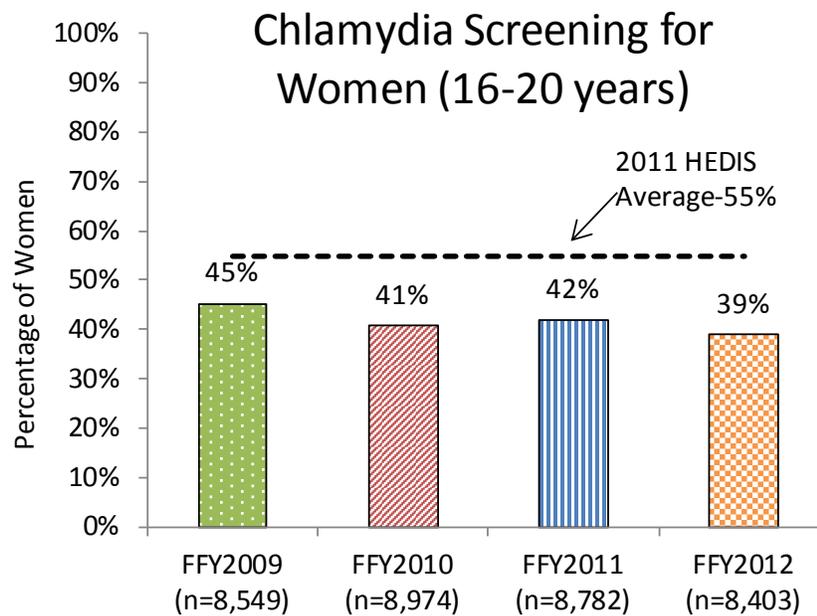
### Measure Definition

This measure assesses the extent to which at least one chlamydia test is given during the measurement year to women 16-20 years of age who were identified as sexually active and were enrolled in MaineCare for at least 11 out of the 12 months during the measurement year.

### Results

Figure 5 shows that the percent of sexually active women age 16 – 20 years enrolled in MaineCare who had a chlamydia screening has decreased through the years from 45 percent in FFY 2009 to 39 percent in FFY 2012. Each year’s rate fell far below the 2011 HEDIS average rate of 55 percent.

FIGURE 5.



Source: MaineCare Claims Data

<sup>10</sup> Information gathered from the Center for Disease Control, National Overview of Sexually Transmitted Diseases (STDs), 2008 at <http://www.cdc.gov/std/stats08/Natoverview.htm>

<sup>11</sup> Information gathered from the Kaiser Family Foundation, State Health Facts.org at <http://www.statehealthfacts.org/profileind.jsp?cat=2&sub=29&rgn=21>

## Preventive Dental and Dental Treatment Services

### CHIPRA Measures 13, 17 / IHOC Measures 38, 39

#### Background

Oral health problems are common, painful and preventable. According to the *CDC Oral Health Report in 2011*, tooth decay affects more than one-fourth of U.S. children aged 2–5 years and half of those aged 12–15 years. About half of all children and two-thirds of adolescents aged 12–19 years from lower-income families have had decay.<sup>12</sup> Ongoing dental services are essential to improve children’s oral health.

Dental services are a required service for most Medicaid-eligible individuals under the age of 21, as a component of the Early Periodic Screening, Diagnosis and Treatment (EPSDT) program, and with the advent of CHIPRA, dental services are a required benefit for CHIP enrollees. Two dental measures from the CMS-416 (a required report submitted by all EPSDT programs to CMS each year) are included in the CHIPRA core set: children receiving preventive dental services (CHIPRA #13 / IHOC #38), and children receiving dental treatment services (CHIPRA #17, IHOC #39).

#### Measure Definition

Two EPSDT measures, *Receipt of Preventive Dental Services* and *Dental Treatment Service* assess the percent of children ages 1 to 20 who received dental services<sup>13</sup> as a function of the number of children eligible for EPSDT services as shown on line 1b of the CMS-416 form. Children are counted as eligible for EPSDT services if they were enrolled in MaineCare for at least three consecutive months during the measurement year.

#### Results

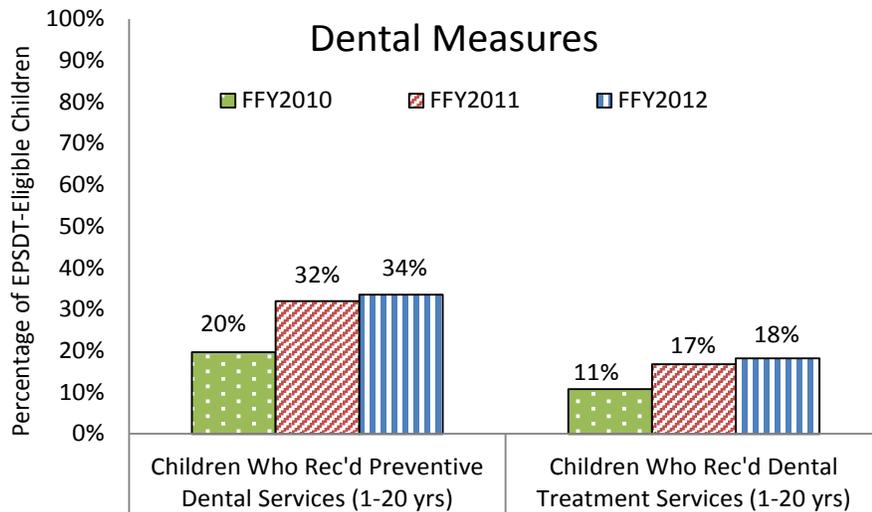
Figure 6 shows results for the two measures related to dental services for children age 1-20 that are eligible for EPSDT services.<sup>14</sup> About 34 percent of eligible children received preventive dental services in FFY 2012, up from 20 percent in FFY 2010. The dental treatment measure showed that 18 percent of eligible children received dental treatment in FFY 2012, with an increase of 7% over the FFY 2010 rate of 11%.

12 <http://www.cdc.gov/chronicdisease/resources/publications/AAG/doh.htm>

13 “Dental Services” are identified using CDT or HCPCS codes D0100 – D9999. “Preventive Dental” are codes D1000 – D1999, and “Dental Treatment” are codes D2000 – D9999.

14 Note that the results for the two EPSDT dental measures presented here are data that were included in the FFY 2010, FFY 2011 and FFY 2012 CMS 416 Reports.

FIGURE 6.



Source: MaineCare Claims Data

## Appropriate Testing for Children with Pharyngitis and Prescribed an Antibiotic

CHIPRA Measure 15/ IHOC Measure 30

IHOC Measures 16, 38, 39

### Background

Upper respiratory infections (URIs), including pharyngitis (inflammation of the throat), are among the most common reasons for children's acute care encounters with health care providers. URIs often present opportunities for the overuse of antibiotics even though most URIs are time-limited and, if viral, cannot be cured with antibiotics. The purpose of the measure is to monitor and help reduce the unnecessary use of antibiotics by ensuring that antibiotics are not prescribed without a diagnosis of streptococcal (strep) bacteria. Pharyngitis is measured because it was the leading diagnosis for 6.4 million visits to physician offices and hospital outpatient departments for all children under age 15 in 2006 nationally, providing many opportunities for inappropriate antibiotic use.<sup>15</sup>

<sup>15</sup> Background Report for the Initial, Recommended Core Set of Children's Healthcare Quality Measures for Voluntary Use by Medicaid and CHIP Programs. Available at: <http://www.ahrq.gov/chipra/corebackgrnd.htm>

### Measure Definition

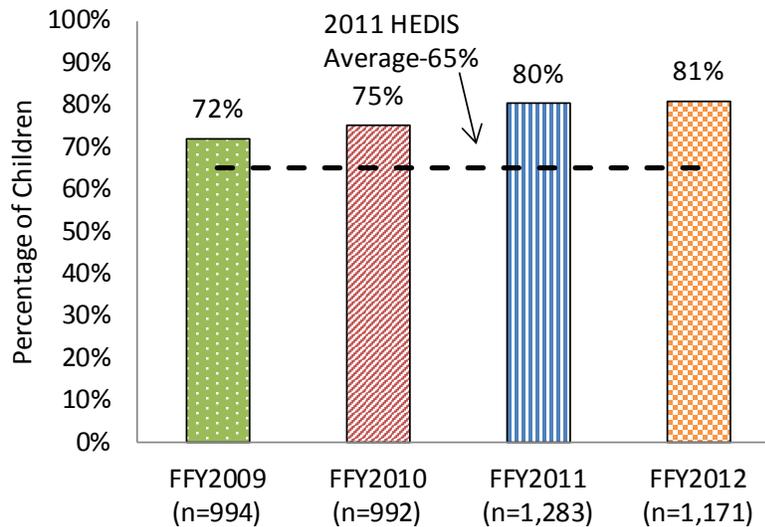
This measure assesses whether a strep test was administered for children 2-18 years in the 7-day period from 3 days prior through 3 days after the first eligible episode date. An eligible episode is an outpatient visit with a diagnosis of pharyngitis at which an antibiotic was dispensed. The measure counts children who were continuously enrolled 30 days prior to the episode date through 3 days after the episode date.

### Results

Figure 7 shows that in FFY 2012, 81 percent of children enrolled in MaineCare who were diagnosed with pharyngitis and prescribed an antibiotic had received a strep test. Because the overuse of antibiotics is such a widespread problem, ideally the rate would be 100 percent. This measure has improved steadily over the past four years, from 72 percent in FFY 2009 to 81 percent in FFY 2012. Maine's rates far exceed the nationwide 2011 HEDIS average of 65 percent.

FIGURE 7.

#### Appropriate Testing for Children Diagnosed with Pharyngitis who are Prescribed an Antibiotic (2-18 years)



Source: MaineCare Claims Data

## Emergency Department (ED) Visits

### *CHIPRA Measure 18 / IHOC Measure 41*

#### Background

Emergency departments are a critical feature of the U.S. health care delivery system. However, their availability and convenience compared to other care settings means that they may be used when traditional care settings would be more appropriate and less costly. The intent of using this measure is to reduce unnecessary ED visits.

The measure is potentially important to MaineCare, given that in 2006, Medicaid paid for 68 percent of all ED visits of children less than age 1 and they paid for 76 percent of all ED visits of children 1-14 years.<sup>16</sup>

#### Measure Definition

This measure assesses the average number of ED visits per 1,000 member months (rather than individual members). The measure breaks out the results by age: less than 1 year, 1-9 years, 10-19 years and the total of all ages.

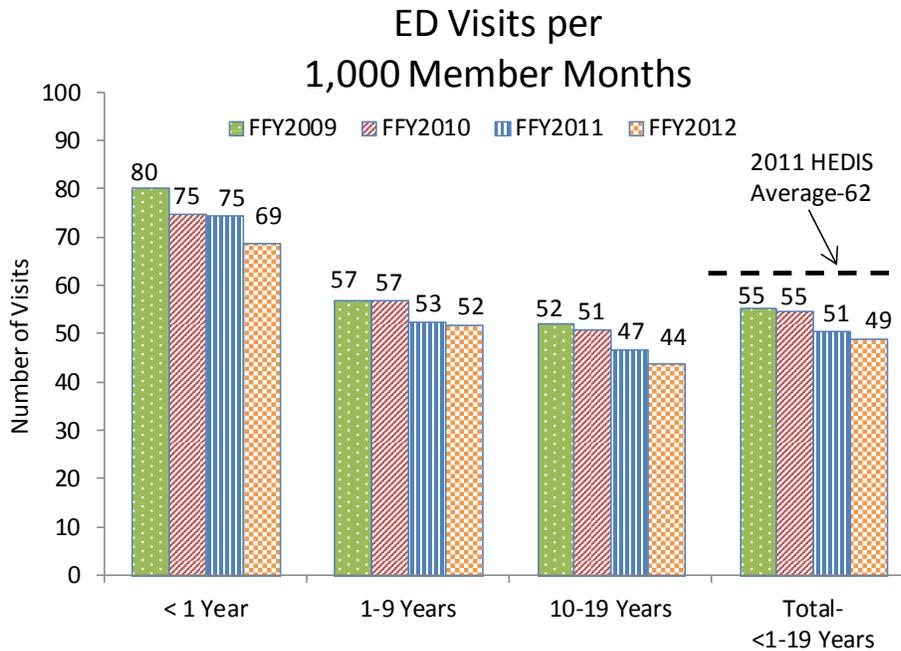
#### Results

The results in Figure 8 show that the youngest children (under age 1) had the most ED visits, at 69 visits per 1,000 member months in FFY 2012. Children ages 10 – 19 had only 44 ED visits per 1,000. Notably, the rate of ED visits fell across all age groups from FFY 2009 through 2012, from an average of 55 per 1,000 in FFY 2009 down to 49 per 1,000 in FFY 2012 across all ages. In addition, Maine's FFY 2012 ED visit rate of 49 per 1,000 was significantly lower than the HEDIS average of 62 per 1,000 for children under age 19.

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<sup>16</sup> Kilbreth, B., C. McGuire, C. Gray, T. Chitashviliand, and K. Finison (2009). Analysis of 2006 Maine. Emergency Department Utilization. Portland, ME: University of Southern Maine, Muskie School of Public Service

FIGURE 8.



Source: MaineCare Claims Data

## Asthma Emergency Department (ED) Visit and Use of Appropriate Medications

CHIPRA Measure 20 / IHOC Measures 25, 42

### Background

Asthma is one of the most prevalent chronic physical conditions among children. As of 2007, 12.9 percent of children covered by Medicaid reported they currently had asthma.<sup>17</sup> In 2008, the CDC reported that 9.4 percent of Maine children had asthma.<sup>18</sup>

Emergency department visits for asthma are important to measure because they are expensive and provide a gateway to hospitalization.

Asthma controller medicines are also important to measure because they help prevent asthma symptoms when

<sup>17</sup> Agency for Healthcare Research and Quality. 2006 National statistics All ED visits (those that resulted in admission to the hospital and those that did not) by patient age and payer - Information on encounters that start in the ED from the HCUP Nationwide Emergency Department Sample (NEDS). Author 2009

<sup>18</sup> [http://www.cdc.gov/asthma/stateprofiles/Asthma\\_in\\_ME.pdf](http://www.cdc.gov/asthma/stateprofiles/Asthma_in_ME.pdf)

taken every day as prescribed. The asthma controller measure (IHOC #25) is not part of the CHIPRA core set, but is included in Meaningful Use (NQF #0036).

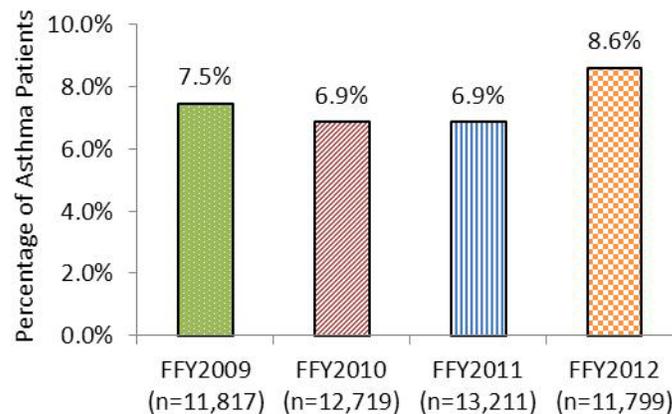
### Measure Definition

The asthma ED visit measure assesses the percentage of children in MaineCare, ages 2 through 20 diagnosed with asthma during the measurement year with one or more asthma-related ED visits. The measure does not require that a child be continuously enrolled in MaineCare to be included; the eligible population is defined by the age of the child and diagnosis of asthma, identified using ICD-9 codes in the claims.

The asthma controller medication measure assesses the percentage of children enrolled in MaineCare ages 5 through 21 years who were identified as having persistent asthma who were appropriately prescribed controller medication during the measurement year.

FIGURE 9.

### Asthma Patients with at Least 1 Asthma-Related ED Visit



Source: MaineCare Claims Data

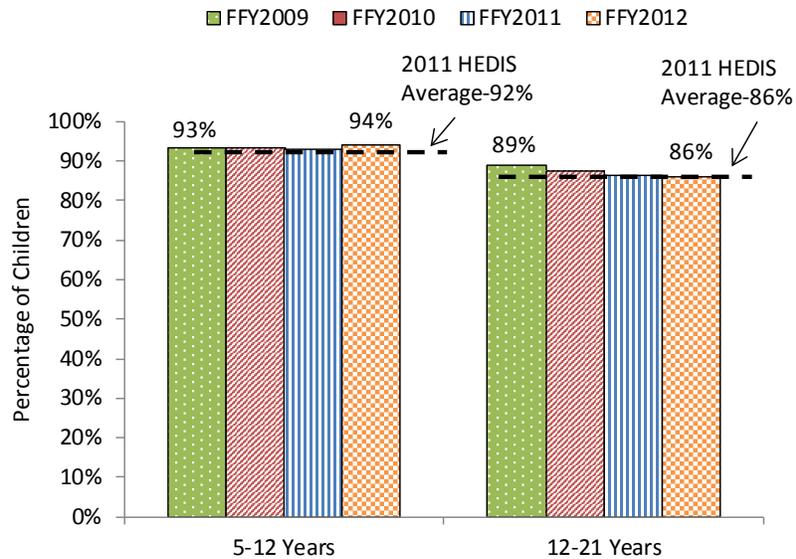
### Results

Figure 9 shows that in FFY 2012, there were 11,799 children ages 2 – 20 enrolled in MaineCare who were identified as having asthma; of those, 8.6 percent had one or more visits to the ED because of their asthma during the year. Note that because the Asthma-related ED visit measure (CHIPRA #20) specifications were

revised in 2012, the FFY 2012 results are not directly comparable to previous years.<sup>19</sup>

**FIGURE 10.**

**Children With Asthma Prescribed Controller Medication**



Source: MaineCare Claims Data

Figure 10 shows the number of active asthma patients who were appropriately prescribed controller medications during the measurement year. Two age groups were measured, children ages 5-12 years and 12-21 years.

Ninety four percent of 5-12 year old children with asthma were prescribed controller medications in FFY 2012, up one percent from the previous three measurement years. Among the older age group (12-21 years) controller medication rates were only slightly lower, at 86% in FFY 2012. Asthma controller medication rates declined by three percentage points from FFY 2009 to 2012 for the older age group, from 89% to 86%.

<sup>19</sup> The measure steward for the asthma ED visit measure (CHIPRA #20) changed the method of identifying children with asthma for the denominator population. Specifically, use of short-acting beta agonist medications was eliminated as a means of identifying asthmatic patients in the claims data.

## Follow-up Care for Children Prescribed ADHD Medication *CHIPRA Measure 21 / IHOC Measure 36*

### Background

As of 2006, the CDC reported that approximately 4.5 million children 5-17 years of age had been diagnosed with attention deficit hyperactivity disorder (ADHD). Children with Medicaid were more likely than uninsured children or privately insured children to have a diagnosis.<sup>20</sup> Estimates from the 2007 National Survey of Children's Health show that 4.2 percent of children nationally take medication for ADHD.<sup>21</sup> Since medications affect children differently, follow-up care for medicated children is critical for their health and well-being, as well as the treatment of their ADHD.

### Measure Definition

This measure assesses the percentage of children ages 6-12 years newly prescribed ADHD medication that had at least three follow-up care visits within a 10-month period, one of which was within 30 days from the time the first ADHD medication was dispensed and at least two follow-up visits in the following nine months. The first 30 days are referred to as the Initiation Phase and the next nine months are referred to as the Continuation and Maintenance (C&M) phase. To be included in the denominator for the initiation phase, children must be enrolled in MaineCare continuously for four months prior to the medication dispensing date through 30 days after that date. To be included in the denominator for the C&M phase, children must be enrolled in MaineCare continuously for four months prior to the medication dispensing date through 10 months after that date.

### Results

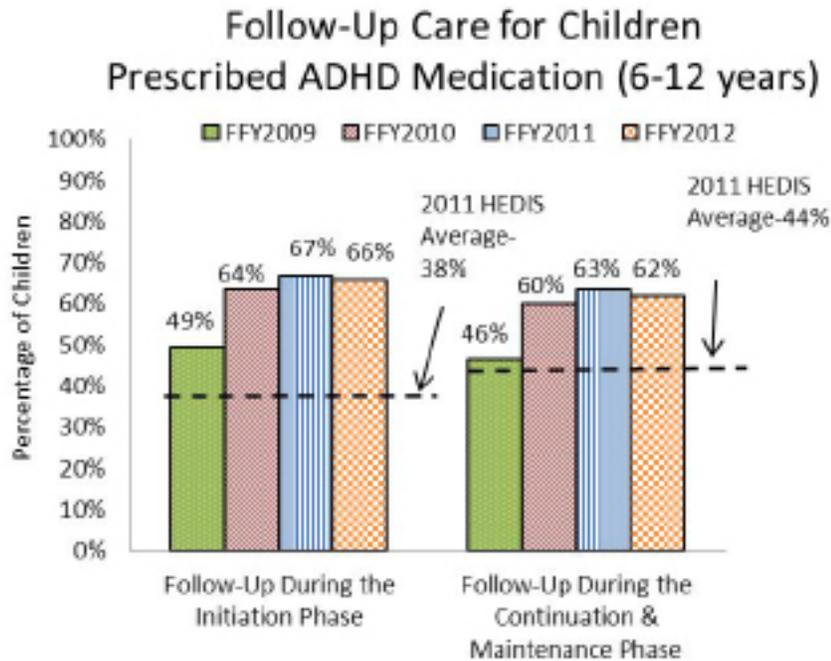
In FFY 2012, there were a total of 1,565 children ages 6 – 12 enrolled in MaineCare who were identified as having received a prescription for ADHD; two-thirds of those children (66%) received appropriate follow-up care during the Initiation Phase. The C&M phase rates are similar, with 62 percent of children receiving appropriate follow-up care in FFY 2012. Both measures have improved significantly over the past three years and far exceed the 2011 HEDIS averages.

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20 *Diagnosed Attention Deficit Hyperactivity Disorder and Learning Disability: United States, 2004-2006*. Available at: [http://www.cdc.gov/nchs/data/series/sr\\_10/sr10\\_237.pdf](http://www.cdc.gov/nchs/data/series/sr_10/sr10_237.pdf)

21 *Background Report for the Initial, Recommended Core Set of Children's Healthcare Quality Measures for Voluntary Use by Medicaid and CHIP Programs*. Available at: <http://www.ahrq.gov/chipra/corebackgrnd.htm>

FIGURE 11.



Source: MaineCare Claims Data

## Annual Pediatric Hemoglobin A1c Testing and Comprehensive Diabetes Care

CHIPRA Measure 22 / IHOC Measure 43

### Background

Health care providers and others are raising concerns about the rising rate of diabetes among children and adolescents. In 2010, the CDC reports that about 215,000 people younger than 20 years of age are diagnosed with diabetes (type 1 or type 2). This represents 0.26% of all people in this age group.<sup>22</sup> That figure does not include the substantial number of young people that are undiagnosed or considered to be pre-diabetic. Hemoglobin A1c (HbA1c) testing measures how close to normal blood glucose levels are maintained over time; therefore, it is an important indicator of blood glucose level management of the diabetic patient.

### Measure Definition

This measure assesses the extent to which patients, ages 5-17 with a diagnosis of diabetes had a Hemoglobin

<sup>22</sup> 2011 National Diabetes Fact Sheet. Available at: <http://www.cdc.gov/diabetes/pubs/estimates11.htm#2>

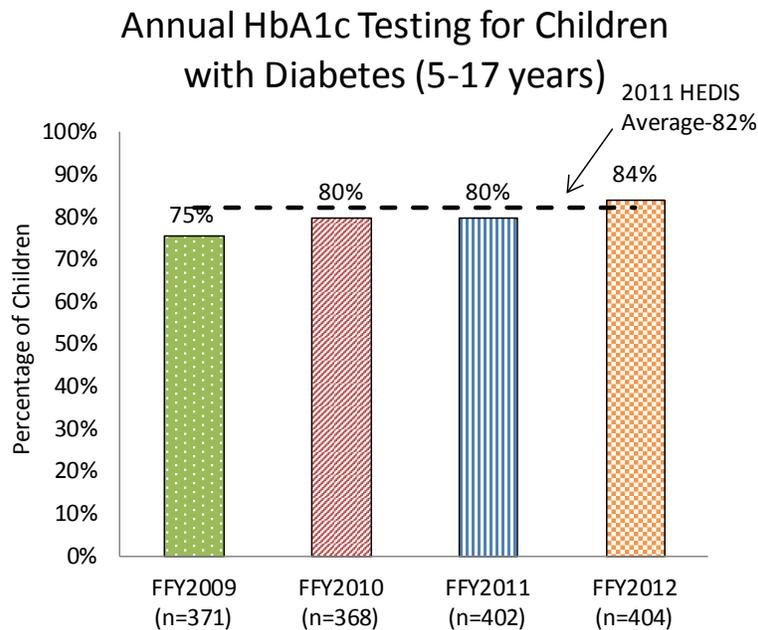
A1c (HbA1c) test during the measurement year. To be included, children must be continuously enrolled in MaineCare (i.e. enrolled for at least 11 out of the 12 months of the measurement year). Children with diabetes can be identified based either on pharmacy data or claims; children who were dispensed insulin or oral hypoglycemics/anti-hyperglycemics or those with a diagnosis of diabetes on one or more claims are used to identify children with diabetes.

**Results**

Figure 12 shows the results for the diabetes testing measure. In FFY 2012, there were 404 children identified with diabetes in the MaineCare claims data, and 84% had an HbA1c test. This measure increased from 80 percent in FFY 2011 and exceeded the nationwide FFY 2011 HEDIS measure by two percentage points.

The average number of HbA1c tests per diabetic child was 2.8 in FFY 2012, 2.5 in FFY 2011 and 2.3 in FFY 2009 and FFY 2010 (not shown). Also notable is the fact that there are relatively few children enrolled in MaineCare identified as having diabetes—ranging from 371 in FFY 2009 to 404 in FFY 2012.

**FIGURE 12.**



*Source: MaineCare Claims Data*

## Follow-up after Hospitalization for Mental Illness CHIPRA Measure 23 / IHOC Measure 44

### Background

In 2006, the most common conditions for which children with Medicaid were hospitalized in community hospitals were mood disorders (38,000 discharges) and ADHD/disruptive behaviors (14,293 discharges).<sup>23</sup> Follow-up care after hospitalization is necessary to maintain children’s mental health and continuity of care in the community and can help reduce re-hospitalization.

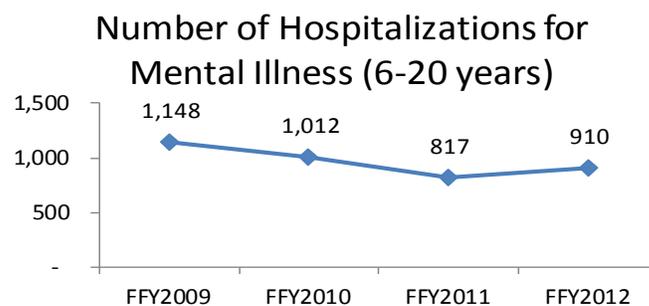
### Measure Definition

This measure assesses whether individuals aged 6-20 years who have had a mental hospitalization and were discharged from the hospital had an outpatient visit, intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 7 or 30 days after discharge (two rates are reported). To be eligible for this measure, the child must be continuously enrolled in MaineCare from the day of discharge through 30 days after.

### Results

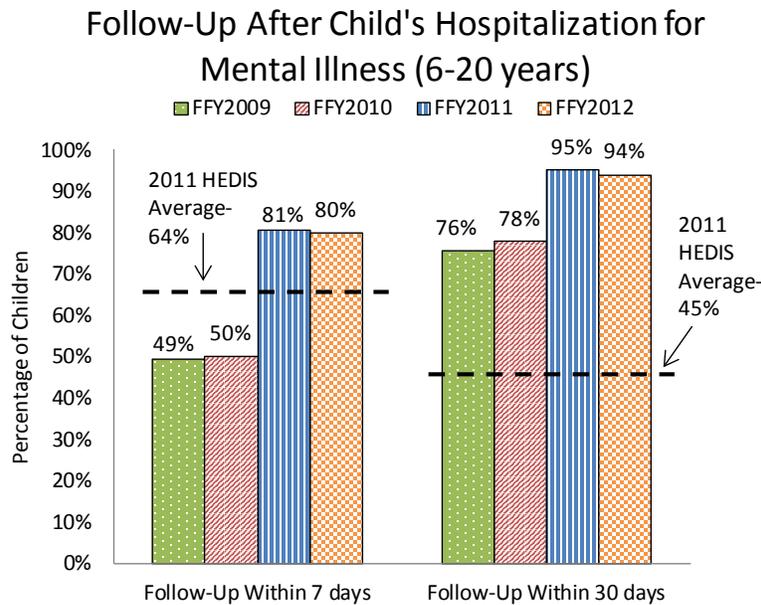
The total number of hospitalizations for mental illness for children ages 6 through 20 decreased overall from 1,148 in FFY 2009 to 910 in 2012 (Figure 13A). In FFY 2012, the 7-day follow-up rate was 94 percent, and the 30-day follow-up rate was 80 percent; this was more than double the HEDIS average of 45% for 30 day follow-up. There was also a sharp increase in Maine’s rates of 7- and 30-day follow-up from FFY 2010 to 2011 (Figure 13B).

FIGURE 13A.



<sup>23</sup> Background Report for the Initial, Recommended Core Set of Children’s Healthcare Quality Measures for Voluntary Use by Medicaid and CHIP Programs. Available at: <http://www.ahrq.gov/chipra/corebackgrnd.htm>

FIGURE 13B.



Source: MaineCare Claims Data

## Timeliness and Frequency of Prenatal Care CHIPRA Measures 1, 2 / IHOC Measures 46, 47

### Background

Early prenatal care (in the first trimester of pregnancy) helps prevent premature birth and other infant health problems, as well as, helps improve the health of women during pregnancy.

### Measure Definition<sup>24</sup>

These measures assess the timeliness and frequency of prenatal care that MaineCare-enrolled women received for all deliveries during the measurement year (calendar year). Timeliness measures the number of MaineCare-

<sup>24</sup> Because of limitations with the self-reported prenatal care information available in the Vital Statistics data, we had to make some modifications to the CHIPRA measure specifications to compute these two measures. The Vital Statistics data only included a total count of prenatal visits received during the pregnancy, and the month in which the first visit was received (e.g. 1 through 9). For the timeliness measure, we counted all mothers who reported their first prenatal visit in month 1, 2 or 3 OR who reported their first visit as taking place within 2 months of MaineCare enrollment as meeting numerator criteria. For the frequency of ongoing prenatal care measure, we only adjusted the number of expected visits based on gestational age at delivery (with no adjustment for date of enrollment in MaineCare). Essentially, we made a simplifying assumption that all prenatal care visits were covered by MaineCare for deliveries identified in the denominator.

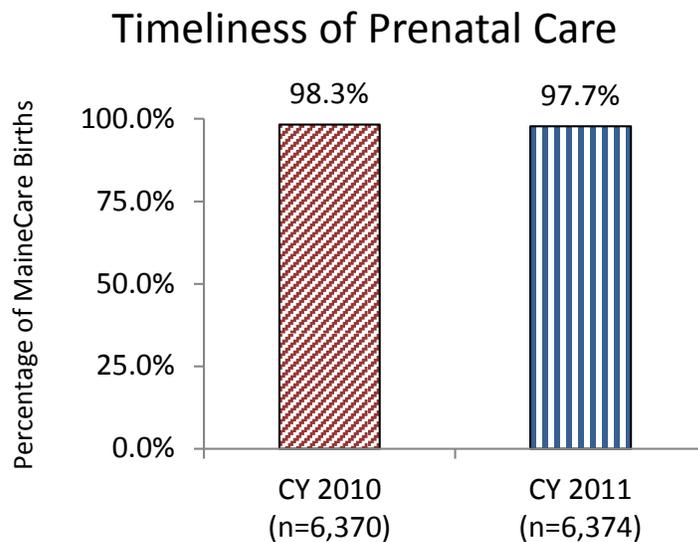
enrolled women in the denominator sample who had a prenatal visit in the first trimester or within 42 days of enrollment.

The Frequency of Ongoing Prenatal Care measure is computed based on the number of reported prenatal care visits on the birth certificate and the expected number of visits for the period between when care began and the date of delivery. The expected number of visits is based on guidelines for perinatal care defined by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. The measure categorizes births where the mother received less than 21% of the expected visits; 21-80%; or more than 81% of the expected visits. Those in the last category are usually defined as having received “adequate” prenatal care.

## Results

The results in Figure 14A show that almost 100 percent of MaineCare deliveries were to mothers who received prenatal care in the first trimester of their pregnancy.

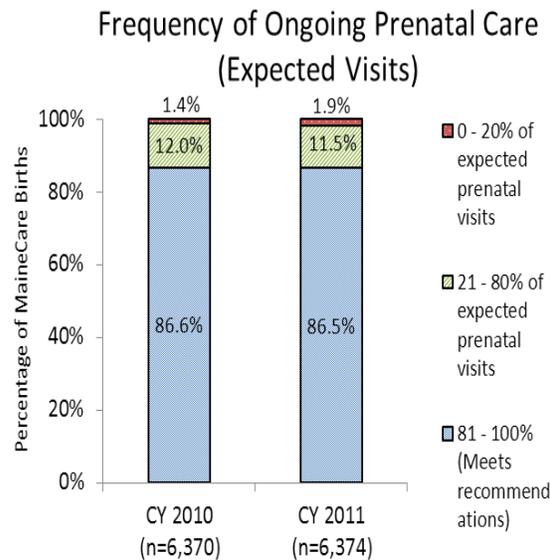
FIGURE 14A.



*Source: MaineCare Eligibility and Vital Statistics Data*

Figure 14B shows that over 85 percent of those deliveries who received an “adequate” number of prenatal visits according to the AAP/ACOG.

FIGURE 14B.



Source: MaineCare Eligibility and Vital Statistics Data

## Live Births Weighing Less than 2,500 Grams CHIPRA Measure 3 / IHOC Measures 48

### Background

Low birth weight (often used as a proxy for premature birth) is an important condition that is highly prevalent. Low birth weight is an important predictor of health outcomes for infants, and it is costly to the health care system and society.

### Measure Definition

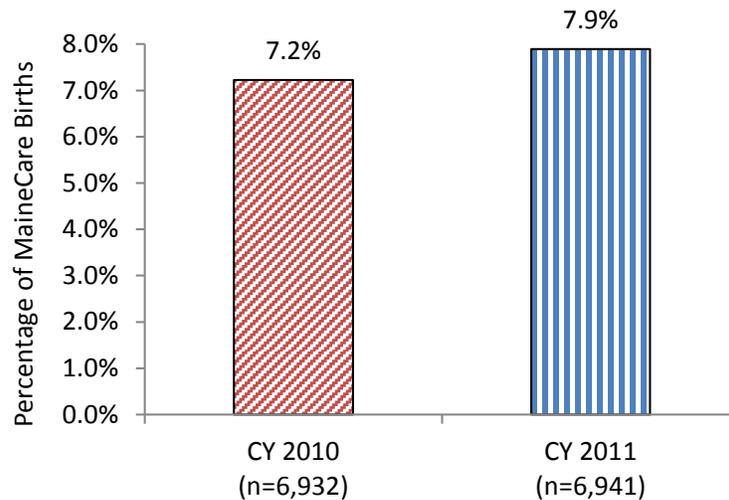
This measure assesses the percentage of live births per year to women enrolled in MaineCare that weighed less than 2,500 grams (5.5 pounds) during the calendar year.

### Results

Figure 15 shows that almost eight percent of babies born to MaineCare-enrolled mothers were low birth weight in calendar year 2011, up from 7.2 percent in 2010.

FIGURE 15.

Percentage of Live Births Weighing Less than 2500 grams



Source: MaineCare Eligibility and Vital Statistics Data

**Developmental Screening in the First Three Years of Life**  
 CHIPRA Measure 8 / IHOC Measures 7, 8 and 10

**Background**

Nationwide, an estimated 9.5 million Medicaid- and CHIP-enrolled preschool children are eligible for developmental screening. In the United States, 17 percent of children (12 million children) were found to have a behavioral disability such as autism, mental retardation, or attention-deficit/hyperactivity disorder. Medicaid serves more than 25 percent of all children in the United States (and more than half of all poor and low-income children). Children from poor families are at greater risk than those from non-poor families for poorer outcomes, including those related to mental development. The 2007 National Survey of Children’s Health (NSCH) found that publicly insured children were 1.9 times as likely as privately insured children (18.3 percent versus 9.7 percent, respectively) to have one or more of six specified learning, developmental, or behavioral conditions.<sup>25</sup>

<sup>25</sup> Background Report for the Initial, Recommended Core Set of Children’s Healthcare Quality Measures for Voluntary Use by Medicaid and CHIP Programs. Available at: <http://www.ahrq.gov/chipra/corebackgrnd.htm>

## Measure Definition

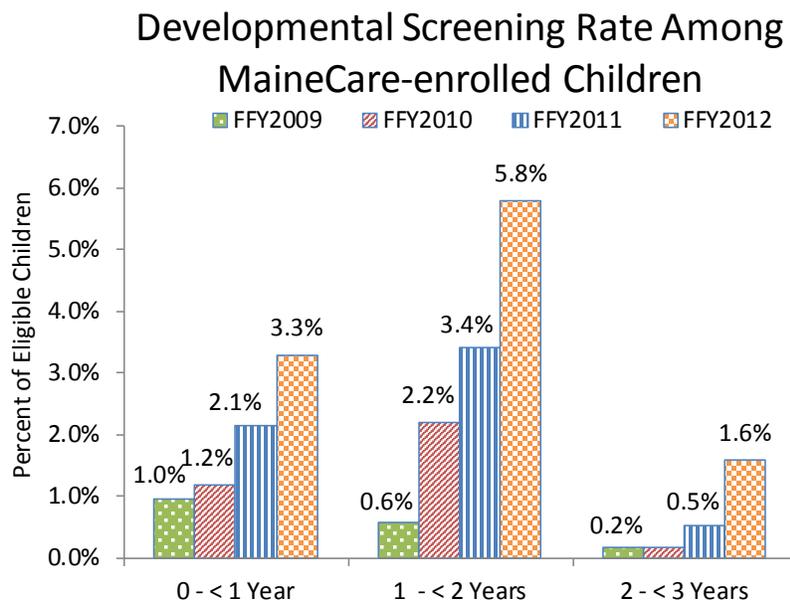
This measure assesses the extent to which children at various young ages from 0-36 months were screened for social and emotional development with a standardized, documented tool or set of tools. Eligible children include those who turn age 1, age 2, or age 3 and who were enrolled continuously in MaineCare during the measurement year. For claims-based reporting, screening is identified using CPT code 96110.

## Results

The results for the developmental screening of children who turn 1, 2, and 3 years old during the measurement year are shown in Figure 16A. The rates steadily increased over the four years, reaching almost six percent among 2 year-olds in FFY 2012.

Note that the observed low rates of developmental screening raised concerns about the validity of the claims data, so these results were not reported in the FFY 2012 CHIP Annual Report. MaineCare and IHOC project staff are in the process of investigating and addressing issues related to billing of developmental screening, which we anticipate will improve the quality of the claims data in future years.

FIGURE 16A.

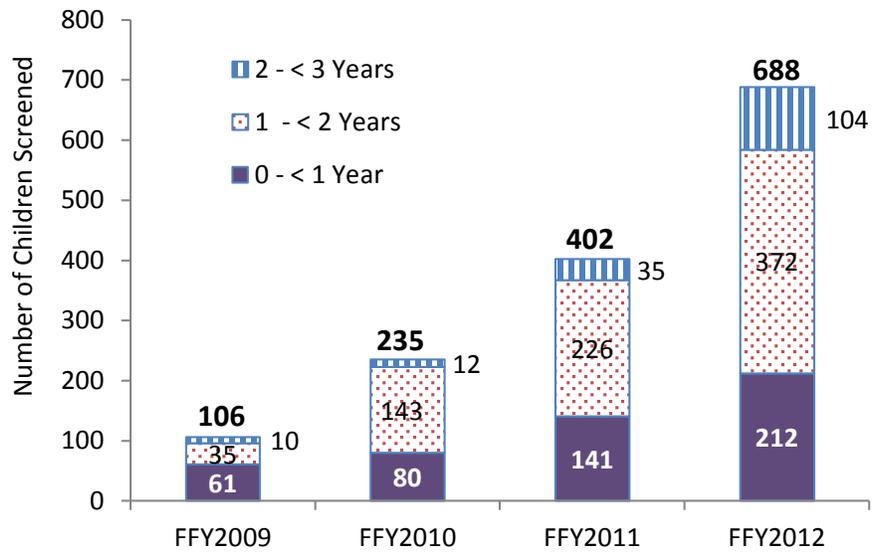


Source: MaineCare Claims Data

In addition, the total number of developmental screenings documented in the MaineCare claims increased dramatically over the past four Federal Fiscal Years, from only 106 in FFY 2009, to a total of 688 in FFY 2012 (Figure 16B). Most of the growth in claims submitted for developmental screening were for children under age 2.

FIGURE 16B.

Number of Children with  
Developmental Screening Documented  
in MaineCare Claims (CPT 96110)



Source: MaineCare Claims Data

**APPENDIX: IHOC AND CHIPRA CLAIMS-BASED RESULTS FOR FFY 2009, 2010, 2011 AND 2012**

| CHIPRA  | Specs             | Measure Description   | FFY2009 |        |           | FFY2010 |         |           | FFY2011 |         |           | FFY2012  |         |           |
|---|-------------------|---|---------|--------|-----------|---------|---------|-----------|---------|---------|-----------|--|---------|-----------|
|   |                   |   | Num     | Denom  | % or Rate | Num     | Denom   | % or Rate | Num     | Denom   | % or Rate | Num  | Denom   | % or Rate |
| 1   | CHIPRA (modified) | Timeliness of Prenatal Care (All ages)                                      |         |        |           | 6,259   | 6,370   | 98.26%    | 6,230   | 6,374   | 97.74%    | Vital Statistics data not available for FFY 2012 |         |           |
| 2   | CHIPRA (modified) | 0 - 20% of expected prenatal visits   |         |        |           | 86      | 6,370   | 1.35%     | 124     | 6,374   | 1.95%     | at time of CHIP Annual Report submission         |         |           |
|   |                   | 21 - 80% of expected visits   |         |        |           | 766     | 6,370   | 12.03%    | 734     | 6,374   | 11.52%    |  |         |           |
|   |                   | >=81% of expected visits  |         |        |           | 5,518   | 6,370   | 86.62%    | 5,516   | 6,374   | 86.54%    |  |         |           |
| 3   | CHIPRA            | Percentage of live births weighing less than 2500 grams (All ages)          |         |        |           | 501     | 6,932   | 7.23%     | 548     | 6,941   | 7.90%     |  |         |           |
| 8   | CHIPRA            | Developmental Screening by age 1  |         |        |           | 80      | 6,745   | 1.19%     | 141     | 6,597   | 2.14%     | 212  | 6,494   | 3.26%     |
|   |                   | Developmental Screening by age 2  |         |        |           | 143     | 6,487   | 2.20%     | 226     | 6,613   | 3.42%     | 372  | 6,466   | 5.75%     |
|   |                   | Developmental Screening by age 3  |         |        |           | 12      | 6,520   | 0.18%     | 35      | 6,555   | 0.53%     | 104  | 6,617   | 1.57%     |
| 9   | HEDIS             | Chlamydia Screening (ages 16 - 20)  | 3,877   | 8,549  | 45.35%    | 3,663   | 8,974   | 40.82%    | 3,689   | 8,782   | 42.01%    | 3,315  | 8,403   | 39.45%    |
| 11  | HEDIS             | Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life       | 14,762  | 23,124 | 63.84%    | 15,505  | 25,304  | 61.27%    | 16,308  | 25,984  | 62.76%    | 16,492   | 26,526  | 62.17%    |
| 12  | HEDIS             | Adolescent Well-Care Visits (12 - 21)                                       | 16,502  | 43,402 | 38.02%    | 16,785  | 46,469  | 36.12%    | 18,058  | 46,988  | 38.43%    | 18,528   | 47,990  | 38.61%    |
| 13  | CHIPRA            | Total Eligibles Who Received Preventive Dental Services (1 - 20) **         |         |        |           | 24,399  | 123,555 | 19.75%    | 41,165  | 128,418 | 32.06%    | 41,422   | 123,250 | 33.61%    |
| 14  | HEDIS             | Children and Adolescents' Access to Primary Care Practitioners (12 - 24 mo) | 6,643   | 6,822  | 97.38%    | 7,111   | 7,329   | 97.03%    | 6,952   | 7,183   | 96.78%    | 6,850  | 7,048   | 97.19%    |
| 14  | HEDIS             | Children and Adolescents' Access to Primary Care Practitioners (25mo - 6yr) | 25,177  | 28,715 | 87.68%    | 27,153  | 31,229  | 86.95%    | 28,024  | 32,012  | 87.54%    | 28,548   | 32,438  | 88.01%    |
| 14  | HEDIS             | Children and Adolescents' Access to Primary Care Practitioners (7 - 11)     | 21,463  | 23,901 | 89.80%    | 22,517  | 24,999  | 90.07%    | 24,058  | 26,415  | 91.08%    | 25,599   | 27,788  | 92.12%    |
| 14  | HEDIS             | Children and Adolescents' Access to Primary Care Practitioners (12 - 19)    | 30,580  | 34,457 | 88.75%    | 32,068  | 36,025  | 89.02%    | 33,318  | 37,233  | 89.49%    | 35,178   | 38,996  | 90.21%    |
| 15  | HEDIS             | Appropriate Testing for Children With Pharyngitis                           | 716     | 994    | 72.03%    | 745     | 992     | 75.10%    | 1,031   | 1,283   | 80.36%    | 946  | 1,171   | 80.79%    |
| 17  | CHIPRA            | Total Eligibles Who Received Dental Treatment Services (1 - 20) **          |         |        |           | 13,431  | 123,555 | 10.87%    | 21,635  | 128,418 | 16.85%    | 22,537   | 123,250 | 18.29%    |
| ** Note: Dental measure results come from the FFY 2010, FFY 2011, and FFY 2012 CMS 416 / EPSDT Annual Reports (Lines 12b and 12c) |                   |   |         |        |           |         |         |           |         |         |           |  |         |           |

**APPENDIX: IHOC AND CHIPRA CLAIMS-BASED RESULTS FOR FFY 2009, 2010, 2011 AND 2012 (CONTINUED)**

| CHIPRA | Specs  | Measure Description   | FFY2009 |        |           | FFY2010 |        |           | FFY2011 |        |           | FFY2012 |        |           |
|--------|--------|---|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|---------|--------|-----------|
|        |        |   | Num     | Denom  | % or Rate |
| 20     | CHIPRA | Annual Number of Asthma Patients with > 1 asthma-related Emergency Room Visit             | 881     | 11,817 | 7.46%     | 874     | 12,719 | 6.87%     | 907     | 13,211 | 6.87%     | 1,009   | 11,799 | 8.55%     |
| 21     | HEDIS  | Follow-Up Care for Children Prescribed ADHD Medication (Initiation Phase)                 | 628     | 1,271  | 49.41%    | 855     | 1,346  | 63.52%    | 949     | 1,417  | 66.97%    | 1,026   | 1,565  | 65.56%    |
| 21     | HEDIS  | Follow-Up Care for Children Prescribed ADHD Medication (Continuation & Maintenance Phase) | 551     | 1,189  | 46.34%    | 765     | 1,274  | 60.05%    | 854     | 1,347  | 63.40%    | 922     | 1,482  | 62.21%    |
| 22     | CHIPRA | Comprehensive Diabetes Care - HbA1c Testing   | 280     | 371    | 75.47%    | 294     | 368    | 79.89%    | 321     | 402    | 79.85%    | 339     | 404    | 83.91%    |
| 22     | HEDIS  | Comprehensive Diabetes Care - HbA1c Average number of test per member                     | 854     | 371    | 2.30      | 928     | 368    | 2.30      | 1,013   | 402    | 2.52      | 1,117   | 404    | 2.76      |
| 23     | HEDIS  | Follow-Up After Hospitalization for Mental Illness (30 day f/u)                           | 867     | 1,148  | 75.52%    | 787     | 1,012  | 77.77%    | 777     | 817    | 95.10%    | 854     | 910    | 93.85%    |
| 23     | HEDIS  | Follow-Up After Hospitalization for Mental Illness (7 day f/u)                            | 567     | 1,148  | 49.39%    | 507     | 1,012  | 50.10%    | 659     | 817    | 80.66%    | 729     | 910    | 80.11%    |
| -      | HEDIS  | Use of Appropriate Medications for People With Asthma (5-12)                              | 1,259   | 1,353  | 93.05%    | 1,369   | 1,465  | 93.45%    | 1,506   | 1,619  | 93.02%    | 1,523   | 1,612  | 94.48%    |
| -      | HEDIS  | Use of Appropriate Medications for People With Asthma(12-21)                              | 1,160   | 1,304  | 88.96%    | 1,213   | 1,386  | 87.52%    | 1,245   | 1,441  | 86.40%    | 1,240   | 1,438  | 86.23%    |
| -      | HEDIS  | Use of Appropriate Medications for People With Asthma (5 - 21)                            | 2,419   | 2,657  | 91.04%    | 2,582   | 2,851  | 90.56%    | 2,751   | 3,060  | 89.90%    | 2,763   | 3,050  | 90.59%    |
| -      | IHOC   | Well Child Visits between 7 years of age and 11 years of age                              | 12,754  | 27,246 | 46.81%    | 12,950  | 28,856 | 44.88%    | 13,868  | 29,618 | 46.82%    | 14,713  | 30,811 | 47.75%    |

**APPENDIX: IHOC AND CHIPRA CLAIMS-BASED RESULTS FOR FFY 2009, 2010, 2011 AND 2012 (CONTINUED)**

| Well-Child Visits     |        |   | FFY2009   |               |                  | FFY2010   |               |                  | FFY2011   |               |                  | FFY2012   |               |                  |
|-----------------------|--------|---|-----------|---------------|------------------|-----------|---------------|------------------|-----------|---------------|------------------|-----------|---------------|------------------|
| CHIPRA                | Specs  | Measure Description   | Visits    | # Mbrs        | %                |
| 10                    | HEDIS  | Well-Child Visits in the First 15 Months of Life  | 0         | 131           | 2.1%             | 0         | 151           | 2.3%             | 0         | 136           | 2.1%             | 0         | 185           | 2.9%             |
|                       |        |   | 1         | 106           | 1.7%             | 1         | 97            | 1.5%             | 1         | 102           | 1.6%             | 1         | 115           | 1.8%             |
|                       |        |   | 2         | 165           | 2.7%             | 2         | 194           | 3.0%             | 2         | 178           | 2.8%             | 2         | 188           | 2.9%             |
|                       |        |   | 3         | 268           | 4.4%             | 3         | 278           | 4.3%             | 3         | 277           | 4.3%             | 3         | 309           | 4.8%             |
|                       |        |   | 4         | 532           | 8.7%             | 4         | 562           | 8.6%             | 4         | 608           | 9.5%             | 4         | 499           | 7.8%             |
|                       |        |   | 5         | 1,001         | 16.4%            | 5         | 1,082         | 16.6%            | 5         | 1,086         | 16.9%            | 5         | 951           | 14.9%            |
|                       |        |   | 6+        | 3,908         | 64.0%            | 6+        | 4,162         | 63.8%            | 6+        | 4,022         | 62.8%            | 6+        | 4,148         | 64.9%            |
|                       |        |   | TOTAL     | 6,111         | 100%             | TOTAL     | 6,526         | 100%             | TOTAL     | 6,409         | 100%             | TOTAL     | 6,395         | 100%             |
| -                     | HEDIS  | Well Child Visits between 15 months and 3 years of age                                      | 0         | 653           | 11.2%            | 0         | 753           | 11.5%            | 0         | 743           | 11.3%            | 0         | 655           | 9.9%             |
|                       |        |   | 1         | 972           | 16.7%            | 1         | 1,138         | 17.5%            | 1         | 1,097         | 16.7%            | 1         | 1,000         | 15.1%            |
|                       |        |   | 2         | 1,538         | 26.4%            | 2         | 1,712         | 26.3%            | 2         | 1,667         | 25.4%            | 2         | 1,660         | 25.1%            |
|                       |        |   | 3 +       | 2,663         | 45.7%            | 3 +       | 2,917         | 44.7%            | 3 +       | 3,048         | 46.5%            | 3 +       | 3,302         | 49.9%            |
|                       |        |   | TOTAL     | 16,846        | 280%             | TOTAL     | 18,290        | 280%             | TOTAL     | 18,072        | 280%             | TOTAL     | 18,111        | 280%             |
| <b>ED Utilization</b> |        |   | FFY2009   |               |                  | FFY2010   |               |                  | FFY2011   |               |                  | FFY2012   |               |                  |
| 18                    | CHIPRA | Emergency Department (ED) Utilization – Average number of ED visits per 1,000 Member Months | ED Visits | Member Months | Visits/ 1,000 MM | ED Visits | Member Months | Visits/ 1,000 MM | ED Visits | Member Months | Visits/ 1,000 MM | ED Visits | Member Months | Visits/ 1,000 MM |
|                       |        | age1 (<1)   | 3,798     | 47,206        | 80.5             | 3,499     | 46,728        | 74.9             | 3,327     | 44,640        | 74.5             | 3,119     | 45,461        | 68.6             |
|                       |        | age1-9 (>=1 to < 10)  | 39,922    | 701,139       | 56.9             | 42,071    | 737,854       | 57.0             | 39,009    | 742,544       | 52.5             | 39,890    | 768,991       | 51.9             |
|                       |        | age10-19 (>=10 to < 20)   | 35,956    | 689,193       | 52.2             | 36,833    | 721,229       | 51.1             | 33,661    | 717,337       | 46.9             | 33,015    | 743,866       | 44.4             |
|                       |        | total   | 79,676    | 1,437,538     | 55.4             | 82,403    | 1,505,811     | 54.7             | 75,997    | 1,504,521     | 50.5             | 76,024    | 1,558,318     | 48.8             |